NORTH CENTRAL TEXAS COLLEGE
NORTH CENTRAL TEXAS COMMUNITY COLLEGE DISTRICT
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North Central Texas College

North Central Texas College is accredited by **The Southern Association of Colleges** and **Schools Commission on Colleges** to award Associate Degrees and Certificates of Completion.

Contact the **Commission on Colleges** for questions about the accreditation of North Central Texas College.

1866 Southern Lane
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(404) 679-4500

Our Core Values

North Central Texas College is accountable to its students, colleagues, and the community and holds the following values to be fundamental.

Affordable, Quality Education
NCTC is passionate about providing access to higher education. Its highly qualified faculty and staff and student-centered programs and services reflect NCTC's commitment to excellence.

Stimulating Learning Environments
NCTC fosters diverse, challenging, and engaging learning environments to empower its students to impact a global society as creative problem solvers, critical thinkers, and dynamic leaders.

Integrity
NCTC faculty, staff, and students act in an ethical, honest and responsible manner.

Innovation
NCTC embraces creative ideas and challenging initiatives.

Cohesive Relationships
NCTC cultivates productive partnerships through teamwork, personalized attention, and open communication.

Encouragement
NCTC supports students, faculty and staff by welcoming diversity and promoting mutual respect.

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NOTICE: All information printed in this edition of the Bulletin of North Central Texas College is subject to change by the Board of Regents and Administration. Every effort is made to make the information contained herein as complete and accurate as possible; however, changes may occur at any time in requirements, deadlines, fees, curricula, courses listed/offered and times offered. Course numbers and descriptions may change from previous Bulletins/Schedules/Catalogs, and such changes will be on record in the offices of the Provost, the Instructional Deans, Vice Chancellor of Student Services and Vice Chancellor of Financial Services.

Graduate Guarantee Program

Guarantee for Job Competency

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

- The graduate must have earned the Associate of Applied Science degree or Certificate of Completion beginning May, 1992 or thereafter in a technical, vocational or occupational program identified in the college's General Catalog.
- The graduate must have completed requirements for the Associate of Applied Science degree or Certificate of Completion with the North Central Texas College system, with a minimum 75 percent of credits earned at North Central Texas College, and must have completed the degree or certificate within a five-year span.
- Graduates must be employed full-time in an area directly related to the area of program concentration as certified by the appropriate Division Chair.
- Employment must commence within 12 months of graduation.
- The employer must certify in writing that the employee is lacking entry-level skills identified by North Central Texas College as program exit competencies and must specify the areas of deficiency within 90 days of the graduate's initial employment.
- The employer, graduate, Division Chair, and appropriate faculty member will develop a written educational plan for retraining.
- Retraining will be limited to 12 credit hours or additional skill training related to the identified skill deficiency and to those classes regularly scheduled during the period covered by the retraining plan.
- All retraining must be completed within a calendar year from the time the educational plan is agreed upon.
- The graduate and/or employer is responsible for the cost of books, insurance, uniforms, fees and other course-related expenses.
- 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 North Central Texas College and its employees 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 Division Chair within 90 days of the graduate's initial employment.

Transfer Credit

NCTC guarantees to its Associate of Arts and Associate of Science 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.

Transferability means acceptance of credit toward a specific major and degree at a specific institution. These three components must be identified by the student during the application for admission process prior to the first semester of enrollment at North Central Texas College.

- Limitations on total 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.
- Transferability refers to courses in a written transfer/degree plan filed in a student's file at North Central Texas College.
- Only college-level courses with Community College Academic Course Guide Manual approved numbers are included in this guarantee.

If all the above conditions are met and a course or courses are not accepted by a receiving institution in transfer, the student must notify the Provost at North Central Texas College within 10 days of notice of transfer credit denial so the "Transfer Dispute Resolution" process can be initiated.

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

Important Notice to All Students

CIVIL RIGHTS: In compliance with Title VI of the Civil Rights Act of 1964 (P.L.88-352), Title IX of the Education Amendments of 1972 (P.L. 92-318). and the Age Discrimination Act of 1978 (P.L. 92-256), North Central Texas College does not discriminate against or exclude from participation in any of its programs or activities, either in the student body or the staff, any person on the grounds of sex, race, color, religion, age, handicap, national origin, or veteran status.

RIGHTS OF INDIVIDUALS WITH DISABILITIES: North Central Texas College complies with Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112), the Americans With Disabilities Act of 1990, and with the ADA Amendments Act (ADAAA) of 2009 and does not discriminate on the basis of a disability in the operation of its educational programs or in its admission and employment practices. Special emphasis will continue to be placed on correcting conditions which may inadvertently discriminate against any individual with a disability. For further information and assistance, contact the Office for Students with Disabilities (OSD) at (940) 668-4209.

ACCESS TO: North Central Texas College offers educational and occupational/ technical programs, as described in the College catalog, to all persons without regard to sex, race, color, religion, age, handicap, or national origin. Admission to these programs is based on college admission requirements and individual program policies as outlined in the catalog.

FAMILY EDUCATIONAL RIGHTS AND RECORDS ACCESS ANNUAL NOTICE: In compliance with the Family Educational Rights and Privacy Act of 1974, the College may release information classified as “directory information” to the general public without the written consent of the student. Directory information includes: student’s name, address, telephone number and student email; dates of attendance; educational institution most recently attended; and other information including major field of study and degrees and awards received. A student may request that directory information be withheld from the public by giving written notice in person to the Records Office during the first 12 class days of a fall or spring semester or the first 4 class days of a summer session. If no request to withhold directory information is filed, information is released upon inquiry. No transcript or academic record is released without written consent from the student except as specified by law.

RELIGIOUS HOLY DAYS: In compliance with Texas Education Code, Section 51.911, North Central Texas College allows a student who is absent from class for the observance of a religious holy day to make up the class work for that day within a reasonable time after the absence. Students who intend to be absent for religious holy days must notify each instructor in writing by the 15th calendar day of the semester.

ILLEGAL DRUGS: In compliance with HR253/SR645, no illegal drugs shall be allowed on campus, and any student caught with an illegal drug will be suspended from attendance or enrollment for a specified period of time. See the Vice Chancellor of Student Services for a copy of due process procedures.

STANDARD OF CONDUCT: The college student is considered a responsible adult. The student's enrollment indicates acceptance of the standards of conduct published in the Student Handbook.

POLICY ON HIV INFECTION AND AIDS: The North Central Texas College policy on HIV infection and AIDS is available in the office of the Vice Chancellor of Student Services. An educational pamphlet on AIDS is available in the Counseling Center and the Office of the Vice Chancellor of Student Services.

BACTERIAL MENINGITIS VACCINATION: During the 2011 Texas Legislative session, Senate Bill 1107 (SB 1107) was passed and signed into law. Effective with enrollment after January 1, 2012, SB 1107 requires students, with certain exceptions, to provide proof of vaccination or booster no later than the 10th day before the first day of the semester. During the 2013 Texas Legislative session, Senate Bill 62 (SB 62) was passed. Please check the NCTC website for updated information.

INCLEMENT WEATHER AND CLOSING OF THE COLLEGE: North Central Texas College schedules its instruction to comply with the Common Calendar published by the Texas Higher Education Coordinating Board. College instructors meet all scheduled classes as published in the class schedule. If severe weather or emergency situations make it advisable to discontinue classes, the college makes every effort to notify its students through a variety of means. An official closing of the college delays all work until the next class meeting or until a date determined by the instructor. Make-up days for official college closings will be scheduled as needed.

If a student is in an area experiencing severe weather and the college has not officially closed, it is that student's responsibility to exercise caution and decide whether to risk coming to class. Should the student decide not to attend class, the student must contact the instructor about the instructor's rules for make-up work.

For information about your rights or about grievance procedures, contact the Vice Chancellor of Student Affairs, North Central Texas College, 1525 W. California Street, Gainesville, TX, 76240, (940) 668-4240.

Academic Calendar 2019-2020

Event	Fall 2019	Fall 2019 1st 8-Week	Fall 2019 2nd 8-Week	Winter Mini-Mester 2019
Last Day of 100% Refund for Courses Dropped	August 25	August 25	October 20	December 15
Classes Begin	August 26	August 26	October 21	December 16
Labor Day Holiday-College Closed	September 2	September 2		
Official Date of Record	September 9	September 3	October 28	December 19
Last day to withdraw from a class with 'W'	November 1	September 27	November 25	January 2
Thanksgiving Holiday-College Closed	November 27-30		November 20-23	
Final Exams (see final exam schedule)	December 9-14	October 14-18	December 9-14	January 9
Commencement Ceremonies	December 13			
Term Ends	December 14	October 18	December 14	January 9
Final Grades, Attendance Rosters & Grade Rolls due at Noon	December 14	October 19	December 15	January 10

Event	Spring 2020	Spring 2020 1st 8-Week	Spring 2020 2nd 8-Week	May Mini-Mester 2020
Last Day of 100% Refund for Courses Dropped	January 19	January 19	March 22	May 17
Martin Luther King Holiday Observed-College Closed	January 20	January 20		
Classes Begin	January 21	January 21	March 23	May 18
Official Date of Record	February 3	January 27	March 30	May 21
Spring Break-College Closed	March 16-21			
Memorial Day Observed – College Closed				
Last day to withdraw from a class with 'W'	April 3	February 21	April 24	June 1
Final Exams (see final exam schedule)	May 11-16	March 9-13	May 11-16	June 5
Commencement Ceremonies	May 15			
Term Ends	May 16	March 13	May 16	June 5
Final Grades, Attendance Rosters & Grade Rolls due at Noon	May 16	March 14	May 16	June 6

Event	Summer I 2020 5 ½ -Week Session	Summer II 2020 5 ½ -Week Session	Summer III 2020 10 -Week Session
Last Day of 100% Refund for Courses Dropped	June 7	July 14	June 7
Classes Begin	June 8	July 15	June 8
Official Date of Record	June 17	July 27	June 23
Last day to withdraw from a class with 'W'	June 30	August 6	July 16
4th of July Holiday Observed-College Closed	July 4		July 2
Final Exams (see final exam schedule)	July 14	August 20	August 13
Term Ends	July 14	August 20	August 13
Final Grades, Attendance Rosters & Grade Rolls due at Noon	July 15	August 21	August 14

College Personnel

Board of Regents	Board Position	Term Expires
Karla Metzler, Gainesville	Chair	2021
Richard Haayen, Gainesville	Vice-Chair	2023
Christy Morris, Gainesville	Secretary	2019
Patsy Wilson, Gainesville	Member	2021
Jerry Don Henderson, Gainesville	Member	2023
Jon Grime, Muenster	Member	2021
Matt Chalmers, Gainesville	Member	2019

Presidents Leadership Team

Dr. Brent Wallace, Chancellor - Chief Executive Officer
B.B.A., Hardin-Simmons U.; M.A., Abilene Christian U.; Ph.D., Texas Tech U.

Dr. Andrew Fisher, Provost-Chief Academic Officer
B.A., U. of North Texas; M.S., Texas A&M U. Commerce; Ed.D., Texas A&M U. Commerce

Debbie Sharp, Vice Chancellor of External Affairs
B.S., M.S., U. of North Texas

Dr. O. John Maduko, Vice Chancellor of Student Services
M.D., St. Matthew's University School of Medicine

Robbie Baugh, Vice Chancellor of Administrative Affairs
B.B.A., U. of North Texas; M.B.A., U. of Mary Hardin-Baylor

David Brown, Associate Vice Chancellor - Institutional Research and Strategic Planning
B.S., M.B.A., U. of North Texas

Roy Culberson, Associate Vice Chancellor Campus Operations
B.A., M.Ed., U. of Texas at El Paso

Denise Cason, Associate Vice Chancellor of Information Technology
A.S., North Central Texas College; B.S., Bellevue Univ.

Deans & Directors

Jennifer Beal, Director of Admissions
A.S., North Central Texas College; B.S., Texas Woman's Univ.

Kim Birdwell, Director of Graham Campus
B.S., Texas Tech U.

Jessica Carlile, Dean of Adult and Continuing Education
B.S., M.Ed. Texas Woman's U.

Melinda Carroll, Senior Director of Institutional Research and Reporting
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Dr. Roxanne Del Rio, Dean of Student Affairs
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Jessica DeRoche, Director of Flower Mound Campus
B.A., M.Ed., U. of North Texas

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Sara Flusche, Dean of Math, Science & Teacher Education
A.A., A.S., North Central Texas College; B.S., Texas Women's U.; M.A. U. of Texas-Dallas

Daisy Garcia, Director of Student Life
A.A.S.; B.B.A, U. of North Texas

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Karen Stewart, Cosmetology
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Rob Stone, Fire Science

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A.A., Kilgore College; B.M.E., Baylor U.; M.C.M., Southwestern Baptist Theological Seminary

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A.D.N. Grayson College; B.S., M.Ed., Univ. of Texas-Arlington

Thom Talbott, Division Chair, Performing Arts
B.A., Baker University; M.A., Texas Woman's U.

Sherri Taylor, Vocational Nursing
A.A.S., Trinity Valley Community College

Becky Terrell, Equine Science
B.S., Texas Tech U.; M.S., Colorado State U.

Erica Thompson, English
B.A., U. of North Texas, M.A., Midwestern State Univ.

Bonnie Toronjo, Surgical Technology
Manuel Trevino, Jr. Database Management
B.S., M.S., Univ. of Phoenix

Brian Waddell, Tennis Coach, Physical Education
B.S., Cumberland College

Danielle Wagner, English
B.A., M.A., Midwestern State U.

Dawn Watts, Teacher Education

B.S., M.Ed., Univ. of North Texas

Kristen Weinzapfel, English
B.S., Texas Tech University; M.A., Midwestern U.

Amy Whiting, Chemistry
B.S., U. of Mary Hardin Baylor; M.S., U. of Notre Dame

Jill Willi, Chemistry
A.S., North Central Texas College; B.S., Texas Woman's Univ.; M.S., Univ. of North Texas

Donnie Willis, Networking
B.S., Prairie View A&M; M.S., Colorado Technical Univ.

Aziel Wilson, Mathematics
B.S., M.S., Texas Woman's U.

Danelle Wolf, Teacher Education
B.S., Texas Woman's U.; M.Ed., Lamar Univ.

Kevin Wood, Chemistry
A.A., Weatherford College; B.S., Tarleton State U.; M.S., Texas Woman's U.

Crystal R.M. Wright, Division Chair, History, Humanities, Philosophy
B.S., M.A., U. of North Texas

Eric Wright, Head Baseball Coach, Physical Education
A.S., Panola Junior College; B.S., Sul Ross State U.; M.Ed., U. of Texas Pan-American

Caroline Wunder, Economics
B.S., M.S., Univ. of North Texas

Jill Yoder, Mathematics
B.S., Goshen College; M.S., Wichita State U.; M.S., Iowa State U.

General Information

The legal authority of North Central Texas College is established by state statute (Texas Education Code, Section 130.003) which governs public community colleges. In accordance, North Central Texas College is a two-year institution primarily serving residents of Cooke, Denton, and Montague counties and the residents of Graham ISD by offering technical and academic courses for certification or associate degrees, continuing education, remedial education consistent with open-admissions policies, and programs of counseling and guidance. The College insists on excellence in all academic areas, instruction, research, and public service. Faculty research, using the facilities provided for and consistent with the College's primary functions, is encouraged.

Mission

The North Central Texas College is dedicated to student success and institutional excellence. NCTC encourages student achievement by providing affordable, quality learning environments, comprehensive student support, and public services.

The College District fulfills its mission by offering programs leading to associate degrees and certificates and by providing:

- University Transfer Education
- General Education
- Workforce & Technical Education
- Developmental Education
- Student Development
- Continuing Education
- Community Education

NCTC strives to meet nine Institutional Learning Goals, which support the college's mission:

1. A quality general education curriculum in all associate degree programs.
2. Quality freshman and sophomore level courses in arts and sciences which parallel the lower division offerings of four-year colleges and universities.
3. Quality technical programs leading directly to careers in semi-skilled and skilled occupations, and quality technical education program up to two years in length leading to certificates and associate degrees.
4. Quality, flexible, and responsive continuing education programs including workforce training, customized business and industry training, community education programs, and community service programs for occupational and entrepreneurial skills enhancement and/or cultural enrichment.
5. Assistance to students in achieving their educational goals by making available quality student and educational support services.

6. Quality programs and services in support of adult literacy and basic skills development as a means of workforce enhancement and expanding access to higher education.
7. A systematic, broad-based planning, research, and evaluation process, the ongoing pursuit of institutional effectiveness and continuous improvement among programs, services, and personnel.
8. A qualified, competent faculty, staff, and administration who are dedicated to carrying out the role, scope, and mission of the institution as adopted by the Board.
9. Adequate physical and financial resources to accomplish the role, scope, and mission of the institution are dedicated to the completion of Institutional Learning Goals.

Vision

North Central Texas College will be a recognized leader in higher education and a catalyst for economic, cultural, and community development.

Values

North Central Texas College is accountable to its students, colleagues, and the community and holds the following values to be fundamental:

Affordable, Quality Education
NCTC is passionate about providing access to higher education. Its highly qualified faculty and staff and student-centered programs and services reflect NCTC's commitment to excellence.

Stimulating Learning Environments
NCTC fosters diverse, challenging, and engaging learning environments to empower its students to impact a global society as creative problem solvers, critical thinkers, and dynamic leaders.

Integrity

NCTC faculty, staff, and students act in an ethical, honest and responsible manner.

Innovation

NCTC embraces creative ideas and challenging initiatives.

Cohesive Relationships
NCTC cultivates productive partnerships through teamwork, personalized attention, and open communication.

Encouragement
NCTC supports students, faculty and staff by welcoming diversity and promoting mutual respect.

Statement of Ethics and Philosophy

The College is dedicated to providing quality educational opportunities to all students and to all other persons and businesses wishing to avail themselves of its services. The College is aware of the complexity of challenges facing both individual and corporate members of a technologically demanding society. Therefore, it pledges the commitment of its Trustees, administration, faculty, and staff to an educational program of excellence and flexibility for a constituency of diverse needs and backgrounds. In order to provide its students with the opportunity to improve their quality of life, the College is dedicated to providing dynamic, responsive and quality services.

The College District seeks to treat each person of the College community as a unique individual and to provide a positive, encouraging, and success-oriented environment. College District policies and practices which protect the rights and development of each individual in the College community shall be enforced. Protection from unlawful discrimination, including conduct that constitutes sexual harassment, and freedom to develop as a student and/or College employee shall be promoted.

The College District accepts its responsibilities to its students, to its employees, and to the members of the community. Further, the College District is committed to meet these responsibilities with balance, fairness, accountability, and ethical integrity. It is the policy of the College District to apply the highest ethical standards to all members of the College community including the Board of Regents, administration, staff, and faculty in achieving its mission and in managing its resources efficiently and effectively to reach its goals and objectives. The College District shall include a code of ethics for Board members, administration, staff, and faculty in its Policy Manual.

Public Service

North Central Texas College responds to the special needs and interests of the public, but it realizes that all these needs and interests cannot be served solely in a formal classroom setting through the traditional academic curricula. Members of the community at large are welcome on campus at any time and are given access to many college facilities and services, such as the Library, free of charge. Other facilities and services, including space for meetings, workshops, and similar activities are made available at minimal charges.

For more information contact the office of the Vice Chancellor of Administrative Affairs at (940) 668-4201.

Specialized facilities allied with the college's instructional programs also are made available to the community as a public service. In cooperation with the Division of Continuing Education, departments regularly sponsor workshops, seminars, and short courses aimed at disseminating information to individuals as well as to business.

All members of the college faculty, administration, and staff welcome inquiries related to their particular areas of specialization from community organizations and individuals.

A widely varied program of artistic, social, and cultural events recitals, concerts, stage productions, lectures, exhibits and others are sponsored by the college.

Strategic Plan

In order to fulfill its mission, North Central Texas College has identified three priority goals and the "will" statements that describe the College's commitment in each area:

1. **Foster Student Success**
   NCTC will:
   - Improve student retention at the course and program level, term to term
   - Improve student completion rates from Fall to Spring
   - Provide learning and career pathways to foster continuous learning
   - Align courses and programs with external standards and professional requirement
2. **Meet Community Needs**
   NCTC will:
   - Identify and respond quickly to the existing and changing needs of our regional economy
   - Partner with businesses, ISDs, municipalities and higher education institutions
   - Offer events that improve community life and foster institutional support
3. **Ensure Institutional Excellence**
   NCTC will:
   - Strive for further efficiencies in the corporate function of the institution
   - Maintain our physical, equipment and technology infrastructure to meet the needs of students, employees, and community
   - Provide professional development to improve performance of employees and work groups.

Small Business Development Center

The Small Business Development Center (SBDC) is a non-profit business consulting service that provides guidance free of charge to present and prospective business owners. The goal of the SBDC is to provide practical assistance to clients that will help their business survive, grow and prosper. SBDC staff members assist clients in such areas as writing a business plan, identifying funding sources, managing the business, marketing and meeting federal and state regulations. The SBDC offers training seminars on business related issues, such as marketing, accounting, financial management and operating a home based business.

Call for an appointment, (940) 498-6470

Small Business Development Center
North Central Texas College
1404 N Corinth St, Suite 308
Corinth, Texas 76208

Tobacco-Free Campus

North Central Texas College is committed to providing a safe and healthy environment for its employees, students and visitors. NCTC recognizes the health hazards of tobacco use and of exposure to secondhand smoke. NCTC restricts the use of any and all tobacco products and is aware that tobacco use influences underage students, accumulates unsightly tobacco litter and interferes with assuring clean air for all who come to the college. Information regarding the Tobacco Free policy is available on the NCTC website, www.nctc.edu/tabacco-free.html

History

North Central Texas College, formerly Cooke County College, was established in 1924 with Randolph Lee Clark as its first president. A pioneer in Texas education, Clark is honored with an official Texas Historical Commission Marker on campus.

The college was operated as an extension of the Gainesville Independent School District until May 7, 1960, at which time the voters of Cooke County approved the expansion of the district to include all of Cooke County. As the college grew, its name was changed from Gainesville Junior College to Gainesville College and then to Cooke County Junior College (in 1960). The “junior” was dropped soon thereafter and, reflecting its expanded role as a true comprehensive community college, Cooke County College officially became North Central Texas College in June 1994.

Gainesville Campus

Donation of five acres of land by William T. Bonner made the move of the main college campus from Gainesville High School to its present site possible in 1959. Subsequent acquisitions of land have increased the size of the campus to more than 132 acres. It is situated in the southwest section of Gainesville on U.S. Highway 51, about one mile from downtown.

Since 1959, NCTC's Gainesville Campus has maintained a steady program of physical growth to meet the needs of its expanding program offerings. Its physical plant is currently valued at $36.1 million. Modern facilities now in operation include a total of 21 separate buildings. In addition to classrooms, campus buildings host learning laboratories, shop facilities for technical programs, Field House, Student Activities Center, Bookstore, cafeteria, and even a Planetarium. Athletic outdoor facilities include tennis courts, intramural playing fields, and a baseball/softball field complex.

We are especially proud of our facilities for both the visual and performing arts. Our state-of-the-art **First State Bank Center for the Performing Arts** is one of the region's finest performance venues for drama, dance, and music. The facility also contains excellent instructional and rehearsal spaces for its programs.

The newest buildings on campus is our modern and well-equipped **Industrial Technology Center** where programs ranging from welding and HVAC to machining and industrial mechanics are offered and the **Leo and Mabel Scott Health Science Center** which offers the most authentic training possible in fields such as nursing and radiological technology.

NCTC Gainesville Campus
1525 West California Street
Gainesville, Texas 76240-4699
(940) 668-7731
Fax (940) 668-6049
www.nctc.edu

First State Bank Exchange at NCTC Denton

North Central Texas College is proud to announce the coming of the First State Bank Exchange to downtown Denton during the 2019-2020 school year. It is set to open the Fall 2019 semester.

Creating a hub for students downtown, the 45,214 sq. ft. center will be all about convenience and learning. Transfer credits and Associate Degrees including Associate of Arts (AA), the Associate of Science (AS), and the Associate of Arts in Teaching (ATT) will be the core focus for the nine classrooms, two large lecture classrooms, and a single large lecture hall. In addition, there will be a testing center, computer lab, security office, and NCTC's new Mane Stop – a one-stop-shop for student services.

The FSB Exchange also brings to downtown an additional 300 parking spaces in our separate four-story parking garage. Students will also have ready access to complementary shuttles and train service via DCTA's transit station, two blocks from campus

FSB Exchange at NCTC Denton
314 E. Hickory Street
Denton, TX 76201
Call or text (940) 251-0701

Corinth Campus

The Corinth Campus, which officially opened in January 2000, is situated just off Interstate 35 in Corinth, Texas, and is centrally located in Denton County. With an enrollment of approximately 3,800 students taking a wide range of credit courses, this campus has the college's largest student base. The 75,000 square foot building located on the Corinth Campus provides students with modern, fully equipped classrooms, science and computer labs and other amenities. Students also have access to a wide range of services, including admissions, financial aid, tutoring and counseling. In addition, there is a full-service bookstore and a modern library.

Pinnell Square

While the Corinth Campus is centrally located in Denton County, NCTC also has satellite locations throughout the area to better serve students. NCTC has expanded to Pinnell Square, directly across from the Corinth Campus. Located in Pinnell Square are NCTC's Surgical Technology Program Vocational Nursing, EMS Career Connection Center, Lifelong Learning, RITA Grant and the Business Development Center.

NCTC Corinth Campus
1500 North Corinth Street
Corinth, Texas 76208-5408
(940) 498-NCTC
Fax (940) 498-6200

Flower Mound Campus

The Parker Square location serves as a centralized higher education center in the southern portion of Denton County. It complements the NCTC Corinth Campus located in central Denton County.

The Flower Mound campus is a 32,000 square foot building located in the beautiful Parker Square destination. This modern and sophisticated campus provides students with a technologically advanced learning environment. In addition to the library and general access computer lab, bookstore, testing center and student study areas, the campus also includes 10 classrooms, a lecture hall, two computer labs, and a universal science lab. Students attending this campus can receive a full-range of support services including academic advising, counseling, financial aid, and tutoring.

NCTC Flower Mound Campus
1200 Parker Square
Flower Mound, Texas 75028
(972) 899-8400

Bowie Campus

The Bowie Campus provides students with modern classrooms, computer and science labs, library, and student services. Through the support of local employers, donors, the City of Bowie and other key partners, the campus was recently expanded to house a larger library and workforce training programs, such as Petroleum Technology.

NCTC Bowie Campus
810 S. Mill Street
Bowie, Texas 76230-1247
(940) 872-4002
Fax (940) 872-3065

Graham Campus

In November 2009, the citizens of Graham voted to join the NCTC service area and approve a branch campus maintenance tax to support the maintenance and operations of the campus.

The Graham Knowledge Base Foundation funded the renovation of the former Shawnee Elementary Campus and created the facilities, technology, and distance education capabilities for instruction and workforce training. The facility has over 49,800 square feet of instructional and administrative space, including a large lecture hall, performance stage, distance education classrooms, and a computer lab.

NCTC Graham Campus
928 Cherry Street
Graham, Texas 76450
(940) 521-0720

General Admission Policy

North Central Texas College is committed to providing quality education to the community and the students who wish to attend to pursue higher education. Students may begin their studies in the Fall (August or October), Spring (January or March), Summer I (June), Summer II (July), or Summer III (June/July) semesters. NCTC has an open admission policy that allows all students to be admitted regardless of previous academic history. We encourage students from a wide range of diverse backgrounds to attend North Central Texas College to meet their educational goals.

Non-citizen students seeking admission at NCTC who do not hold a temporary visa of any category, but who hold an undocumented immigrant status and/or have graduated from a Texas public high school or received a GED in Texas are eligible for admission. Please contact the Office of Admissions for additional information.

NCTC follows official state-mandated policy regarding the Texas Success Initiative for all entering students.

Admission Requirements

In its admission policies and practices, North Central Texas College does not discriminate on the basis of sex, race, age, creed, handicap, or national origin. The following steps must be taken for general admission to NCTC:

1. **Application For Admissions:** Forms may be submitted by using the ApplyTexas Application at: www.applytexas.org. Paper applications may be downloaded from the admissions page of the NCTC website or obtained from the NCTC Admissions Office.
2. **Official Transcripts:** As applicable, an official high school transcript or home school academic record with date of graduation, documentary proof of GED certification or, in the case of a transfer student, official transcript(s) reflecting all work taken from all regionally accredited institutions of higher education must be on file in the Office of Admissions by the official date of record at North Central Texas College. All transcripts submitted become the property of NCTC and cannot be returned. Only copies of the documents will be supplied upon request.
3. **Residency:** For tuition purposes, students who enroll in North Central Texas College will be classified in one of three categories: in-district resident, in-state resident, or out-of-state (non-resident of Texas). The residency status of each student applying at NCTC is determined during the admissions process, based upon documentary evidence available to make that decision. The following definitions briefly describe the residency requirements specified in Texas statutes and in rules and regulations of the Texas Higher Education Coordinating Board.
    a. **In-district residents** reside in Cooke County or Graham ISD and have been residents of Texas (as defined by the State of Texas) for the 12 months preceding the official date of record. In-district residents must be able to provide documentation of residency.

b. **In-state residents** reside in a Texas county other than Cooke County or Graham ISD and have been residents of Texas (as defined by the State of Texas) for the 12 months preceding the official date of record.
c. **Out-of-state resident** status pertains to a student under eighteen years of age who lives away from his/her family and whose family resides in another state or whose family has not resided in Texas for the 12 months preceding the official date of record, or a student eighteen years of age or over who resides out of Texas or who has not been a resident of the state for the 12 months preceding the official date of record.
d. **Residency reclassification** should be completed by the official date of record of the current semester. Students are responsible for providing any necessary documentation to be eligible for residency reclassification. Students needing additional information about residency determination should contact the campus Office of Admissions.

5. **Texas Success Initiative (TSI) Assessment:** The Texas Success Initiative, TSI, is a state law that requires all Texas public institutions to determine college readiness in reading, writing and mathematics for all degree-seeking students, including, dual credit, incoming freshman, and transfer students. TSI status does not affect your admission to NCTC. All TSI- liable students are required to submit the appropriate TSI testing scores or exemptions before enrolling for courses at NCTC. Please see the TSI section for a list of exemptions.Students must complete a Pre-Assessment Activity (PAA) prior to scheduling TSI testing at NCTC.
6. **Health Records:** North Central Texas College acknowledges the Texas Department of Health's request that all students have proper health inoculations and records. The College stresses the importance for all students to update their personal inoculations, especially those for mumps, measles, and rubella. The College reserves the right to request from each student such inoculation records to be placed in their personal student file should the Texas Department of Health mandate such a requirement. Students in Health Occupations programs are required to be immunized against Hepatitis B. Students enrolled in a specific course may be required to show proof of major medical health insurance.
Important Note on Bacterial Meningitis Vaccination: During the 2011 Texas Legislative session, Senate Bill 1107 (SB 1107) was passed and signed into law. Effective with enrollment after January 1, 2012, SB 1107 requires students, with certain exceptions, to provide proof of meningitis vaccination. During the 2013 Texas Legislative session, Senate Bill 62 (SB 62) was passed. Please check the NCTC website for additional information.
7. **Admission to Health Science Programs:** Admission to a Health Science program is contingent upon admission to NCTC; however, granting of admission to the college does not guarantee admission to the specific Health Science program. Refer to specific programs for any additional admission requirements.
8. **First Year Experience (NCTC 1001) or Transfer Orientation**: All first-time college students, including previous Dual Credit students, are required to enroll and complete the First Year Experience course (NCTC 1001) during their first year of enrollment. Transfer students will complete a Transfer Orientation through the MyNCTC student portal prior to the official date of record of their first semester of enrollment at NCTC.

Methods of Admission

Freshman or GED

Students enrolling in college for the first time may apply for admission based on one of the following categories:

- Students who graduate from an accredited public or private high school must submit an official high school transcript showing the date of graduation.
- Students who have completed a non-traditional secondary education course of study in a non-accredited private school setting, including home school, must submit an academic record indicating the curriculum completed and graduation date.
- Students who have satisfactorily completed the Test of General Education Development (GED) must submit official GED test scores or an official GED certificate. Copies will not be accepted.
- North Central Texas College will not recognize a student as a high school graduate who has obtained a diploma through a school or online program that requires only payment with little or no coursework requirements. Determination of the legitimacy of these diplomas will be at the discretion of the Office of Admissions. Graduates of such programs will be considered for admission on an individual approval basis (see Individual Approval section below).

Dual Credit

Dual credit refers to courses taught by NCTC in which students are eligible to receive college and high school credit simultaneously. Courses are limited to NCTC Core Curriculum, Field of Study Curriculum, Foreign Language, or if the course offering is part of a Early College Educational Program. Eligibility requirements are as follows:

- Only high school students who have met all the eligibility requirements (academic and behavioral) and who are recommended by the high school principal/counselor are eligible to enroll in dual credit courses. Students must be college ready as evidenced by TSI (Texas Success Initiative) Assessment scores and have a high school GPA of "C" or higher. To remain eligible, students must maintain a "C" or higher in each dual credit course.
- Home or private schooled students may enroll in dual credit courses. All dual credit requirements apply.
- Dual Credit students are not eligible to take college preparatory/remedial courses at NCTC.

Dual Credit Admission Requirements

Students must submit the following to NCTC for admission:

- Application for Admission through Apply Texas

- Current high school/college transcripts
- Official TSI test scores or exemptions
- Dual Credit Registration Form - this form must be completed accurately with required signatures and NCTC course information.
- Students that are registering for Dual Credit courses that will be taught on any of the NCTC campuses will be required to submit proof of the Bacterial Meningitis immunization. Students registering for courses offered on the high school campus or online are not required to submit proof of the immunization.

Student Eligibility

High School students who meet and maintain all academic and behavioral requirements and who are recommended by the high school principal/counselor are eligible to enroll in dual credit courses.

Appropriate scores on any of the following approved tests may be used to determine eligibility for dual credit: SAT, ACT, PSAT/NMSQT, TSI Assessment, and STAAR EOC. *All scores are subject to change based on the Texas Higher Education Coordinating Board.*

The testing standards include:

- ACT: Composite score of 23 with 19 on English and/or Math.
- SAT - New SAT: 530 on Math and 480 on EBRW (Evidenced Based Reading and Writing), no composite score.
- STAAR End of Course (EOC): Score of 2000 on English II reading test, score of 4000 cumulative on Reading/Writing on English II.
- TSI Assessment standards: Reading 351, Writing Multiple Choice score of 340 with an essay of 4 or Multiple Choice of 339 or lower with an Essay of 5; Math 350 or higher.
- PLAN Aspire: THECB approved scores.
- PSAT: THECB approved scores.

Dual Credit students must show college readiness in at least one testing area to be eligible to enroll in dual credit courses, and they are highly encouraged to exhibit eligibility in at least the Reading section of any approved assessment for most courses. Dual Credit students taking English composition courses must be college ready in both Reading and Writing areas.

Dual Credit Load

High School students may enroll in the number of courses appropriate to their needs with an institutional upper limit of 18 hours per fall or spring semester without the appropriate approval from. A load of 12 hours per fall or spring semester should be considered advanced by most metrics for dual credit students.

Early Admissions

Early Admissions refers to students who have successfully completed their junior year of high school. Students must submit an official high school transcript or home or private school academic record to date, along with written approval from their high school principal or counselor. Students must also meet requirements for College Readiness through approved TSI (Texas Success Initiative) test scores previously mentioned. Students can choose Early Admissions or Dual credit, but cannot be in both programs at the same time. Early Admission students are not eligible to take college preparatory/ remedial courses at NCTC.

Individual Approval

This method of admission may be selected by non-high school graduates or GED completers. Students admitted through individual approval must sign a waiver stating that they understand they will be ineligible for financial aid without a GED or high school diploma, unless the minimum score requirements are met on the Ability to Benefit exam. Continued enrollment at NCTC will require completion of a GED or high school diploma within a year of signing this waiver. In addition to this, there are certain special admission programs that require a GED or high school diploma. It is the student's responsibility to check the requirements for the program to which he/she is applying.

College Transfer

Students previously enrolled at another accredited institution of higher education are eligible for admission. Credit will be awarded for prior course work according to the following conditions:

- Transfer applicants are considered for admission to North Central Texas College first on the basis of having received sufficient credit to demonstrate ability to make satisfactory progress.
- Transfer Credit Evaluation: Transfer of credit from another institution involves consideration of accreditation, comparability of course work, and applicability of that course work to a degree program.
- Course work from regionally accredited institutions can be evaluated without a written request. However, students are encouraged to submit a completed Transcript Evaluation Form to the Registrar's Office to expedite evaluation.
- Official transcript(s) reflecting all work taken from all regionally accredited institutions of higher education, as well as placement scores or TSI status, must be on file in the NCTC Office of Admissions by the official date of record of the student's first semester. If transcripts are not received by this time, then there will be an academic hold placed on the student's account.
- Credit for courses equivalent to those listed in the NCTC catalog will be given for credit earned at a regionally accredited institution of higher education. Courses noted as meeting core requirements at a Texas public institution will be evaluated and transferred in as satisfying the specific core component.

- Credit for equivalent courses will be awarded, according to the previously mentioned procedure. A minimum of 15 semester hours must be taken in residence before a degree can be awarded by North Central Texas College.
- Official course descriptions from out-of-state colleges previously attended may be needed to determine transfer credit toward equivalent course work. If a determination is unable to be determined, further recommendation will be required from the appropriate instructional area.
- Credit for all non-equivalent courses, which includes course work not listed in the core curriculum or general education requirements, will be awarded up to 15 hours of general elective credits to apply toward degree completion.
- All courses completed with a "D" or better on an official transcript will be considered as part of the academic history subject to transfer credit evaluation. Grades of "D" may not meet degree requirements based on departmental requirements.
- The Registrar's Office determines the total number of semester hours as well as grade points to be transferred. Students who complete the "Transcript Evaluation" form will be informed of their transfer credit four to six weeks after submitting the request. Student's transcripts may be evaluated administratively for financial aid purposes.
- Course work completed from non-regionally accredited institutions will be evaluated after a written request has been submitted by the student along with required documentation.
- Students with credit from non-regionally accredited institutions of higher education should submit an official transcript with course descriptions, learning outcomes and faculty credentials to the Registrar's Office for instructional review.
- The official transcript from institutions not regionally accredited only need to be submitted if a transcript evaluation for equivalent courses is needed.
- Foreign transcripts or credentials will not be evaluated or accepted for transfer coursework.
- PE courses may be waived for military service or for medical reasons. Required documentation include the student's DD214 indicating six months of active duty or a written statement from a physician.
- Credit will be evaluated for military courses and/or experiences based upon the evaluation recommendations as outlined in the American Council on Education Guide to the Evaluation of Educational Experiences in the Armed Services manual.

Readmission

Students wishing to return after a break of enrollment for two long semesters must reapply through ApplyTexas.org. Applicants who have attended institutions of higher education since last enrolled at NCTC must submit official transcripts from those institutions along with TSI scores from a state-approved assessment by the official date of record. If transcripts are not received by this time, then there will be an academic hold placed on the student's account.

Application for Admission

New students and former students who did not attend the previous two long semesters (Fall and Spring) must complete the admissions application.

Forms may be submitted by using the ApplyTexas Application at, www.applytexas.org. Paper applications may be downloaded from the admissions page of the NCTC website or obtained from the NCTC Admissions Office.

Students should be aware that future enrollment will be restricted if all admission records and documents are not on file by the official date of record of the first semester enrolling or returning to North Central Texas College. In addition, no transcripts will be issued until the student's file is complete.

Admission to Health Science Programs

All students must be granted admission to North Central Texas College prior to admission to special programs:

1. Students seeking admission to Health Sciences' programs (Emergency Medical Services, Fire Science, Allied Health Professions, Radiological Technology, Surgical Technology, Associate Degree Nursing or Vocational Nursing) must apply for admission to the college and also to the individual program.
2. The Health Sciences' program faculty will advise students of special pre-admission requirements for each program. The requirements vary, but may include a mandatory advisement session, a pre-admission test, recommendation letters, and/or immunization and physical examination records. Refer to specific programs for additional requirements.
3. Applicants will be notified concerning their status with the individual program by the Health Science or Nursing program coordinator prior to the registration period in which the program starts.

Other Regulations Affecting Admissions

A student on suspension from another college or university (as noted on the student's official transcript), will be required to submit an Appeal to the Admissions Office of NCTC in order to be eligible for enrollment. If approved for enrollment, the student will automatically be placed on Academic Probation status at NCTC, and therefore must earn a GPA of at least 2.0 in the first semester at NCTC in order to avoid moving to Academic Suspension status.

Any student falsifying registration information is subject to disciplinary action and dismissal.

International Students

International students are highly valued by North Central Texas College, and the multicultural influence they bring to the student body promotes a holistic educational experience for all members of the college community. Information provided below is current as of the publication of this catalog. The United States Citizenship and Immigration Service and the Department of Education have developed policies and procedures for student and institutional compliance with national security measures originating in the Patriot Act of 2001.

North Central Texas College
Attn: International Admissions
1500 N. Corinth Street
Corinth, TX 76208
940-498-6429
international@nctc.edu

Practical Training

Please see NCTC's international advisor for more details on Optional Practical Training (OPT) or Curriculuar Practical Training (CPT).

Students Applying from Outside the United States

Application for Admission
Submit application online at applytexas.org

Passport
Copy of photo ID page of valid passport.

Proof of Language Proficiency
Evidence of proficiency in the English language is required and can be satisfied by submitting a minimum TOEFL score of 71 (IBT) or 525 (PBT). NCTC code for score reporting is 6245.

Official Transcripts
Students are required to submit official transcripts from all schools attended. Credentials should be submitted in English and verify high school completion. Foreign transcripts must be accompanied by a general evaluation completed by a current member of NACES. A current membership roster may be found at www.naces.org.

Financial Support Documentation
Submit an original, notarized affidavit with supporting evidence dated within six months of the beginning of the semester for which the student is applying. Financial statements must indicate the sponsor has adequate funds readily available to cover all educational and personal expenses the student will incur throughout the duration of their studies at North Central Texas College. Contact NCTC International Admissions for current financial support requirements.

Health Records

Students under 22 years of age must provide evidence they have received the bacterial meningitis vaccination within the past five years.

Guidelines Agreement
Contact International Admissions at international@nctc.edu.

Dependents
Valid passport photo ID page required for any dependent who will accompany the student.

Proof of Housing
Information regarding on-campus student housing can be found at housing.nctc.edu. If the student plans to reside off campus, they must submit documentation of living arrangements such as a signed lease agreement in their name. If the student plans to reside with a U.S. sponsor, confirmation of room, board, and transportation to and from campus must be included on the affidavit of financial support.

TSI Assessment Exam
Must complete all three components of the TSI (Texas Success Initiative) exam or prove exemption to be eligible for enrollment in any core classes or degree program. A Pre-Assessment Activity (PAA) is required before scheduling the TSI exam at NCTC.

Students Transferring from a U.S. Institution

Application for Admission
Submit online application from https://www.applytexas.org

Language Proficiency
If currently enrolled in an ESL program, student must submit TOEFL score of 71 (IBT) or higher.

Official Transcripts
Students must submit official transcripts from all institutions attended. A minimum cumulative GPA 2.0 is required for admission. Foreign credentials must be accompanied by a general evaluation completed by current member of NACES - www.naces.org.

Travel Documents
Copy of photo page of valid passport, student visa, and all I-20s issued to student.

Transfer Clearance Form
Must be completed by international advisor at current institution and indicate student is in status, has met all financial obligations, and is eligible for transfer. Contact NCTC International Advisor regarding this form at international@nctc.edu.

Financial Support Documentation
Submit an original, notarized affidavit with supporting evidence dated within six months of the beginning of the semester for which the student is applying. Financial statements must indicate the sponsor has adequate funds readily available to cover all educational and personal expenses the student will incur throughout the duration of their studies at North Central Texas College. Contact NCTC International Advisor for current financial information requirements.

Health Records

Students under 22 years of age must provide evidence they have received the bacterial meningitis vaccination within the past five years.

Guidelines Agreement
Contact International Admissions at international@nctc.edu

Proof of Housing
Information regarding on-campus housing can be found at www.housing.nctc.edu. If the student plans to reside off campus, he or she must submit documentation of living arrangements; i.e., a signed lease agreement. if the student will reside with a U.S. sponsor, confirmation of room, board, and transportation to and from campus must be included on the affidavit of financial support.

TSI Assessment Exam
Must complete all three components of the TSI (Texas Success Initiative) exam or prove exemption to be eligible for enrollment in any core classes or degree program. Completion of a Pre-Assessment Activity (PAA) is required prior to scheduling the TSI exam at NCTC.

Dependents
Copy of photo ID page of passport, visa, and I-20 are required for any F-2 dependent.

Students Applying for Concurrent Enrollment

Application for Admission
Submit online application from https://www.applytexas.org

Official Transcripts
Students must submit official transcripts from all previous colleges or universities attended.

Concurrent Enrollment Approval
Must submit written approval from International Advisor at current institution.

Travel Documents
Copy of photo page of valid passport, student visa, and current I-20.

Health Records
Students under 22 years of age must provide evidence they have received the bacterial meningitis vaccination within the past five years.

TSI Assessment Exam
Must complete all three components of the TSI (Texas Success Initiative) exam or prove exemption to be eligible for enrollment in any core classes or degree program. Completion of a Pre-Assessment Activity (PAA) is required prior to scheduling the TSI exam at NCTC.

Students applying to transfer from an ESL program or who hold a non-immigrant status other than F-1 are encouraged to contact International Admissions at international@nctc.edu for information pertaining to our admission policies and any additional requirements.

Specific Requirements

For Temporary and Permanent Residents

Temporary and Permanent Residents seeking admission to North Central Texas College must present their Permanent Resident card (green card) at the time of admission. Some visa holders may be eligible to pay resident tuition. Please contact the Admissions Office at admissions@nctc.edu for further information.

Student Correspondence Policy

Student Email

Email will be the preferred method for official correspondence with accepted and currently enrolled students, and the College will maintain a reasonable expectation that electronic correspondence will be received and read in a timely manner.

North Central Texas College will use various and appropriate media and delivery methods for communication and corresponding with prospective, accepted and currently enrolled students. These may include, but are not limited to, electronic mail (email), text messages, web site and portal announcements, conventional mail delivery, paper documents and publications, and campus postings.

Text messaging can be used by authorized college officials to relay information about cancellations, admissions and academic requirements or deadlines, registration information, financial aid, and other matters that are time sensitive and necessary for student success.

All accepted and currently enrolled students will be assigned an official NCTC email address by the Information Technology Services Department. This address will be communicated to the student along with their acceptance letter from NCTC. This is the official student email address to which NCTC will send all official email communications.

Social Networking Policy

If a student maintains social networking sites such as Facebook, Twitter, etc., the student is responsible for keeping personal sites appropriate.

Students are encouraged to refrain from posting physical threats or derogatory comments about students, coaches, faculty, staff or the NCTC administration. Threats of physical violence are a violation of NCTC board policy FLB-Student Conduct. Violators may be reported to the police. Students found to be in violation of the policy may face disciplinary action.

Technical Support

The research, development and maintenance of technical support will reside with the NCTC Information Technology Services Department. Technical support will be delivered through appropriate and various means as determined by the ITS department.

Online Registration

Eligible students may register for classes via the online registration, or Add/Drop system, available through MyNCTC. Students will receive their MyNCTC network username and password upon initial processing of their application. MyNCTC is the online student portal used to access the following features:

- Review Admissions file and/or account holds
- Access Advising Worksheet showing progress towards degree or certificate completion
- View/print unofficial transcripts
- Add/Drop courses for eligible semesters
- View/print class schedules
- Check final grades at the end of each semester
- View/pay financial account balance or set up payment plan

NCTC feels that all students benefit from having ongoing conversations with their academic advisors to maintain progress towards educational goals, however, students with an identified academic plan have the opportunity to self-enroll if they meet the following criteria.

Eligibility for Online Registration

- Students who have met admissions requirements, are in good academic standing, and have no holds on their accounts
- Students who are enrolled in an associate's degree plan
- Students who are College Ready in all three TSI areas (Reading, Writing, and Math)
- Students who have met with their academic advisor and pre-selected classes for their academic plan

Students Required to Meet with an Advisor for Registration Assistance

- First-time college students (including previous Dual Credit students who are now at NCTC as a full or part-time student)
- Students who are not TSI complete in one or more subject area(s) and therefore required to enroll in preparatory coursework
- Students enrolled in a certificate program rather than an associate's degree plan
- Transfer students needing transcripts evaluated and credits applied from another institution, in order to meet course prerequisites
- Students currently on Academic Suspension (if appeal has been submitted and approved)

Academic Advising

Academic advising is an essential element of NCTC's commitment to ensuring that students take the proper courses in the proper sequence to meet their educational objectives. NCTC counselors and advisors provide academic advising services for new, current, and potential students.

Goals of Academic Advising

- Identify your purpose for pursuing an education or additional training at NCTC
- Discuss the relationship between your future career plans and an applicable major
- Understand the course requirements and sequencing of classes for your identified major
- Determine the best options for continuing your education beyond NCTC, such as university transfer
- Promote awareness of the campus resources available to help you achieve your goals at NCTC, such as Tutoring/Student Success services, Career Center, Completion Center, Financial Aid/Scholarships, and Student Life/Student Organizations

Who is My Advisor?

Currently enrolled students are assigned to an academic advisor based on their declared major or program of interest. You will visit with your advisor prior to registering for classes to ensure that you are on the right academic path, and also throughout each semester so they can check on your progress and discuss any challenges or successes. Your assigned advisor is listed on your MyNCTC account either when you look at your current class schedule, or on your Advising Worksheet.

All students should regularly review their Advising Worksheet saved in MyNCTC. Advising Worksheets are extremely important because they show both students and advisors exactly what courses need to be taken for students to achieve their educational goals.

> **Note**: Transcripts from all previously attended colleges or universities must be submitted to the Admissions Office along with a Transcript Evaluation Form in order for transfer work to be applied and an accurate Advising Worksheet saved to your MyNCTC account.

Please contact the Counseling and Advising Office at your preferred campus in order to speak with an advisor or counselor at any time before or during the semester, or email counseling@nctc.edu.

Corinth
(940) 498-6499

Gainesville
(940) 668-4216

Flower Mound
(972) 899-8412

Bowie
(940) 872-4002, ext. 5212

Graham
(940) 521-7120

Academic Fresh Start

Academic Fresh Start permits course work taken at NCTC that is at least 10 years old to be ignored for application purposes and determination of grade point average (GPA). Students applying to the institution or to a specific program (e.g. LVN, ADN, Paramedicine, etc.) may choose to invoke an Academic Fresh Start. Students must complete the Request for Academic Fresh Start form available in any NCTC Admissions Office at the time of application. Although grades on students' NCTC transcripts are not altered, the cumulative hours earned and cumulative GPA are set to 0 and an explanatory note is added to the transcript. Academic Fresh Start applies to all course work in a given semester regardless of the grades earned. Semesters chosen for consideration must be consecutive.

Auditing a Course

When space is available in a specific course and registration for credit students prior to a given semester has ended, those wishing to audit a course may do so by contacting the instructor of the course within the course specific department. When auditing, students take a course without receiving official credit for the course from North Central Texas College. After the course begins, a student's audit status may not change. All documentation/requirements are arranged between the audit student and the instructor of the course.

Texas Success Initiative (TSI)

The Texas Education Code, Section 51.403(e), authorizes the Texas Higher Education Coordinating Board to establish guidelines and reporting requirements. The purpose of Chapter 4, Subchapter C, is to implement the Texas Success Initiative for Texas public institutions of higher education. This includes assessing the academic skills of each entering undergraduate student prior to enrollment.

It is the intent of the Texas Higher Education Coordinating Board that Texas public institutions of higher education use the flexibility and responsibility granted under these rules to improve individualized programs to ensure the success of students in higher education.

The following students are exempt from TSI:

- Students who have graduated with an Associate's degree or higher from an accredited institution within the U.S.
- Students who earned a degree outside the U.S. must submit transcripts accompanied by a general evaluation completed by an accredited service. The evaluation must verify their degree to be the equivalent of an associate degree or higher earned at an accredited institution within the U.S. A list of accredited evaluation services may be found at www.naces.org/members.htm
- Any student wishing to enroll in a certificate program. Level I certificates are programs of one year or less that require at least 15 but no more than 42 semester credit hours.
- Students who are serving on active duty as a member of the U.S. armed forces, or serve as a member of a reserve component of the U.S. armed forces, or National Guard for at least three years preceding enrollment. All TSI rules apply when the student is discharged from the military.
- Students who were honorably discharged, released or retired from active duty as a member of the U.S. armed forces, the Texas National Guard, on or after August 1, 1990.
- Students who transfer from private or out-of-state institutions may use transferred courses for which college credit is earned in the areas of Reading, Mathematics, and Writing. List of equivalent NCTC courses are listed in the Transfer section.
- Students with the following scores: (Partial Exemptions available on tests taken on or after April 2004)

ACT - Composite score of 23; at least 19 on both English and/or Math portions. Note that scores must have been earned in one sitting within the past five years.

SAT - New SAT: 530 on Math and 480 on EBRW (Evidenced Based Reading and Writing), no composite score. Old SAT: composite score of 1070 and at least 500 on

Critical Reading and/or 500 on Math for tests taken after April 1995. Note that scores must have been earned in one sitting. Other scores apply to SAT tests taken before April 1995.

TAKS - For a period of five (5) years from the date of testing, a student who is tested and performs at or above the following standards of the Eleventh grade Texas Assessment of Knowledge and Skills (TAKS) may be exempted for the corresponding section: minimum scale score of 2200 on the mathematics section, minimum scale score of 2200 on the English Language Arts section with a writing subsection score of 3.

STAAR End-Of-Course (EOC): (End of Course Exam) English III - taken during 11^{th} grade year, score of 2000 on Reading and 2000 on Writing, or 4000 if score is combined; EOC Algebra II - taken during 11^{th} grade year, score of 4000.
* *These rules are subject to change by the Texas Legislature.*

An accepted TSI placement test is also required of all dual credit/early admission students from area high schools unless they are exempt.

Minimum Passing Standards

The following minimum passing standards shall be used by NCTC to determine a student's readiness to enroll in freshman-level academic coursework. The following assessments may be used for TSI purposes when on an official college transcript from a Texas public institution with coursework prior to Fall 2013:

ASSET

- Reading Skills - 41
- College Algebra - 46
- Writing Skills (objective) - 40
- Written Essay - 6.

COMPASS

- Reading Skills - 81
- Algebra - 60
- Writing Skills (objective) - 59 if Essay score 5 or higher
- Written Essay - 6.

ACCUPLACER

- Reading Comprehension - 78
- Elementary Algebra - 64
- Sentence Skills- 80
- Written Essay - 6.

THEA

- Reading - 230
- Mathematics - 270
- Writing - 220.

The minimum passing standard for the written essay portion of ASSET, COMPASS, ACCUPLACER, or THEA is a score of 6. However, an essay with a score of 5 will meet this standard if the student meets the objective writing test standard.

TSI Assessment*

- Mathematics - 350
- Reading - 351
- Multiple Choice score of 340 with an essay of 4 or Multiple Choice of 339 or lower with an Essay of 5

* *Statewide placement test-scores subject to change per the Texas Higher Education Coordinating Board.*

It is important to note that alternative test scores (ASSET, COMPASS, THEA and ACCUPLACER) will not be used by NCTC *unless* the scores are submitted on an official *in-state* transcript. The TSI Assessment scores must be submitted on an official transcript or in a sealed envelope from the institution's testing facility, or students can access the Accuplacer online portal to retrieve their own TSI Assessment score report for submission.

Students who do not meet minimum passing standards for any section of the TSI Assessment or other alternative test will be required to enroll in remediation for that area. Students are required to enroll in at least *one* area of remediation each semester until all remediation has been completed or retesting on the TSI Assessment has placed a student at college-level. If more than one subject area of remediation is required, students can be enrolled in more than one preparatory class in the same semester as well as any eligible college-level courses.

Regular and punctual attendance is expected of students enrolled in all classes, both preparatory and college-level, and instructors have the right to drop any student from a course in which the student has excessive absences. Students must complete all required preparatory courses with a "C or better" before proceeding to college-level course work in that subject area.

Students that have not passed a portion of the TSI Assessment may be enrolled in an integrated course which includes a credit, college-level course paired with preparatory, developmental support. Students are expected to attend and participate in both parts of the integrated course, and must successfully complete the credit portion of the course in order to satisfy TSI requirements in that content area.

> ***NOTE**: It is strongly encouraged that students who do not pass the Reading section of their placement test enroll in the preparatory Reading class during their first semester.*

If students so choose, they may retest on the TSI Assessment at any point during the semester in order to potentially place out of their current level of remediation. The student will then be eligible to proceed to the next level of course work in the next available semester for the subject areas in which the student received a higher score. Students should contact the Testing Center at their preferred campus to schedule an appointment for retesting on the TSI Assessment.

Transfer Students

Students who have completed coursework with a "D" or better in the following subject areas from an accredited institution, meeting NCTC's transfer work requirements, will be partially or completely exempt from placement/TSI Assessment testing.

Writing

ENGL 1301 Composition I

ENGL 1302 Composition II

ENGL 2311 Technical Writing

Any sophomore-level Literature

Reading

ENGL 1301 Composition I

ENGL 1302 Composition II

HIST 1301 US History to 1865

HIST 1302 US History from 1865

HIST 2301 Texas History

HIST 2321 World Civilizations I

HIST 2322 World Civilizations II

HUMA 1301 Intro. to Humanities

Any sophomore-level Literature

PSYC 2301 General Psychology

PSYC 2314 Lifespan Growth & Development

PSYC 2319 Social Psychology

PSYC 2320 Abnormal Psychology

PSYC 2330 Biological Psychology

GOVT 2306 Texas Government

GOVT 2305 Federal Government

PHIL 1301 Introduction to Philosophy

PHIL 2303 Introduction to Logic

PHIL 2306 Introduction to Ethics

SOCI 1301 Introduction to Sociology

SOCI 1306 Contemporary Social Problems

SOCI 2301 Marriage & Family Relations

SOCI 2319 Minority Studies
SOCI 2326 Social Psychology

Math

MATH 1314 College Algebra

MATH 1316 Plane Trigonometry

MATH 1324 Mathematics for Business & Social Sciences

MATH 1325 Calculus for Business & Social Sciences

MATH 1332 Contemporary Mathematics I

MATH 1342 Elementary Statistics

MATH 2412 Pre-Calculus (or any sophomore-level Calculus course)

First Year Experience

First Year Experience (NCTC 1001) is required of all first-time NCTC students, including former Dual Credit and Early Admission students. The goal of the First Year Experience course is to equip new students with information about college-level expectations, and knowledge of the NCTC resources which can help them have a more successful college experience. First-time college students are required to enroll in and complete NCTC 1001 during their first year of enrollment prior to completing 15 credit hours.

Transfer students are required to complete an online Transfer 101 Orientation through the MyNCTC student portal prior to the official date of record of their first semester of enrollment at NCTC.

Advanced Placement Examination

NCTC awards credit on the basis of local and national examinations, prior military experience, and professional certifications, subject to general limitations. A maximum of 18 semester hours of credit earned by examination-College Board Advanced Placement Program (AP), College Level Examination Program (CLEP) Subject Examinations, USAFI, and professional certifications-may be applied toward the award of a degree or certificate at NCTC.

Courses completed in the Armed Forces and will be evaluated and credit will be awarded based on the recommendation in ACE (American Council on Education) Guide to Evaluation of Educational experiences in the Armed Services. Such credit is not included in determining grade point averages and has the following restrictions:

- May not be used to reduce the 15 semester hours required in residence for any degree or certificate.
- May not be earned in any course in which the student has earned a grade of "F". Credit by exam cannot be used to replace a grade.
- Credit is awarded only in areas offered within the current curriculum of NCTC, and is appropriately related to the student's educational program.
- Once enrolled, students wishing to utilize AP or CLEP credit are required to do so by submitting official AP or CLEP test score reports to the NCTC Registrar's Office. If minimum AP or CLEP test scores are met, the applicable course credit will be applied to an NCTC transcript.

CLEP

College Level Examination Program

All student requests for CLEP examinations should be made prior to registration into the class for which credit is being requested. Once a course is attempted and a grade earned (A, B, C, D, or F), no credit by CLEP examinations will be allowed-CLEP scores cannot be used to replace a grade. If you are taking a CLEP exam with NCTC and having scores sent to another college or institution, you will need to verify their CLEP score requirements and course equivalencies as not all schools are the same.

For new/first-time NCTC students, credit will be recorded at the end of their first semester of enrollment in which they earn credits through regular scheduled classes. Continuing or currently enrolled NCTC students will have their credit recorded as soon as official score reports are available. Students wishing to use test results for courses that are prerequisite to NCTC classes they wish to take are responsible for having official examination scores sent to the college in time to be processed by the Admissions office.

North Central Texas College administers the College Level Placement Exam (CLEP) through the Testing Center, so please consult the NCTC Testing Center web page for the most current fees and available dates associated with CLEP testing. You must pre-register through the Official CLEP website at clep.collegeboard.org and also email gainesvilletesting@nctc.edu to reserve your seat for CLEP testing.

For a list of CLEP tests and the course credit you can receive at NCTC, please consult the chart, as NCTC does not grant credit for every CLEP exam offered. You are required to know the exact name of the CLEP exam you wish to take when you pre-register through their website. If you have ever attempted a course as evidenced by a grade on your transcript, then you are ineligible for that CLEP exam For example, if you failed ENGL 1301, you are ***not*** eligible to take the CLEP College Composition Modular exam.

Awarding Experiential Credit

North Central Texas College offers credit for experiential learning towards Level I and Level II Certificates and Associate of Applied Science career and technical degrees. Experiential learning is a process through which students develop knowledge, skills, and values from direct experiences outside a traditional academic setting and have those skills applied to course requirements. Military personnel, veterans, and adult learners may also be eligible to receive experiential credit based upon appropriate documentation and institutional guidelines. All credit granted for experience must be supported by official and verifiable documentation.

Guidelines for Receiving Credit

- Have met NCTC admissions requirements.
- Have transferred all previous credit(s) to NCTC.
- Must declare a major. Students seeking credit in Career & Technical programs must declare a Career & Technical Major. Career & Technical program degree plans are listed in the NCTC catalog under *Career & Technical Education* and *Health Sciences*.
- Students seeking credit in Career & Technical programs must submit documentation to Division Chair(s).
- Military personnel and veterans must submit transcripts and course description(s) to the Office of Admissions.

Determination of competence standards and the decision to award credit will be made by appropriate academic and subject experts (Program Coordinators, Division Chairs, Deans).

Students can receive credit for up to 18 semester hours towards an Associate of Applied Science degree. This includes experiential credit and credit by examination. This credit may not be used to reduce the 15 semester hours required in residence for any degree or certificate. A maximum of 30% of experiential credit can be applied for students seeking to complete a Level I or Level II certificate. Experiential credit may not be earned in any course the student is enrolled in after the official date of record or has previously attempted ("W" or "F" grades) or completed.

Students will be awarded experiential credit upon applying for graduation at North Central Texas College. It is recommended that the application for credit be completed within the first semester of enrollment.

Students can submit documentation for evaluation to receive experiential credit within the first semester of being enrolled, however, credit will not be applied until the application for graduation is complete. Once the evaluation process is complete, students will receive a letter from the Division Chair or Program Coordinator listing the awarded credits.

Division Chairs will provide the student with a letter that will exhibit a list of courses for which the student will receive credit. The letter will be good for five years. If the student does not graduate within the five years, the student will have to reapply for the credit or obtain written approval from the Division Chair stating the credit is still good.

A $75 fee must be paid for the evaluation process. If supplies are needed to complete the evaluation process, the student is responsible for the cost of supplies. Once fees are paid and all documentation is submitted, the grade of "S" (Satisfactory) will be posted to the NCTC transcript. The fee is waived for veterans and military students.

A copy of the credit approval letter and proof of payment must be submitted to the Registrar's Office before credit is applied.

> **Note:** Policies and procedures may differ at other colleges and universities. Students transferring to another college or university should become familiar with the policies and procedures at that college or university in regards to awarded credit and transfer of nontraditional course credits.

Armed Forces Credit

Student who has served in active duty capacity in the military service of the United States for a period of at least six (6) months and who has been honorably discharged or released, as verified by a DD214, will receive four (4) semester hours of credit for physical activity courses. Personnel on active duty with at least six (6) months in the military service may also receive this credit by presenting a certified letter from their commanding officer attesting to their period of active service.

Students may submit a Joint Services Transcript to the Office of Admissions for evaluation and determination of applicable credit. Courses completed in the Armed Forces will be evaluated and credit will be awarded based on the recommendation provided in the American Council on Education (ACE) Guide to Evaluation of Educational experiences in the Armed Forces.

Industry Credit

Partial degree requirements may be waived for industry certifications, such as A+, Linux +, Network+, Security+, CCNA, or similar certifications issued by a qualified authority (COMPTIA, Microsoft, CISCO, etc.). The appropriate Division Chair will maintain a list of the appropriate equivalent NCTC courses.

Professional certifications must meet current industry standards, be equivalent to the current college course that is requested, and have the appropriate number of classroom training hours required of the college course. Documentation must include a syllabus or other documents that specify topics taught, learning outcomes, and the number of clock hours required for the certification. Credit will be granted only for documented learning that demonstrates achievement of all outcomes for specific courses in an approved degree program. Program faculty will conduct evaluations of all requests and make recommendations for the amount of credit to be awarded. Recommendations will be forwarded to the Provost for final approval.

International Baccalaureate Diploma

The International Baccalaureate Diploma is an international program of courses and exams offered at the high school level. In keeping with Senate Bill 111 passed in 2005, NCTC will grant (CR) credit for IB exams with certain required scores beginning Fall of 2006.

Texas institutions of higher education must award 24 hours of course specific college credit in subject appropriate areas on all IB exams scores of 4 or above as long as the incoming freshmen have earned an IB diploma. However, course credit does not have to be awarded on any IB exams where the score received is a 3 or less. This may mean that such students will not receive 24 hours of college credit, even if they have an IB diploma.

Students must submit an official transcript of IBD test results to the Office of the Registrar at least two weeks prior to the first day of classes for transcript evaluation and advising. The student will be notified by the designated admissions officer of specific course credit for which the student is eligible upon completion of the IBD transcript evaluation. All IB students must show proof of meeting the Texas Success Initiative (TSI) requirements prior to their initial enrollment at North Central Texas College.

NCTC will not award a diploma based solely upon the number of IBD credits transferred in toward a degree requirement. NCTC and SACS (Southern Association of Colleges and Schools/Commission on Colleges) policies require students to take 25% of credit hours through NCTC instruction for graduation purposes.

Students bringing in an IB transcript for credit evaluation should consider the total number of qualifying credits to be awarded. Additional hours above the required amount to graduate may have an adverse impact on students' financial aid or other grant programs. In addition, no Texas public university or college shall be required to accept in transfer or toward a degree program more than sixty-six (66) semester credit hours of lower division academic credit.

Credit by Exam Chart

AP, CLEP & IBD

NCTC Credit for AP Examination

AP Exam	Score	NCTC Course Name	Course Number	Credit Hours
History of Art	3, 4, or 5	Art History I & II	ARTS 1303, 1304	6
Biology	3, 4, or 5	General Biology	BIOL 1408	4
Chemistry	3, 4, or 5	General Chemistry I & II	CHEM 1411, 1412	8
Computer Science	3, 4, or 5	Business Computer Applications	BCIS 1305	3
Macro Economics	3, 4, or 5	Principles of Macroeconomics	ECON 2301	3
Micro Economics	3, 4, or 5	Principles of Microeconomics	ECON 2302	3
Engl-Lang & Comp	3 or 4	Composition I	ENGL 1301	3
Engl-Lang & Comp	5	Composition I & Composition II	ENGL 1301 & ENGL 1302	6
French Language	3, 4, or 5	Elementary French	FREN 1411,1412	8
German Language	3, 4, or 5	Elementary German	GERM 1411,1412	8
Government & US Politics	3, 4, or 5	Federal Government	GOVT 2305	3
History - US	3, 4, or 5	US History to 1865	HIST 1301	3
History - US	3, 4, or 5	US History from 1865	HIST 1302	3
Statistics	3,4, or 5	Elementary Statistics	MATH 1342	3
Calculus AB*	3, 4, or 5	Calculus I	MATH 2413	4
Calculus BC	3, 4, or 5	Calculus I & II	MATH 2413 & MATH 2414	8
Music Theory	3, 4, or 5	Music Theory I & II	MUSI 1311, 1312	6

AP Exam	Score	NCTC Course Name	Course Number	Credit Hours
Psychology	3, 4, or 5	General Psychology	PSYC 2301	3
Spanish Lang	3, 4, or 5	Elementary Spanish I & II	SPAN 1411,1412	8
Physics 1	4 or 5	College Physics I	PHYS 1401	4
Physics 2	4 or 5	College Physics II	PHYS 1402	4
Physics C: Mechanics	4 or 5	University Physics I	PHYS 2425	4
Physics C: Electricity & Magnetism	4 or 5	University Physics II	PHYS 2426	4

**or Calculus AB subscore of 3, 4, or 5 from the Calculus BC exam*

NCTC Credit CLEP Examination

CLEP Exam	NCTC Required Score	Credit Granted	Equivalent Score
American Literature	50	3	ENGL 2327 or 2328
College Composition Modular	50	3	ENGL 1301
English Literature	50	3	ENGL 2322 or 2323
College Algebra	50	3	MATH 1314
Biology	50	4	BIOL 1408
Chemistry	50	4	CHEM 1411
Calculus	50	4	MATH 2413
College Mathematics	50	3	MATH 1332
Precalculus	50	4	MATH 2412
Foreign Languages			
French, Level I	50	8	FREN 1411,1412
French, Level II	59	14	FREN 1411,1412,2311,2312
German, Level I	50	8	GERM 1411,1412
German, Level II	60	14	GERM 1411,1412,2311,2312
Spanish, Level I	50	8	SPAN 1411,1412

CLEP Exam	NCTC Required Score	Credit Granted	Equivalent Score
Spanish, Level II	63	14	SPAN 1411,1412,2311,2312
		History & Social Sciences	
History of US to 1877	50	3	HIST 1301
History of US from 1877	50	3	HIST 1302
Lifespan Growth & Development	50	3	PSYC 2314
Macroeconomics, Principles of	50	3	ECON 2301
Microeconomics, Principles of	50	3	ECON 2302
Psychology, General	50	3	PSYC 2301
Sociology, Introduction	50	3	SOCI 1301
Western Civilization I	50	3	HIST 2321
Western Civilization II	50	3	HIST 2322
		Business	
Info Systems & Comp Applications	50	3	BCIS 1305
Management, Principles of	50	3	BMGT 1327
Marketing, Principles of	50	3	MRKG 1311

NCTC Credit for IBD Examination

IB Examination	Score	NCTC Course	Credit Hours
Biology (SL)	4, 5, 6 or 7	No credit given at this time, pending further consideration	0
Biology (HL)	4, 5, 6 or 7	No credit given at this time, pending further consideration	0
Business & Management	4, 5, 6 or 7	BMGT 1327	3

IB Examination	Score	NCTC Course	Credit Hours
Chemistry (SL)	4, 5, 6 or 7	CHEM 1411	4
Chemistry (HL)	4, 5, 6 or 7	CHEM 1411 & 1412	8
Computer Science	4, 5, 6 or 7	BCIS 1305	3
Economics (SL)	4, 5, 6 or 7	ECON 2301 & 2302	6
Economics (HL)	4, 5, 6 or 7	ECON 2301 & 2302	6
English (SL) Language A1 or A2	4, 5, 6 or 7	ENGL 1301 & 1302	6
English (HL) Language A1 or A2	4, 5, 6 or 7	ENGL 1301 & 1302	6
History of the Americas (HL)	4, 5, 6 or 7	HIST 1301 & 1302	6
Mathematics (HL)			
Mathematics (HL)	4, 5, 6 or 7	MATH 1314 & 1316	6
Mathematics with Further Mathematics	4, 5, 6 or 7	MATH 1314, 1316 & 1342	9
Mathematical Methods	4, 5, 6 or 7	MATH 2413	4
Mathematical Studies	4, 5, 6 or 7	MATH 1324	3
Modern Languages			
Language A1 or A2 (SL)			
French	4, 5, 6 or 7	FREN 1411 & 1412	8
German	4, 5, 6 or 7	No credit given at this time.	0
Portuguese	4, 5, 6 or 7	No credit given at this time.	0
Russian	4, 5, 6 or 7	No credit given at this time.	0
Spanish	4, 5, 6 or 7	SPAN 1411 & 1412	8
Language A1 or A2 (HL)			
French	4, 5, 6 or 7	FREN 1411, 1412, 2311 & 2312	14
German	4, 5, 6 or 7	No credit given at this time.	0
Portuguese	4, 5, 6 or 7	No credit given at this time.	0
Russian	4, 5, 6 or 7	No credit given at this time.	0

IB Examination	Score	NCTC Course	Credit Hours
Spanish	4, 5, 6 or 7	SPAN 1411, 1412, 2311 & 2312	14
Language B (SL)			
French	4, 5, 6 or 7	FREN 1411 & 1412	8
German	4, 5, 6 or 7	No credit given at this time.	0
Portuguese	4, 5, 6 or 7	No credit given at this time.	0
Russian	4, 5, 6 or 7	No credit given at this time.	0
Spanish	4, 5, 6 or 7	SPAN 1411 & 1412	8
Language B (HL)			
French	4, 5, 6 or 7	FREN 1411,1412, 2311 & 2312	14
German	4, 5, 6 or 7	No credit given at this time.	0
Portuguese	4, 5, 6 or 7	No credit given at this time.	0
Spanish	4, 5, 6 or 7	No credit given at this time.	0
Language AB Initio			
French	4, 5, 6 or 7	FREN 1411	4
German	4, 5, 6 or 7	No credit given at this time.	0
Portuguese	4, 5, 6 or 7	No credit given at this time.	0
Russian	4, 5, 6 or 7	No credit given at this time.	0
Spanish	4, 5, 6 or 7	SPAN 1411	4
Music	4, 5, 6 or 7	MUSI 1306 & 1311	6
Philosophy	4, 5, 6 or 7	PHIL 1301	3
Physics(SL)	4, 5, 6 or 7	PHYS 1401	4
Physics (HL)	4, 5, 6 or 7	PHYS 1401 & 1402	8
Psychology	4, 5, 6 or 7	PSYC 2301	3
Social & Cultural Anthropology	4, 5, 6 or 7	ANTH 2351	3
Theater Arts	4, 5, 6 or 7	DRAM 1310	3
Visual Arts	4, 5, 6 or 7	ARTS 1301	3

Tuition & Fees

Just as providing easy access to quality education for all who desire it is a primary commitment of North Central Texas College, so is providing quality education at a reasonable cost. The following information will help students calculate their expenses at NCTC on a per-semester basis.

Students should read this information carefully and thoroughly to assure that they will be able to come up with a fairly accurate estimate of expenses. Students also should keep in mind that this amount will be an estimate, since there is no way to accurately forecast for each individual student such personal expenditures as those for entertainment, transportation, clothing, etc. Also, as will be explained below, some other expenses such as those for books and supplies, board, etc., will vary from student to student.

> **Important**: NCTC is a state-supported institution subject to state laws. Credit is extended for expenses owed to the college only under limited circumstances. All tuition, fees, dorm rent, and other elements of expense for attending NCTC are subject to change by the NCTC Board of Trustees.

Tuition & Fee Costs

Generally, the cost of enrolling at North Central Texas College for a regular long semester (Fall or Spring) will be the sum of four expense categories.

- Tuition
- Fees
- Books & Supplies
- Personal Living Expenses, including Transportation and Room/Board. No attempt is made to estimate this category of expense because it varies so widely among individual students.

Credit Hour Tuition

The tuition charged for a course is based on two things:

1. The total number of credit hours for which you're enrolled
2. Your permanent, legal place of residence.

When a student registers for a course, that course will be worth a certain number of hours of college credit for a semester. Most courses at NCTC are worth three (3) hours of credit, however, there are courses that are worth one (1) credit hour all the way up to six (6) or more hours of credit for any given semester. A student can tell how many hours of credit a particular course is worth by looking at the course identification number.

The second digit in this four-digit number gives the semester-credit-hour value of the course. For example, the English course ENGL 1301 is worth three (3) hours of credit, and the French course FREN 1411 is worth four (4) hours of credit. So, if a

student registers for four three-hour courses and one four-hour course, he or she will be enrolled for a total of sixteen (16) semester credit hours.

Tuition, then, would be figured by multiplying the number of credit hours for which a student is enrolled times a tuition rate which is determined according to the student's place of residence.

Place of Residence

NCTC is a public institution that draws a portion of its funding from the State of Texas. Therefore, tuition rates will be higher if a student's permanent legal residence is not in Texas. Tuition at North Central Texas College is based on a student's permanent legal place of residence (Texas Education Code 54.008). The three residency classifications are:

- In-District : Residents of Cooke County and Graham ISD.
- In-State: Residents of all Texas counties except Cooke, and residents of Oklahoma counties contiguous with Cooke who, due to a reciprocal agreement, pay the same tuition rate as Texas residents.
- Out-of-State : In addition to residents of states other than Texas, this also includes "international students"- citizens of any country other than the United States.

Students must complete a Residency Questionnaire Form and may also be required to furnish documentary proof, such as a valid Texas Driver's License, to prove resident status.

**Determination of a student's legal residence for purposes of establishing the appropriate tuition rates is made at the North Central Texas College Office of Admissions. Questions or disputes regarding interpretation of these guidelines should be directed to this office. For additional information on rules and regulations determining residence status, visit www.collegefortexans.com or the Texas Higher Education Coordinating Board Web site [www.thecb.state.tx.us.](www.thecb.state.tx.us)*

Fees

Fees charged at registration, in addition to tuition (Education Code 54.051), consist of a General Use Fee of $43.00 per semester hour (Education Code 130.084), and an Out of District Service Fee* (Education Code 130.084) when applicable.

** An Out of District Service Fee is assessed of all college students who are not residents of Cooke County.*

Other Fees

Individualized Instruction Fee

Special fees are charged for certain specific courses as listed below:

- Applied Lessons in Music (1 semester hour) — $75.00

- Applied Lessons in Music (2 semester hours) — $150.00

Health Science and Nursing courses may require additional fees-payable at registration-for malpractice insurance, specialized books, assessment tests and other unusual expenses. Other courses such as bowling, horticulture and artificial insemination will require additional fees to be paid to the facilities in which the instruction is conducted.

Returned Payment Fee

A $20.00 charge will be assessed for any returned check/payment.

Three Peat

An additional $60.00 per semester credit hour tuition will be charged to anyone taking a course more than two times at North Central Texas College.

The Texas Higher Education Coordinating Board (THECB) does not permit institutions to submit for formula funding any hours for a course that the student previously attempted for two or more times at the same institution, therefore this loss of revenue will be passed on to the user.

Correction of Errors

Students are responsible for any additional amount due NCTC resulting from auditing and correction of records after registration fees have been paid - including all registration assessment errors, invalid third-party agreements, and failure to prove residence status.

Tuition Rates Per Semester Hour

Category	In-District	In-District Branch Campus (Graham ISD)	In-State	Out-of-State (except some Oklahoma)
Tuition	$57.00	$57.00	$115.00	$206.00
General Use Fee	$43.00	$43.00	$43.00	$43.00
Out of District Service Fee	N/A	$20.00	$32.00	$46.00
Total per Semester Hour*	$100.00	$120.00	$190.00	$295.00

**Exclusive of other fees and costs*

The student is responsible for any financial obligation that results from adding or dropping classes at NCTC.

NCTC adheres to the state of Texas policy when refunding tuition and fees.

Dual Credit

Dual Credit students attending high school in the College's service area of Cooke, Denton, and Montague counties and Graham ISD will be charged at a reduced rate.

Books & Supplies

These costs of books and supplies depend entirely upon the specific courses a student takes. Book and material costs vary widely from course to course; some are relatively inexpensive and some are not. Nursing students, for example, will pay higher prices for their highly technical books and related supplies, such as clinical uniforms, than a student taking mostly academic transfer courses such as English and History.

Students needing an accurate estimate of book costs, based on the specific courses they will take, should contact the Bookstore on their campus. For some courses, an additional fee for specialized books and/or course materials may be automatically charged to a student's account.

> **NOTE**: NCTC bookstores are operated by Follett Higher Education Group. All campuses (Gainesville, Corinth, Flower Mound, Bowie and Graham) are serviced online by the eFollett.com virtual store site. On-site bookstores are located on the Gainesville, Corinth and Flower Mound campuses. Please check the NCTC website at www.nctc.edu and www.efollett.com for hours of operation and other pertinent information.

"A student of this institution is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer." —Texas Education Code Sec.51.9705

CEU Option Courses

A 100% refund will be given for courses if request to drop is in writing seven business days prior to first day of class.

> **NOTE:** North Central Texas College reserves the right to establish separate withdrawal refund schedules for any fees classified as *optional*. NCTC will refund tuition and fees paid by a sponsor, donor or scholarship to the source rather than directly to the student who has withdrawn if the funds were made available through the College.

Any student who withdraws from the College after registration must notify the office of Adult & Continuing Education. No transcript for work done will be given a student whose library, financial or other obligations to the College have not been cleared. Students dropped from classes for excessive absences by an official of the College are not entitled to a refund after the refund dates.

Flexible Entry & Non-Semester Length Courses

A 100 percent refund will be made for courses dropped prior to the first class day. Otherwise, refunds will be made as follows (It is the responsibility of the student to complete the steps necessary to drop classes. Any financial obligation that results is also the responsibility of the student.):

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

Military Withdrawal

If a student withdraws from NCTC because he/she is called into active military service, the College will, at the student's option:

1. Refund the tuition and fees paid by the student for the semester in which the student withdraws;
2. Grant a student (who is eligible under applicable college guidelines) an incomplete grade in all courses by designating "withdrawn-military" on the student's transcript; or
3. As determined by the instructor, assign an appropriate final grade or credit to a student who has satisfactorily completed a substantial amount of course work and who has demonstrated sufficient mastery of the course material.

Other Fees

Individualized Instruction Fee

Special fees are charged for certain specific courses as listed below:
Applied Lessons in Music (1 semester hour) — $75.00
Applied Lessons in Music (2 semester hours) — $150.00
Health Science and Nursing courses may require additional fees-payable at registration-for malpractice insurance, specialized books, assessment tests and other unusual expenses. Other courses such as bowling, horticulture and artificial insemination will require additional fees to be paid to the facilities in which the instruction is conducted.

Returned Payment Fee

A $20.00 charge will be assessed for any returned check/payment.

Reinstatement Fee

A $50.00 fee may be assessed for students who re-enroll in courses after having their registration canceled for non-activity. This is a non-refundable fee and will be assessed each time the student re-enrolls.

Pay Tuition & Fees

Payment Requirement

All tuition and fees are due the day you register and must be paid in full to complete the registration process. Any accounts unpaid may result in the cancellation of a student's registration and a requirement that the student re-register for classes. Payment for any additional tuition and fees resulting from schedule revisions or class adds/drops is due at the time a change is made. Students will NOT be allowed to register after the last day of the add/drop period. It is the responsibility of the student to complete the steps necessary to drop classes. Any financial obligation that results from adding or dropping classes is also the responsibility of the student.

No matter how students sign up for their classes, most NCTC students can pay their tuition/fees online. This means students can:

- Avoid the possibility of long lines and delays
- Pay at their convenience on weekends and after regular hours
- Pay in installments
- Pay with credit card or bank draft

Students can also get all the details of their student account by accessing their MyNCTC account online. In order to access student accounts, go to www.nctc.edu, click on MyNCTC. Login using a valid Student ID and pin number. Select the Student Services tab at the top and then click on the Financial option on the left.

Installment Plan Payments

To be eligible for installment plan payments a student cannot have a financial aid hold nor may a student be on probation or suspension by the college.

Pay in Full or Make Payment Arrangement Online

Students can select from the following payment options:

- Flexible Payment Plan with down payment and 1, 2, or 3 monthly payments.
- Pay in full

  Note: You may incur a nominal, non-refundable enrollment fee of $30.00 (per semester) if you choose to pay your tuition and fees in installments. There is no additional charge to pay in full.

Notice

Students will not be considered officially registered until all tuition and fees required by the College have been paid in full or students have entered into an official payment plan with NCTC. These are payable in advance (at registration) at the beginning of each semester.

Students who are participating in one of the various financial aid programs should take special note of deadlines for application and submission of required materials. Lateness in making application and/or submitting all required information may require such students to pay tuition and fees personally at the time of registration, and they should be prepared to bear these expenses until their awards can be processed. Refer to the separate section in this catalog on Student Financial Aid.

More information can be found by contacting the NCTC Business Office at any campus.

Gainesville (940) 668-4200

Corinth (940) 498-6255

Flower Mound (972) 899-8403

Bowie (940) 872-4002

Graham (940) 521-0720

Refund Schedule

For students who drop or withdraw from courses, NCTC will refund tuition and mandatory fees collected according to the following schedule. For faster access to funds, students are encouraged to use our Direct Deposit to MyNCTC debit cards. Note that for courses which meet on a regular schedule (i.e., specified days and times throughout a fall/spring semester or summer session), the term *class days* refers to the number of calendar days NCTC normally meets for classes, ***not*** the days a particular course meets. For *flexible entry* courses and others which meet on an unusual or irregular schedule, NCTC will exercise professional judgement in defining the term *class days* for refund purposes.

Please note also that percentages given in the schedule are to be applied to the tuition and mandatory fees collected for each course from which the student is withdrawing. Also, note that some fees are non-refundable and will not be calculated in these percentage refunds.

Regular Fall & Spring Credit Classes

A 100% refund will be made for courses dropped prior to the first class day of a semester.

Otherwise:

- During the first 15 class days — 70% Refund
- During 16th-20th class days — 25% Refund
- After 20th class day — No Refund

Regular Summer Sessions

A 100% refund will be made for courses dropped prior to the first class day.

Otherwise:

- During the first 5 class days — 70% Refund
- During 6th class day — 25% Refund
- After 6th class day — No Refund

Note: It is the responsibility of the student to complete the steps necessary to drop classes. Any financial obligation that results is also the responsibility of the student.

Return of Title IV Aid

Federal Title IV financial aid recipients who completely withdraw from classes during any semester of attendance at NCTC will be subject to a return of Title IV aid if the withdrawal occurs before 60% of the semester has been completed. All students who owe Federal and/or NCTC funds will not be allowed to re-enroll at NCTC until the funds have been repaid. Please contact the Office of Financial Aid for more information regarding this federal requirement.

Tuition for CEU Enrollment Option

Students may opt to enroll in selected semester-credit-hour courses for Continuing Education Unit (CEU) rather than for conventional semester-hour credit. Tuition for these CEU courses is $81 per credit hour.

1 semester hour class — $81

2 semester hour class — $162

3 semester hour class — $243

4 semester hour class — $324

> **NOTE***:* Lab fees are charged in addition to rates above. All other deposits and fees are not applicable.

Virtual College of Texas

Virtual College of Texas is a consortium of community colleges that supplies and/or hosts online instruction in which students from participating colleges may enroll by paying tuition to the host college for the course and having credit for that course granted by the host college and applied to the student's transcript. NCTC participates in the Virtual College of Texas as a host college and enrolls students only in courses that are not available through NCTC.

Student Affairs

The term *Student Affairs* at North Central Texas College refers collectively to the various student-related support functions carried out by several offices on campus under the administrative direction of the Vice Chancellor of Student Affairs. These include:

- Office of Admissions
- Office of the Registrar
- Office of Recruitment
- Office of Counseling & Advising Services
- Office of Testing Services
- Completion Center
- Office of the Dean of Student Affairs & Outreach
- International Student Services
- Office of Financial Aid
- Veterans Services
- Career Services
- On-Campus Student Housing
- On-Campus Student Dining
- Office of Student Life
    - Student Activities
    - Clubs & Organizations

In addition, the Office of the Vice Chancellor of Student Affairs handles matters related to student discipline.

Policies, procedures and regulations governing the conduct of students at North Central Texas College are outlined in the Student Handbook, which also contains general information related to student life at the College.

TRiO Student Support Services

The TRIO Student Support Services program provides comprehensive, individualized services to students enrolled at all five NCTC campuses each academic year. The mission of the federally funded program is to increase the retention and graduation rates of eligible participants and to foster an institutional climate supportive of first generation, low income college students and students with disabilities. TRIO students receive the following services: one-on-one tutoring, academic advising, career counseling, financial aid information, cultural enrichment, personal counseling, and educational workshops geared to give students tools to succeed in college.

To obtain more information regarding TRIO services or to apply to the program, please contact:

Nancy amora
Program Coordinator
(940) 498-6214
nzamora@nctc.edu

Camilia Dunn
Advisor/Coach - Corinth/Flower Mound Campuses
(940) 498-6248
cdunn@nctc.edu

Terrie Moss
Advisor/Coach - Bowie/Graham Campuses
(940) 872-5227
tmoss@nctc.edu

Scott Pulte
Advisor/Coach - Gainesville Campus
(940)668-7731, ext. 4905
spulte@nctc.edu

Behavioral Intervention Services

The NCTC Behavioral Intervention Team or CARES (Campus Assessment Response Evaluation Services) Team addresses behavior which may be disruptive, harmful or pose a threat to the health and safety of the NCTC community-such as stalking, harassment, physical or emotional abuse, violent or threatening behavior, or self-harm. All students have the ability to report concerning behavior which could impact a student's own safety or the safety of another NCTC student. Just click the NCTC CARES Team logo posted on MyNCTC, or complete the CARES Reporting/Referral Form. If any student feels that there is an immediate threat to his or her own safety or welfare (or to another student), please call 911 immediately.

CARES Team Corinth (940) 498-6203 or (940) 498-6207

CARES Team Flower Mound (972) 899-8402

CARES Team Bowie/Graham/Gainesville (940) 668-4207

Financial Aid

North Central Texas College administers a variety of programs for students who need assistance in financing their education. There are four basic financial aid programs available to students: grants, loans, work-study employment and scholarships. Each program is funded either through federal, state, institutional or local sources.

Who Qualifies?

Except for most scholarship programs, eligibility for financial assistance at North Central Texas College is based almost exclusively upon demonstrated need. It is understood, however, that this need varies greatly from one individual to another. It is the student's responsibility to inform the College of the need for financial assistance and to provide the information necessary to establish the individual student's qualifications for such assistance. Financial Aid is not currently available through federal, state or NCTC resources for those students who enroll in dual credit, non-credit or concurrent courses.

The following table is offered as an aid to students in comparing costs of attending North Central Texas College to personal financial resources. Although the prospective student should keep in mind that some figures are estimates, it is hoped that this information will be of assistance in determining relative financial need as it applies to the prospect of applying for financial aid at NCTC.

The costs outlined are based on enrollment for a regular academic year (Fall and Spring semesters) and a class load of 15 hours each semester.

	In District	**Out of District**
In-State Tuition & Fees*	$2,550.00	$3,960.00
Books & Supplies	$2,100.00	$2,100.00
Room & Board*	$5,816.00	$5,816.00
Transportation**	$1,692.00	$1,692.00
Personal	$1,846.00	$1,846.00
TOTAL	$14,004.00	$15,414.00

**Out-of-state tuition & fees - $7,500.00*
***Room & Board, Transportation based on off-campus figures.*

Financial aid is available for most students who have demonstrated need, it is not awarded until after the student has made application. Again, it is the student's responsibility to inform the College of need and to supply information necessary to establish eligibility.

Application & Eligibility

The NCTC Financial Aid Office encourages prospective college students to apply early for financial aid. FAFSA applications are available to complete as early as October 1 of each year. FAFSA applications may be completed online at www.fafsa.gov. The NCTC school code is 003558.

Parents and students should be aware that FAFSA applications are free to all students. Be wary of scams that require payment for the submission of a FAFSA application. FAFSA applications are processed by the U. S. Department of Education. Students are notified by email and/or regular mail as to the status of their financial aid application.

Any additional documentation required to complete the financial aid process will be requested through the NCTC Financial Aid Office, also by email or regular mail. Eligibility for financial assistance is established by the data that students and parents input on their FAFSA application. All students who are eligible to receive Federal Financial Aid must be admitted to the college as regular degree-seeking students and show proof that they have graduated from an accredited high school or received a GED.

Application Deadlines

Students must apply for financial aid each academic year. Federal application deadlines are October 1 of the prior year through June 30 of the following year. Priority deadlines may be set by each state or college. NCTC Financial Aid priority deadlines are as follows:

- June 1 - Fall Registration
- November 1 - Spring Registration
- April 1 - Summer Registration

Students who do not meet these deadlines run the risk of paying out of pocket for tuition, fees, and books because of a late or incomplete financial aid application. Please note, to be considered complete, a FAFSA application must include any and all requested supporting documents as well as have been received and been processed no later than the priority deadlines mentioned above. Normal processing time for a FAFSA application is four to six weeks, beginning with the actual online submission to school file completion. Late or incomplete financial aid applications will be accepted and processed past the semester priority deadlines, but students must make arrangements to pay for the semester prior to school starting or at the time of actual registration.

Financial Aid Late Awards

Late awards will be processed and disbursed during the appropriate semester for students whose FAFSA applications are incomplete or late. Students whose applications are completed after semester exams will receive their awards and disbursements during the next semester and after attendance has been verified. Financial Aid disbursements are based on student attendance as of the term census date.

Summer Awards

Financial aid for summer classes is generally limited to students with remaining grant or loan eligibility and available need-based work study employment. In certain situations, students are eligible for an additional 50% of their Pell Grant as long as they enroll in 6 hours or more for any combination of sessions in the summer semester. NCTC considers the summer semester as part of the preceding award year and all summer sessions are considered as one semester for determining enrollment status, grant and loan eligibility.

Financial Aid Distribution

Financial aid is distributed to eligible applicants on a first come first serve basis. Awards may include a combination of federal and state aid depending on the financial needs of the student and the availability of funds.

Award amounts must be accepted by the student by going online to the NCTC Financial Aid Portal. Financial aid grant and loan awards will be applied towards the amounts owed for tuition, fees and books. If a balance due remains, students will be responsible for making payment with the NCTC Business Office before classes begin. Credit balance amounts will be disbursed to students within the first thirty (30) days of class. First time students who are first time loan borrowers must wait thirty (30) days for their first loan disbursement. Refunds are disbursed back to the student based on their "Student Refund Choice" made through the MyNCTC student portal.

Satisfactory Academic Progress Policy

Financial aid recipients are required by law to maintain satisfactory academic progress as defined by the College. Non-compliance results in disqualification for further financial aid assistance. Copies of the minimum standards of progress necessary to maintain eligibility are available from the NCTC Financial Aid Office or financialaid.nctc.edu

> Financial Aid Students must maintain Satisfactory Academic Progress towards an Associate's Degree or approved Certificate Program in order to receive Federal Title IV and/or State Financial Aid.

After each semester the academic records of all Financial Aid Students will be reviewed to determine if Satisfactory Academic Progress is being maintained. A student's entire academic record is reviewed including all credits earned at prior institutions even if Financial Aid was not used to earn these hours. NCTC transfers credit hours that are applicable to any program of study offered. All hours count toward completion rate, even courses earned as a dual credit student, but the GPA does not get transferred. All students, including transfer students, must submit transcripts from all prior colleges and have them evaluated by the end of the first semester of enrollment. Students without degree evaluations will not be eligible to receive aid for the following term. All Title IV funds awarded are affected by this policy. The requirements for these standards are set by Federal regulations (34CFR 668.34).

Good Standing

A financial aid student is in good standing when they have:

- Maintained at least a 2.0 cumulative grade point average (GPA) AND
- Completed 67% of all courses attempted AND
- Complete degree within the 150% time frame. (i.e. an associate degree of 60 credit hours must be completed within 90 credit hours.

Students entering the Suspension Appeal Process will be evaluated based on their Pace of Academic Progression. Pace of Academic Progression will be measured against the maximum time frame allowable to complete the student's degree or certificate program. If it is determined that a student's rate of academic progression is not attainable, they will be placed on an Academic Plan. Students on an Academic Plan will be required to make sufficient academic progress at the end of each payment period in order to maintain eligibility for Financial Aid.

Repeated Coursework

The regulatory definition for full-time enrollment status for undergraduate students has been revised to allow a student to retake (one time only per previously passed course), any previously passed course. For this purpose, passed means any grade higher than an "F," regardless of any school or program policy requiring a higher qualitative grade or measure to have been considered to have passed the course. This retaken class may be counted towards a student's enrollment status and the student may be awarded Title IV aid for the enrollment status based on inclusion of the class.

Student Loan Repayment

The NCTC Student Loan Default Policy states that students who are in default on a federal or state sponsored student loan will be placed on financial hold. Students on hold will not be allowed to enroll in classes or make requests for grades, transcripts, diplomas, certificates, etc. Persons wishing to override this policy are required to present written documentation from their servicer that they have entered into a satisfactory repayment plan. All transcripts, grades, and diplomas and/or certificates will be held until the default status is resolved.

Programs Available

The chart below outlines the major financial aid programs available at North Central Texas College along with eligibility requirements and application procedures. Not all scholarship programs are listed, check with the Scholarship Office for information about other specialized scholarship programs.

Summary of Student Financial Assistance Programs Available at North Central Texas College

Program	Description	Eligibility	Value	To Apply
Federal PELL Grant	Available to eligible students with an established need. (Grant program)	Undergraduate & U.S. citizen or eligible non-citizen.Established financial need.	Up to $6,195 per year paid	1. Complete the FAFSA (Free Application for Federal Student Aid) online at: www.fafsa.gov 2. Check with the NCTC Financial Aid Office upon receipt of your Student Aid Report from the Department of Education. 3. Follow up with any other documentation that may be required.
Federal Supplemental Educational Opportunity Grant (FSEOG)	Reserved for students with EXCEPTIONAL financial. Priority given to Pell recipients with a zero (0) EFC	Undergraduate & U.S. citizen enrolled at least half-time, with minimal family contributions.	Approximately $400	
Federal College Work-Study Program	Part-time employment (up to 19 hours weekly) on or off campus, need-based.	Enrolled at least half-time, U.S. citizen or eligible non-citizen.	$9 on campus and $10 off campus	
Direct Loans: Subsidized, Unsubsidized and PLUS	Federal Loan Program	Must be enrolled at least half-time and amount	$3500 Sub for Freshman 30hrs	Unsubsidized Loan award amounts are $2000 for

Program	Description	Eligibility	Value	To Apply
		awarded must not be over Cost of Attendance.	$4500 Sub for Sophomore 30hrs	dependents and $6000 for independent students. Additional and Summer loan amounts available upon written request based on eligibility.
Mary Josephine Cox Scholarship	Scholarship does not require repayment.	Cooke County resident under age 21, enrolled full-time, cumulative 3.0 GPA and special competency in given field.	Tuition/fees only, maximum $100 per semester (Fall/ Spring)	Students may complete an on-line scholarship application located on the college webpage at scholarships.nctc.edu.
NCTC Foundation Scholarships	Donors have established these scholarships that do not require repayment.	Criteria for these scholarships are varied including academic achievement, certain residency, financial need, specific major, etc.	Average Scholarship $600.	Scholarship applications are accepted twice a year between March 1 - April 15 and September 1 - October 15. Application deadlines are April 15 for the Summer & Fall semesters and October 15 for the Spring semester.
NCTC Foundation Dual Credit Scholarships	Scholarships do not require repayment.	Must be attending high school or residing in the college's service area. Preference given to underprivileged.	Maximum 6 credit hours	Students who are new to NCTC will need to apply for admission before being able to complete a

Program	Description	Eligibility	Value	To Apply
				scholarship application.
"Best Seat in the House" Scholarships	Scholarships do not require repayment	Students majoring in the Performing & Visual Arts	Up to $500	Contact the Performing & Visual Arts Department
Friends of Agriculture Scholarship	Scholarships do not require repayment.	Enrolled full-time, in a minimum or 2 agriculture courses, and maintain a minimum 2.0 cumulative GPA	$500 per semester (Fall/ Spring)	Scholarship applications available at Gainesville Campus with the Agriculture Dept. or by completing the on-line NCTC Foundation scholarship application mentioned above.
NCTC Departmental Scholarships	Scholarships are available from various NCTC depts., including music, drama, dance, art, athletics	Enrolled in the specific dept. at NCTC	Vary depending on program	Contact department chairs for the various departments.

For more detailed information about these and other financial assistance programs, call or write:

Office of Financial Aid - North Central Texas College
1525 W. California, Gainesville, TX 76240
(940) 668-4242
(940) 498-6294

North Central Texas College Foundation
1525 W. California, Gainesville, TX 76240
(940) 668-4213

Return of Title IV Aid Policy

Student Financial Aid

Students receiving federal financial aid such as Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, Federal Direct Student Loans, or the Federal Work-Study Program understands, agrees, and affirms that award monies will be used solely for expenses directly related to attendance or continued attendance at North Central Texas College. Federal financial aid is considered Federal Title IV Funds and follows the rules and guidelines set forth by the U.S. Department of Education.

Students who receive Federal Title IV funds are required to complete a minimum number of hours for which assistance was received. Students who withdraw or stop attending may no longer be eligible for the full amount of Title IV funds originally awarded. All students receiving Financial Aid who complete a Petition for Course withdrawal, whether online or in person, through the NCTC Registrar's Office,will be subject to a recalculation of their Title IV Aid. If the student completely withdraws from school during the semester, or quits attending but fails to officially withdraw, the student may be required to return the unearned part of the funds received to help pay educational expenses for the term. In addition, students who attend and subsequently withdraw before financial aid is disbursed may be eligible to receive a Post-Withdrawal Disbursement of Title IV Funds for the earned aid that was not received. All students who owe Federal and/or NCTC funds will not be allowed to re-enroll at NCTC or request an official transcript, until the funds have been repaid. Liability for the return of Federal Title IV funds will be determined according to the following guidelines:

- If the student remains enrolled and attends class beyond the 60% mark of the semester in which aid is received, all federal aid is considered earned and not subject to this policy.
- If the student completely withdraws from all classes prior to completing 60% of the semester, a pro-rated portion of the federal aid received must be returned to the federal aid programs based on the amount of time the student attended.
- If the student does not officially withdraw from classes but quits attending all classes, a prorated portion of the federal aid received, based on the documented last date of attendance, must be returned to the federal programs. If the College is unable to document the last date of attendance, the school will assume the student only attended to the 50% mark of the semester and this date will be used to determine how much aid must be returned.
- Return of Federal Title IV funds will be distributed according to statutory regulations. Worksheets provided by the U.S. Department of Education will be used to determine the amounts and order of return. The student will be notified and will be allowed 45 days from the date of determination to return their share to the program accounts. If the student does not return the amount owed within 45 days, the amount of the overpayment will be reported to the U.S. Department of Education (DOE) via the National Student Loan Database (NSLDS) and the student will be referred to the DOE for resolution of the debt. Contact Financial Aid for questions and examples of this policy. North Central Texas College refunds unearned funds received from Federal student assistance programs in accordance

with Federal Title IV student assistance regulations, with rules of the Texas Higher Education Coordinating Board, and the rules of the College's Board of Regents.

Return of Title IV, HEA Content Section

When a student applies for financial aid, he or she signs a statement that received funds will be used for educational purposes only. Therefore, if a student withdraws before completing their program, a portion of the funds received may have to be returned. NCTC will calculate the amount of tuition to be returned to the Title IV, HEA Federal fund programs according to the policies listed below.

Return of Title IV Funds Policy

This policy applies to students who withdraw officially, unofficially, fail to return from a leave of absence, or are dismissed from enrollment at NCTC. It is separate and distinct from the NCTC refund policy. (Refer to institutional refund policy)

The calculated amount of the Return of Title IV, HEA (R2T4) funds that are required for the students affected by this policy, are determined according to the following definitions and procedures as prescribed by regulations.

The amount of Title IV, HEA aid earned is based on the amount of time a student spent in academic attendance, and the total aid received; it has no relationship to student's incurred institutional charges. Because these requirements deal only with Title IV, HEA funds, the order of return of unearned funds do not include funds from sources other than the Title IV, HEA programs.

Title IV, HEA funds are awarded to the student under the assumption that he/she will attend school for the entire period for which the aid is awarded. When student withdraws, he/she may no longer be eligible for the full amount of Title IV, HEA funds that were originally scheduled to be received. Therefore, the amount of Federal funds earned must be determined. If the amount disbursed is greater than the amount earned, unearned funds must be returned.

The institution has 45 days from the date that the institution determines that the student withdrew to return all unearned funds for which it is responsible. The school is required to notify the student if they owe a repayment via written notice.

The school must advise the student or parent that they have 14 calendar days from the date that the school sent the notification to accept a post withdraw disbursement. If a response is not received from the student or parent within the allowed time frame or the student declines the funds, the school will return any earned funds that the school is holding to the Title IV, HEA programs.
Post-withdraw disbursements will occur within 90 days of the date that the student withdrew.

Official Withdrawal from the School

A student is considered to be "Officially" withdrawn on the date the student notifies the Financial Aid Office or Admissions/Registrar's Office in writing of their intent to withdraw.

The date of the termination for return and refund purposes will be the earliest of the following for official withdrawal:

- Date student provided official notification of intent to withdraw, in writing or orally.
- The date the student began the withdrawal from NCTC records. A student is allowed to rescind his notification in writing and continue the program. If the student subsequently drops, the student's withdrawal date is the original date of notification of intent to withdraw.

Unofficial Withdrawal from School

In the event that the school unofficially withdraws a student from school, a school Administrator, Faculty, and/or Director of Admissions will complete the Withdrawal Form using the last date of attendance as the drop date. Any student that does not provide official notification of his or her intent to withdraw will be considered unofficially withdrawn.

In the event a student decides to rescind his or her official notification to withdraw, the student must provide a signed and dated written statement that he/she is continuing his or her program of study, and intends to complete the payment period. Title IV, HEA assistance will continue as originally planned. If the student subsequently fails to attend or ceases attendance without completing the payment period, the student's withdrawal date is the original date of notification of intent to withdraw.

Institution Responsibilities

North Central Texas College's responsibilities in regards to Title IV, HEA funds follow:

- Providing students with the information in this policy.
- Identifying students who are affected by this policy and completing the return of Title IV funds calculation for those students;
- Returning any Title IV, HEA funds due to the correct Title IV programs.
- The institution is not always required to return all of the excess funds; there are situations once the R2T4 calculations have been completed in which the student must return the unearned aid.

Student Responsibilities in regards to Return of Title IV, HEA funds

- Returning to the Title IV, HEA programs any funds that were dispersed to the student in which the student was determined to be ineligible for via the R2T4 calculation.
- Any notification of withdraw should be in writing and addressed to the appropriate institutional official.
- A student may rescind his or her notification of intent to withdraw. Submissions of intent to rescind a withdraw notice must be filed in writing to the official records/ registration personal at your school.

**To request a copy of the North Central Texas College Return of Title IV Policy by contacting the Financial Aid Office. This policy is subject to change at any time, and without prior notice.*

Veteran Educational Benefit Service

All Veteran Educational Benefit Services are handled by the Financial Aid Office.

Veterans on the Gainesville, Bowie & Graham Campuses 940-668-4242

Veterans on the Corinth Campus 940-498-6294

Veterans on the Flower Mound Campus 940-899-8400

Active Duty, Selected Reserve, Reserve, Survivor & Dependents Benefits

Eligibility to the various GI Bill educational programs is determined by the veteran's service record. Before applying for an educational benefit veterans should consult the VA Comparison Tool. The VA Comparison Tool is designed to help veterans determine eligibility, compare benefits and review payment rates for each program.

In order to receive educational benefits under the New Post 9/11 or other Montgomery GI Bill Programs students must complete an application. Once this application is processed the Veterans Administration Office notifies applicants by mail whether they qualify for benefits or not. A "Certificate of Eligibility" is sent to students who qualify. This certificate tells the veteran and the school how much and how many months of entitlement they will receive. Students must bring a copy of their Certificate of Eligibility to the school in order to begin receiving monthly benefit amounts.

Other documents required by the school in order to set up Veteran benefits:

Veterans Only:

- DD214
- MEMBER 4
- Report of Separation
- Official Military Transcript

Veterans & Dependents of Veterans

- Copy of Certificate of Eligibility OR Vets.gov/EBenefits Screen Shot of remaining eligibility
- Official College Transcripts from ALL prior colleges
- NCTC VA Information Sheet
- NCTC Degree Audit Request Form
- NCTC Student Veteran Agreement

Benefit Payments for All Chapters

VA monthly benefit payments are made directly to students. The payment is made to the student for the number of days the student is certified for the month. If a student is certified for a whole month, the full monthly benefit is paid. If the student is only certified for part of the month, the benefit is prorated as follows: Using a 30-day month, divide

the monthly rate by 30 to get the daily rate. If a student is certified from the 1st through the 15th, the student is certified 15 days and is entitled to 15/30ths of the full monthly benefit.

Break or Interval Pay

Break or interval pay has been eliminated except for periods where a school is closed due to an Executive Order of the President or due to an emergency situation. This applies to all VA education benefit programs.

Concurrent Enrollment

Guest Student

A student may take courses at more than one school as long as the courses apply to his or her degree plan. The school that will grant the degree is the student's "primary" school. All other schools are "secondary" schools. The primary school provides a letter ("primary school letter" or PIL) addressed to the VA Certifying Official at the secondary school. If the student is enrolled at the primary school and the secondary school at the same time (concurrent enrollment), VA will pay for the combined credit, taking overlapping enrollment dates into account. If the student is only enrolled at the secondary school (supplemental enrollment), VA will pay for the credits taken at the secondary school.

Degree Plan or Degree Audit

All transcripts from all prior colleges including military transcripts must be submitted to the school for the purpose of credit evaluation before attendance can be certified for VA purposes. Only courses that satisfy requirements outlined by the degree plan or graduation evaluation form can be certified. If a student takes a course that does not fulfill a program requirement, it cannot be certified for VA purposes. Excessive free electives, for example, cannot be certified.

Remedial Coursework

Remedial and deficiency courses are courses designed to correct deficiencies in basic mathematics, English, and reading at the elementary or secondary level. These courses can be certified as part of an approved program, but only for students for whom a verifiable need has been established. Generally, veteran students are exempt from meeting the Admissions Office Texas Success Initiative (TSI) requirement. To be considered for an exemption the veteran must turn in a copy of their DD Form 214-Member 4 and sign a TSI Waiver at the Admissions Office. Remedial and deficiency courses offered as independent study (online) cannot be approved and cannot be certified to VA.

Repeated Courses

Courses that are successfully completed may not be certified for VA purposes if they are repeated. If a program requires a higher grade than achieved, that course may be

repeated. For example, if Nursing requires a "B" or better in Biology, then that course may be repeated if a "B" was not earned.

Withdrawing or Non-Punitive Grades

The law prohibits payment of VA educational benefits for a course from which the student withdraws or completes and receives a grade that is not used in computing the grade point average (a non-punitive grade, i.e. "W"). The School Certifying Official (SCO) is required to notify the Department of Veteran Affairs when changes occur to a student's school schedule. A decrease in training time (i.e. drop classes, stop attending, leave school, etc.) will create an overpayment to the student account. In addition, a decrease in credit hours can also change both prior and future payments to the basic housing allowance, book stipend, and/or the monthly benefits amount. If VA has issued a payment to either the student or the school for the term in which a student drops, students will owe money back to the Department of Veteran Affairs. In some cases the VA is willing to forgive an overpayment due to acceptable mitigating circumstances. Mitigating Circumstance: Mitigating circumstances are issues beyond the student's control that prevent the student from continuing in school or that cause the student to reduce credits. Mitigating circumstances include the following:

- An illness or injury afflicting the student during the enrollment period.
- An illness or death in the student's immediate family.
- An unavoidable change in the student's conditions of employment.
- An unavoidable geographical transfer resulting from the student's employment.
- Immediate family or financial obligations beyond the control of the claimant that require him or her to suspend pursuit of the program of education to obtain employment.
- Discontinuance of the course by the school.
- Unanticipated active military service, including active duty for training.
- Unanticipated difficulties with childcare arrangements the student has made for the period during which he or she is attending classes

School Responsibilities

Keep VA informed of the enrollment status of veterans and other eligible persons. Report all enrollments and changes within 30 days, report only those classes that apply to the student degree plan, monitor student's grades to ensure he/she is making academic progress, report unsatisfactory progress at the end of each semester, monitor the student's conduct and report when a student is suspended or dismissed for unsatisfactory conduct.

Keep the State Approving Agency (SAA) informed of new programs and/or changes to current programs, changes to academic policies and/or procedures, changes of addresses, phone numbers, certifying officials, and report any other information required by the SAA.

Keep up to date on current VA rules and benefits, read and maintain VA bulletins, attend VA and SAA training opportunities.

Hazlewood Exemption for Texas Veterans

The Hazlewood Act is a State of Texas benefit that provides qualified Veterans, spouses, and dependent children with an education benefit of **up to 150 hours of tuition exemption**, including most fee charges, at public institutions of higher education in Texas. This does NOT include living expenses, books, or supply fees.

Spouses and dependent children of eligible Active Duty, Reserve, and Texas National Guard who died in the line of duty or as a result of injury or illness directly related to military service, are missing in action, or who became totally disabled for purposes of employability as a result of a service-related injury or illness are entitled to each receive a 150 credit hours exemption.

Eligible veterans must have been a resident of Texas at enlistment and must provide official military documentation to prove eligibility for the exemption. Veterans must serve more than 180 days of active duty service, excluding training, and discharge must be characterized as "honorable" or "general, under honorable conditions."

Veterans or dependents must provide proof of eligibility or ineligibility for VA education benefits. Verification may be obtained by calling the VA Education Call Center at 1-888-442-4551.

Contact the Texas Veterans Commission for more information about the Hazlewood Act and other education benefits for Texas veterans. Call (877) 898-3833 or email hazlewood@tvc.texas.gov

Satisfactory Academic Progress

Meet the GPA requirement of the institution's satisfactory academic progress policy in a degree or certificate program as determined by the institution's financial aid policy and, as an undergraduate student, not be considered to have attempted an excessive amount of credit hours. This requirement does not apply to the spouse of a MIA, KIA, or service connected deceased Veteran.

The Office of Financial Aid will monitor for Satisfactory Academic Progress at the end of each term. Students may regain eligibility to the Hazlewood Exemption if/ when they complete a term in compliance with SB1210 requirements or by submitting an Exemption/Waiver Financial Aid Suspension Appeal Form and being approved based on medical reasons, due to the death of direct family member, or other special circumstances. Please contact the Financial Aid Office for more information.

Completion Center

The Completion Center offers success coaching and career exploration services for all new-to-college students. The Completion Center is here to support and empower students personal success.

Success Coaching Services

- Improve your time management skills
- Demonstrate your knowledge by improving test-taking strategies
- Study smarter with effective reading techniques
- Avoid procrastination and stress with goal setting
- Find community resources to support your short & long term goals
- Prepare questions before meeting with your professors

For more information viisit The Completion Center online,
https://nctc.edu/student-services/completion-center/index.html

Or contact,

Amy Klohn
Director of Title III Programs
(940) 498-6416

Scholarships

The North Central Texas College Foundation awards more than 650 scholarships per semester. These scholarships are made possible by generous contributions of individuals, corporations and private foundations to assist students in reaching their educational goals. The Foundation's scholarships are generally awarded on the basis of academic achievement, financial need, community involvement and leadership. Each scholarship has different award criteria based on the terms identified by the donor, thus opening the door for scholarships for a wide variety of students. Additional scholarships are also available through various college departments, student organizations, faculty association, and other sources.

Students may complete an on-line scholarship application located on the college webpage at scholarships.nctc.edu. Scholarship applications are accepted twice a year between March 1 - April 15 and September 1 - October 15. Application deadlines are April 15 for the Summer & Fall semesters and October 15 for the Spring semester. Students who are new to NCTC will need to apply for admission before being able to complete a scholarship application.

Scholarship applications are archived each January so students must reapply each year for the NCTC Foundation Scholarships beginning in March. For more information please call the Foundation Office at (940) 668-4213.

Athletics

The NCTC athletics program supports the institutional mission through assisting students in meeting their educational goals by making available quality student support services, including intercollegiate athletics. Each athletic program provides an opportunity for student athletes to pursue academic success, physical and emotional well being and social development. Specifically, NCTC athletes pursue academic excellence, participate in well organized sports activities, promote a positive public image for the College and advance their personal and professional objectives.

The college Chancellor has ultimate responsibility for, and the administrative and fiscal control over, the institution's intercollegiate athletic programs as well as supervisory oversight of the athletics program through the Director of Athletics. The Provost coordinates with the NCTC Athletics Committee to regularly evaluate the NCTC athletics program to ensure that it is an integral part of the education of athletes and is in keeping with the educational purpose of the institution.

Students may provide input to the committee by contacting the Provost (940) 668-4120

Intercollegiate Sports

NCTC participates in the following intercollegiate sports: women's tennis, women's volleyball, men's baseball and women's softball. The College is a member of the National Junior College Athletic Association (NJCAA) and competes in the Northern Texas Junior College Athletic Conference.

NCTC adheres to NJCAA requirements in regard to all aspects of athletics including, but not limited to, recruitment, admission, financial aid and the continuing eligibility of athletes. All academic, admission and financial aid policies are the responsibilities of those institutional administrative units regularly charged with oversight of these functions of the College. Students having questions in these areas are encouraged to contact the appropriate office for assistance.

Scholarships are available, and students considering participation in the NCTC intercollegiate athletics program should contact the Director of Athletics, at (940) 668-4286, for additional information.

Department of Student Success

The Department of Student Success provides a Math Lab, a Writing Center, and Study/Tutor Groups accessible for use by all NCTC students. The Math Lab is a drop-in lab. Tutors circulate among students and answer questions as students work through various algebraic or mathematical problems. The Writing Center is a same day appointment center. Students make an appointment to meet with a writing tutor who can guide students through all stages of the writing process. Tutors can assist with structure, style, and grammar, and they empower students to become their own editors.

To find out more about the services listed above and to view the Department of Student Success hours of operation, please go to: www.nctc.edu/student-success/tutoring/index.html

Office for Students with Disabilities OSD

The Office for Students with Disabilities provides support services for students with disabilities. North Central Texas College is committed to making its degree and certificate programs accessible to all qualified persons in accordance with Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112), the Americans With Disabilities Act (ADA) of 1990, and the ADA Amendments Act (ADAAA) of 2009). To afford each of our students every reasonable opportunity for success, the OSD offers a variety of support services to enable students with disabilities and/or special needs to participate in the full range of college experiences. Services are coordinated to fit the individual needs of the student and may include the following: sign language interpreting, note-taking, tutoring, mobility assistance, audio taping, large print materials, readers, scribes, and other reasonable accommodations.

As a resource for the ADA, as well as other legislation regarding disability-related issues, the OSD staff serves as liaison among students, faculty, and college staff to help determine appropriate accommodations in the College environment. If a student has a learning, physical or mental disability, and would like accommodations, they should contact the OSD Department staff to determine if they qualify for services. A student with a disability is not required to disclose this to college officials if the student is not requesting accommodations.

Disclosure of Disability - In accordance with the ADA, NCTC is committed to making reasonable accommodations for any student who provides appropriate documentation verifying her/his disability. Appropriate documentation is current and includes a diagnosis made by a certified health professional in education, medicine, psychology or other related area. Additionally, documentation should indicate the presence of a learning, physical or mental impairment which substantially limits one or more major life activities. For more information or to disclose a disability, contact information for the OSD Department is listed below.

Wayne Smith, M.S., CRC, LPC, CBIST
OSD Director
Corinth Campus, Room 170
(940) 498-6207

kwsmith@nctc.edu

Yvonne Sandmann, M.S.
OSD Specialist
Gainesville Campus, Room 110
(940) 668-3300
ysandmann@nctc.edu

Please refer to the OSD Website for more information: osd.nctc.edu

TRIO Program

The TRIO program provides comprehensive, individualized services to students enrolled at all three NCTC campuses each academic year. The mission of the federally funded program is to increase the retention and graduation rates of eligible participants and to foster an institutional climate supportive of first generation, low income college students and students with disabilities. TRIO students receive the following services: one-on-one tutoring, academic advising, career counseling, financial aid information, cultural enrichment, personal counseling, and educational workshops geared to give students tools to succeed in college.

To obtain more information regarding TRIO services or to apply to the program, please contact:

Nancy amora
TRIO Director
Corinth Campus
(940) 498-6212
nzamora@nctc.edu

Networks Program

The Networks Program provides services for students enrolled in one of NCTC's Technical Programs and students who qualify based on one or more of the following categories:

- Nontraditional Learner
- Limited English Proficiency Learner
- Learners who are economically disadvantaged
- Learners who are single parents or displaced homemakers.

Services include:

- Non-traditional Career Awareness
- Career Assessment
- Referrals to Campus and Community Services
- Academic, Career, and Individual Counseling Services
- Tutoring Services
- Child Care Assistance.

For more information, please contact:

Wayne Smith, M.S., CRC, LPC, CBIST
OSD Director
Corinth Campus, Room 170
(940) 498-6207
kwsmith@nctc.edu

Yvonne Sandmann, M.S.
OSD Specialist
Gainesville Campus, Room 111
(940) 668-3300
ysandmann@nctc.edu

Transfer Services

The NCTC Office of Counseling and Advising serves as a resource center to students preparing for transfer to other Texas public institutions, and as a focal point for information concerning programs, resources, and services to ensure a smooth transition to four-year colleges and universities. Students can start by visiting the Counseling & Advising Transfer Guide on the website to access Transfer Guides for major universities, as well as Academic Pathways which outline the suggested courses a student needs to take for his or her intended college major.

It is always recommended to visit with an advisor or counselor in person to review these Academic Pathways and transfer degree plans and materials, as well as receive assistance with choosing a major, academic course selection, and the transfer application process.

Additionally, when representatives from four-year institutions visit our campuses, they too assist in the transfer process by highlighting their institution, the programs they offer, and scholarship opportunities. Please check the NCTC website to access a monthly calendar of transfer events and scheduled university recruiter visits.

Office for Students with Disabilities

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As a resource for the ADA, as well as other legislation regarding disability-related issues, the OSD staff serves as liaison among students, faculty, and college staff to help determine appropriate accommodations in the College environment. If a student has a learning, physical or mental disability, and would like accommodations, the student should contact the OSD Department staff to determine if he or she qualifies for services. A student with a disability is not required to disclose this to college officials if the student is not requesting accommodations.

Disclosure of Disability - In accordance with the ADA, NCTC is committed to making reasonable accommodations for any student who provides appropriate documentation verifying her/his disability. Appropriate documentation is current and includes a diagnosis made by a certified health professional in education, medicine, psychology or other related area. Additionally, documentation should indicate the presence of a learning, physical or mental impairment which substantially limits one or more major life activities. For more information or to disclose a disability, contact information for the OSD Department is listed below.

Wayne Smith, M.S., CRC, LPC, CBIST
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Corinth Campus, Room 170
(940) 498-6207
kwsmith@nctc.edu

Yvonne Sandmann, M.S.
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Gainesville Campus, Room 110
(940) 668-3330
ysandmann@nctc.edu

Mary Martinson
Dean of Student Success
1525 West California Street
Gainesville, TX 76240
(940) 668-4209
mmartinson@nctc.edu

Dr. Andrew Fisher
Provost
1525 West California Street
Gainesville, TX 76240
(940) 668-4234
afisher@nctc.edu

Please refer to the OSD Website for more information: osd.nctc.edu

Career Services

North Central Texas College provides career-related services to students at all campuses. These services are delivered through several departments and persons.

Technical Program Faculty

Students enrolled in technical education programs such as criminal justice, nursing, cosmetology, drafting, surgical technology, office systems technology, equine science, business management, computer information technology, agricultural science, radiology technology, petroleum technology, and emergency medical services may network with department faculty to receive advising related to potential careers. Faculty members are also available to assist students in contacting prospective employers for internship and employment opportunities.

Job Search Resources

Job postings can be viewed online under the "CareerLion Job Board" link located at Career Services, https://www.nctc.edu/career-services/index.html. Resume and cover letter assistance are also available to job-seeking students through online resources such as Career Cruising and Grade Results, and also through NCTC's Writing Center. Contact a counselor or advisor for more information about resources to assist you with your job search.

Completion Center Program

The NCTC Completion Center is a comprehensive student engagement program, with a variety of services to help with student success, retention, and completion for all first-time-in-college students.

Major services include:

- Centralized Completion Center- Services provided on all campuses to address students' academic and non-academic challenges and issues including- success and academic coaching, goal setting, study skills, time management, test taking, reading strategies, motivation, etc.
- Centralized Career Readiness and Job Placement Program- Services include career readiness and development skills that are related to students' academic experiences. Assist students to create a solid foundation for future professional success, establish academic, personal, and professional goals based on analysis of students personality type, skills, and interests; and demonstrate tools and strategies for personal and professional growth. Other services include assisting students to create ePortfolios, and in-depth job placement services- including resume writing, career/job fair training, application and interview skill training.
- First Year Experience Course for all first-time-in-college students- The primary focus of the course is to develop an academic plan, and assist students with utilizing a range of support services on campus, such as completion center's

success coaches, mentors, career services, advising, financial aid, disability services, and tutoring centers.
- Professional development opportunities for full-time and part-time faculty/staff on student success, engagement, and retention efforts.
- Mentoring program- including faculty, staff and students.

Dean of Student Affairs & Outreach

The Office of the Dean of Student Affairs & Outreach is committed to fostering the holistic development of students at North Central Texas College by providing opportunities for advocacy, leadership, civic learning, career development, moral development, empowerment, accountability, and community engagement. Through a variety of student services, our priority is to support the educational mission of the College while providing a learning environment conducive to student success.

The Office of the Dean of Student Affairs & Outreach includes the following programs and services:

- Behavioral Intervention Team (CARES)
- Campus Tours
- Multicultural Affairs
- Veterans Affairs
- College Housing and Residence Life
- Student Conduct and Conflict Resolution
- Student Life
- Title IX & Sexual Misconduct

Dr. Roxanne Del Rio
Dean of Student Affairs & Outreach
(940) 498-6245
rdelrio@nctc.edu

Carol Novak
Departmental Assistant
(940) 498-6455
cnovak@nctc.edu

Student Conduct & Resolution Office

North Central Texas College is dedicated to providing quality educational opportunities and protecting of the rights and development of each individual of the College community in a positive, encouraging, and success-oriented environment.

In support of the NCTC mission and core values of *Stimulating Learning Environments*, *Integrity* and *Encouragement*, the Office of Student Conduct and Conflict Resolution is responsible for:

- Educating students about their rights and responsibilities as members of the NCTC community
- Facilitating student learning and development regarding community behavioral standards
- Promoting and safe and inclusive environment that fosters student success
- Guiding student conduct for responsible citizenship and positive lifestyle choices
- Implementing the Student Conduct Code and other policies governing student conduct, on and off campus.

Please see the Student Handbook or contact the Dean of Student Affairs & Outreach at (940) 498-6455 for assistance or additional information.

Student Life and Residence Life (Housing)

The Student Life team is committed to NCTC's Mission of *Student Success and Institutional Excellence* by offering student development opportunities. Student Life reflects the belief of administration, faculty and staff that although provision of a quality instructional program is the institution's uppermost aim, the total college learning experience transcends the classroom. Student Life aims to enrich the students' educational experience and personal development by making Life at NCTC memorable, engaging and purposeful outside of the classroom. Student Life at NCTC specifically consists of Residence Life (on-campus housing), Student Organizations, Student Government Association, Student Activities, Campus Recreation, Service Learning trips and Leadership opportunities. To live and learn outside of the classroom contact anyone below or visit studentlife.nctc.edu.

Shelby Johnson
Coordinator of Residence Life
Assistant Softball Coach
(940) 668-4259
housing@nctc.edu

Jacklynn Green
Student Life Specialist
(940) 498-6246
studentlife@nctc.edu

Daisy Garcia
Director of Student Life
(940) 668-3330
dgarcia@nctc.edu

Counseling & Advising Center

The counselors and advisors of this office provide the academic advising students need in order to formalize education and/or vocational objectives, understand the college admissions process, research college majors and transferability of coursework, and assist with resolving personal problems which are impacting a student's academic performance.

Personal counseling is available to students on a limited basis with referral to community and private resources when appropriate.

Academic Advising

Academic Advising is an essential element of NCTC's commitment to ensuring that students take the proper courses, in the proper sequence, in order to meet their educational and career goals. NCTC advisors and counselors provide academic advising services to all new, returning, and potential students throughout each semester —not just during registration

The following students are required to meet with an advisor or counselor in order to register for courses:

- First-time college students, including students who were previously Dual Credit students but are now at NCTC full or part-time
- Students who are not TSI (Texas Success Initiative) complete in one or more areas and therefore required to enroll in preparatory coursework
- Students who are enrolled in a Certificate program versus an Associate's degree plan
- Students who need to have transfer credits applied from another institution in order to meet prerequisites for NCTC courses
- Students on Academic Suspension who have an approved appeal

Students who qualify for online course registration are not required to see an advisor or counselor, however, it is highly recommended for students who have questions or need information about important issues such as course sequencing, prerequisites, choosing or changing a major, transferability of courses or degrees, etc.

Please contact the Counseling and Advising Office at your preferred campus in order to speak with an advisor or counselor at any time before or during the semester or email counseling@nctc.edu.

Corinth
(940) 498-6499

Gainesville
(940) 668-4216

Flower Mound
(972) 899-8412

Bowie
(940) 872-4002, ext. 5212

Graham
(940) 521-0720

Student ID Card

An ID card is issued to all students registered in credit courses, but it remains the property of North Central Texas College. This ID card is the student's official ID and library card. It functions as a debit card with direct deposit for refunds and book buy back and should be carried securely at all times. Access to computer labs and campus check cashing privileges (Bookstore, Cafeteria and Business Office) will not be extended to students who do not present a valid ID.

Lending this card to anyone subjects the holder to disciplinary action and forfeiture of the ID card. The ID card can also be used at local businesses participating in the Lion's Pride Program to receive discounts.

Photo Policy

All students are advised that the North Central Texas College Marketing & Community Relations Office takes photographs and shoots videos throughout the year of members of the student body and reserves the right to use them for publicity, promotional, and marketing purposes. This may include images and audio and video recordings of voices.

The College reserves the right to take photographs of campus facilities and scenes, events, faculty, staff, and students for promotional purposes in any areas on campus or at any NCTC-sponsored event off campus where subjects do not have a normal and reasonable expectation of privacy. All such photographs are the property of NCTC and may be used for NCTC promotional purposes such as electronic and printed publications, websites, classroom use, and college ads without prior permission of the subjects.

As a general practice, there is no attempt to collect individual photo release forms from students. Instead, we make the assumption that NCTC students are our best resources for marketing the College and that they will welcome involvement in these activities. However, students who do not wish to have their images or voices used for this purpose must stipulate this in writing to the office of the Vice Chancellor of Student Affairs at the beginning of the semester. It is also expected that such students will excuse themselves from photo or video sessions and inform the NCTC photographer that they do not wish to be included.

Student Government Association

The governing board and administration of North Central Texas College value the opinions and input of students in regard to a wide variety of college-related issues and they believe strongly in empowering students by giving them a meaningful voice in the institutional decision-making process. This is done in a variety of ways which include, but are not limited to, employee search/selection committees and many standing committees of the College.

In addition, student input is actively encouraged and sought on a district-wide basis from the Student Government Association.

Finally students may—either individually or collectively—bring issues before the Instructional Council, Chancellor's Leadership Team or other administrative bodies of the College at any time by complying with the appropriate process for requesting that they be placed on the agenda.

Clubs and Organizations

Student clubs and organizations are sanctioned by the College administration according to the belief that each renders a particular service to the College and to the student body. No effort is made to manipulate decisions regarding activities or projects of the organization, but the College expects all student organizations to conduct their affairs in a manner appropriate to proper codes of conduct and in accordance with institutional policies and regulations.

All student group-sponsored activities on the College campus are to be sponsored by one of the recognized clubs or organizations and its advisors. Club promotional and money-making ventures involving the public must be cleared through the Office of the Dean of Students Affairs.

New clubs and organizations are required to petition the Vice Chancellor of Student Affairs for official recognition. The four requirements to become a registered organization at NCTC are:

- 7 student members
- A full-time or part-time employee must advise the club or organization
- A constitution
- A student organization registration form

The Office of Student Life will also provide assistance in the formation of clubs and organizations to meet student needs and interests. For more information about starting a club at NCTC, visit studentlife.nctc.edu or contact the Office of Student Life at (940) 668-3330 or studentlife@nctc.edu. For a current list of active student organizations visit studentorg.nctc.edu

Black Student Union (BSU)
BSU creates an environment where all NCTC students of African descent as well as others can join a community and be understood. Within the confines of the community BSU's goal is to exchange resourceful information, and raise awareness on topics including but not limited to health, academics, social issues, political awareness and culture. BSU aims to uplift, empower, support, and bring out the best in our members. BSU is proactive on campus and in the community, in hopes of helping these places become more diverse and aware of the world we live in.

Business Professionals of America
The mission of Business Professionals of America is to contribute to the preparation of global professionals through the advancement of leadership, citizenship, academic and technological skills. Business Professionals of America members participate in these activities to accomplish their goals of self-improvement, leadership development, professionalism, community service, career development, public relations, student cooperation, safety and health.

Cosmetology Student Association (CSA)
CSA creates a link between the students of the Cosmetology Department and other student organizations and the rest of the campus community through participation in a wide variety of student activities.

Esthetician Student Association (ESA)
ESA creates a link between the students of the Esthetician program and other student organizations and the campus community. ESA works to better serve the students through education outside the classroom and the financial support of the ESA program.

Fellowship
Membership in this non-denominational Christian student organization is open to persons of all faiths.

Fellowship of Christian University Students (FOCUS)
Fellowship of Christian University Students creates a place for both Christian and Non-Christian NCTC students to build relationships and to learn about Christ.

Gaming Club
The NCTC Gaming Club is for students who enjoy gaming. Students discuss latest game releases, the development process of favorite games, and work on gaming projects together. This club is for any student no matter what their major.

Horticulture Society of North Central Texas College
This organization focuses on horticulture education while promoting the NCTC Horticulture Program and its students. The society participates in horticulture programs and activities such as the annual plant sale and field trips as well as campus beautification projects. The society also pursues opportunities to partner with Master Gardener and local interest groups within the NCTC service area.

Lambda Epsilon Chi
This club's purpose is to develop a better understanding in the criminal justice field and to improve skills in handling fire arms. Members of this organization seek to enhance the image of law enforcement

Latino Leadership Council (LLC)
LLC is on the Corinth and Gainesville Campuses. Although they are separate student organizations, they each provide leadership skills, volunteer opportunities and fun activities for their members.

Phi Theta Kappa Society
The world's oldest, largest and most prestigious association of community college honor students recognizes and promotes academic excellence on 1,200 community college campuses around the world. The Psi Iota Chapter was chartered on the North Central Texas College campus in 1972. More than $36 million in transfer scholarships have been designated by 600 colleges and universities for Phi Theta Kappa members only. Membership requirements include a GPA of 3.5 or higher, a total of at least 12 transferable credit hours from NCTC, and currently enrolled for at least 6 credit hours.

Residence Hall Association (RHA)
RHA is the voice for the residents in the halls. RHA will plan programs and activities for the residents. RHA is the organization that every residence hall student automatically belongs to and the objective of RHA is to be a social and community service organization. RHA has 4 elected officers (President, Vice-President, Secretary, andTreasurer), 1 advisor, and a number of committee chairs (Activity, Advertising, School Spirit, Community Service, etc.). RHA holds monthly general assembles, weekly officers meetings, and hosts monthly social events for the members.

Spectrum - Alliance
Spectrum aims to promote equality, diversity, and knowledge of LGBTQIA+ lives at NCTC.

STEM
The STEM Club creates a place where students can discuss their interests in science and technology, to emphasize the value of independent thought and reasoning amongst our students, faculty, and community alike, and to establish a fair, inclusive methodology of analyzing opinions, beliefs and known facts.

Student Activities Board (SAB)
SAB's primary purpose is to provide district wide student activities as well as off-campus activities for NCTC.

Student Government Association (SGA)
Members of this officially recognized representative body are elected by fellow students to communicate the interests and concerns of the student body to the Board of Regents, administration and faculty. SGA makes recommendations regarding student interests and policies to the administration. In addition, SGA helps develop campus programming designed to enhance the learning environment through social and cultural activities. By serving as an officer or senator in SGA, students have opportunities to develop and refine leadership and governance skills. Each officially recognized student organization elects a senator to serve and represent the interests of that organization.

Students in Action (SIA)
SIA is an NCTC student based volunteer organization that participates in community service with local organizations and is located on the Corinth campus.

Student Nurse Association (SNA)
The NCTC Student Nurse Association is a constituent of the National and Texas Nursing Student Association. The group acts as a liaison between faculty and students, aids in community health affairs, participates in legislative activities concerning health issues, and appoints delegates to the state convention each year.

Acting Performance

The Drama Department at NCTC has many opportunities to participate in 4-5 performances each year. Every summer, the department even produces a large musical. In the past Annie, Beauty & the Beast, and Peter Pan have been crowd favorites. The Drama Department also produces such interesting works as Frankenstein, Macbeth, and Dracula. With acting and stage craft classes available, students get the chance to experience all aspects of the theater - from on stage to backstage.

Musical Organizations

The performing groups associated with NCTC's Music Department provide exciting learning opportunities for students as well as cultural enrichment for the North Central Texas area. Ensembles include the NCTC Singers, the NCTC Jazz Band, and the NCTC Wind Ensemble. All ensembles are open to both music and non- music majors, and students may receive scholarship assistance.

The NCTC Singers are an auditioned choir that performs both on and off campus. The group has performed in such venues as Carnegie Hall in New York City, Trinity Church in Boston, and the Cathedral in St. Louis. The College Singers are offered both on the Gainesville campus and the Corinth Campus. The Singers keep an active schedule in Cooke and Denton counties, singing for churches, schools and civic organizations. Admission is by audition only.

The NCTC Jazz Band performs a varied repertoire (including big band swing, dixieland and contemporary jazz) during concerts and special appearances throughout the North Texas region.

The NCTC Wind Ensemble focuses on traditional wind band music of the Renaissance through 20th Century, performing works by such composers as Gabrieli, Bach, Bizet and other important composers.

Publications

Student publications are a valuable aid in establishing and maintaining an atmosphere of free and responsible discussion on the campus. They help bring student concerns to the attention of the College community and provide a forum for student opinion on various campus issues.

North Central Texas College publishes The April Perennial, an annual literary and visual arts magazine which features the winning entries in both poetry and short story categories from the major divisions of NCTC's highly popular Creative Writing Awards competition. Other publications are issued periodically, including a student newspaper when journalism classes occur in the schedule.

Students and prospective students are encouraged also to log on to the NCTC website for the latest news and features about the College. Go to www.nctc.edu and click on the "News & Press Releases" button.

On-Campus Housing Services

NCTC provides on-campus housing for students in two facilities, Hays Hall and Bonner Hall.

Hays Hall, a suite style facility, accommodates 30 students in a two-story structure. It features six 4-student suites and two 3-student suites. Each suite has two bedrooms accommodating up to two students each and sharing a common area and bathroom. Each suite is restricted to either all male or all female.

Bonner Hall is a traditional residence hall. It features double occupancy rooms for students and community bathrooms. Male and female wings are separated by a common lobby area, access to each wing by the opposite sex is permitted during visitation hours.

All students living in the residence halls have access to Bonner Hall as there are amenities available for use. Bonner Hall has a kitchen, TV lounges, and laundry facilities on both sides of the building. There is also a study room available for use.

The college requires that students living in both residence halls purchase a Meal Plan (see details under Charges for Room and Board), with meals served in the Student Union just a short walk away.

Students who wish to be considered for housing should pay an application fee, and complete an application online. This information may be found at housing.nctc.edu. All housing reservations will be handled on a first-come, space-available basis. The college reserves the right to make specific room assignments, although roommate preferences will be honored whenever possible. To ensure a student's roommate and hall preference, applications must be submitted by April 30.

Charges for Room & Board

Rental charges for on-campus housing during a regular long term (Spring or Fall) at NCTC include a mandatory Meal Plan which provides 17 meals per week for the duration of the semester. Serving of meals included in this plan begins the first day of classes and ends with the Friday noon meal of the last week of each semester.

Meals are prepared and served by a privately contracted food service company, and menus are planned to give students good nutritionally balanced meals at the most reasonable price possible.

> **NOTE:** As of this catalog's publication date, the NCTC Food Service is open Monday through Friday, as well as Saturday and Sunday for brunch. Students living on campus should be prepared to eat dinner elsewhere on weekends- either in town or in their rooms. Kitchen facilities are provided for student use on each upstairs wing of Bonner Hall. Students are allowed to have small refrigerators and microwaves in their rooms in both residence halls.

Total Charges & Payment Terms

Room/board charges for the entire semester are due and payable - either in full or installments. Students making full payment at registration will have their room/board charges discounted to:

Bonner Hall — $2,261

Hays Hall — $2,361

Installment Schedule

Students wishing to pay room/board charges in installments must make arrangements through the NCTC Business Office. Failure to meet installment obligations will result in severe penalties, including the student's immediate withdrawal from school when accounts become 30 days past due. The installment schedule is as follows:

Fall Semester

Due Date	Bonner Hall	Hays Hall
Due by Move-in	$753	$787
Due September 15	$754	$787
Due October 15	$754	$787
Total	$2,261	$2,361

Spring Semester

Due Date	Bonner Hall	Hays Hall
Due by Move-in	$753	$787

Due Date	Bonner Hall	Hays Hall
Due February 15	$754	$787
Due March 15	$754	$787
Total	$2,261	$2,361

Summer Semester

Due prior to move-in $305 per summer session, $610 for a private room per summer session.

Application Fee

A $150 non refundable application fee is required in advance to be considered for a room in either residence hall. *The College Board of Regents reserves the right to adjust college housing rental/meal charges in accordance with operational costs.*

Bacterial Meningitis Vaccination

During the 2009 Texas Legislative session, House Bill 4189 (HB 4189) was passed and signed into law. HB 4189 requires that any incoming new student who lives on campus must either receive a vaccination against bacterial meningitis (10 days prior to move-in) or meet certain criteria for declining such a vaccination before they can live on campus. Students who are living on campus will be required to provide verification of vaccination against bacterial meningitis or provide a signed affidavit declining the vaccination.

Resident Assistants

Both residence halls at NCTC employ student Resident Assistants (RAs) to help the Coordinator of Residence Life with security, supervising the facilities, providing resident assistance in emergencies, etc. The residence halls are staffed with an appropriate number of RAs in direct relation to the number of residents in the building. Compensation is given in the form of a free private room and meal plan. To apply, contact the Coordinator of Residence Life at (940) 668-4259.

Security

The NCTC Police Department provides direct supervision of security personnel, policies and procedures, and, along with other College officials, reserves the right to forcibly remove any student from the campus who poses an immediate threat to the health and safety of the college environment.

Facilities

Any resident having a maintenance request should submit the request to the RAs or to the Coordinator of Residence Life, so that the maintenance request can be addressed by the appropriate department.

Academic Policies

Academic Freedom

North Central Texas College ensures adequate procedures for safeguarding and protecting academic freedom. That faculty have freedom in teaching, research and publication is essential to the collegiate culture that rests upon the belief that institutions of higher education serve the common good, and depends upon a free search for truth and its free expression without intent to do personal harm. The college's stance on academic freedom and its protection is clearly stated in Board Policy EJA (Local) - Miscellaneous Instructional Policies: Academic Freedom

Each faculty member is entitled to full freedom in the classroom in discussing the subject which he/she teaches. Limitations to this basic statement exist only within the bounds of common decency and good taste. Each faculty member is also entitled to speak or to write as a citizen of the nation, state, and community without fear of institutional censorship or discipline.

The concept of academic freedom must be accompanied by an equally demanding concept of responsibility shared by the Board, administration, and faculty. The fundamental responsibilities of faculty as teachers and scholars include a maintenance of competence in their field of specialization and the exhibition of such competence in lectures and discussions. Although publishing is not a fundamental responsibility of a faculty member, it is encouraged by the college.

Exercise of professional integrity by a faculty member includes recognition that the public will judge the profession and the institution by his/her statements both in public and in private life. Therefore, he/she should strive to be accurate, to exercise appropriate restraint, to show respect for the opinions of others and to avoid creating the impression that he/she speaks or acts for his/her College when he/she speaks or acts as a private person.

A faculty member should be selective in the use of controversial material in the classroom and should introduce such material only as it has clear relationship to the subject field.

Academic Honors

At the end of each Fall and Spring semester, certain students are recognized for superior academic achievement by being named to either the Chancellor’s Honor List or the Dean’s Honor List.

To qualify for the Chancellor’s Honor List, students must attain a GPA of 4.0 while enrolled full-time (12 or more college-level semester hours). Students qualifying for the Dean’s Honor List must be enrolled full-time (12 or more college-level semester hours) and achieve a GPA of 3.5 or above. Names of students so honored will be posted and released to the news media.

Academic Load

At North Central Texas College, a full-time student is defined as one who is enrolled for a minimum of 12 semester credit hours per Fall, Spring, or combined Summer semesters. Special permission must be obtained from the Provost or designee in order to enroll for more than 18 semester credit hours during a Fall or Spring semester, more than 7 semester credit hours in an individual Summer session, or more than 14 semester credit hours during the combined Summer semesters.

Attendance Regulations

The NCTC attendance policy is published in each course syllabi. NCTC faculty are expected to keep up to date attendance records. However, general regulations regarding class attendance are as follows:

- Regular and punctual attendance is expected of all students in all classes for which they have registered.
- All absences are considered to be unauthorized unless the student is absent due to sickness or emergencies which are approved by the instructor, or due to participation in an approved college-sponsored activity (which requires written approval from the appropriate Dean or Director).
- The instructor is responsible for judging the validity of any reasons given for absence. Valid reasons for absence however, do not relieve the student of the responsibility for making up required work.
- Students will not be allowed to make up an examination missed due to absence unless they have reasons acceptable to the instructor. A student who is compelled to be absent when a test is given should petition the instructor, in advance if possible, for permission to postpone the exam.
- Students may be dropped from a class by the Registrar upon recommendation of the instructor who feels the student has been unjustifiably absent or tardy a sufficient number of times to preclude meeting the course's objectives.
- Persistent, unjustified absences from classes or laboratories may be considered sufficient cause for College officials to drop a student from the rolls of the College.
- Students may be dropped from a developmental course required for the Texas Success Initiative (TSI) purposes for non-attendance. Official NCTC TSI rules state that students not passing all sections of the THEA, Compass, or the TSI Assessment test must be enrolled in at least one area of remediation each semester they are enrolled or until all sections are passed or all remedial requirements have been met.
- Simply logging into an online course does not constitute attendance. The U.S. Department of Education calculates last date of attendance by the last time a student participated in an online discussion or made contact (interacted) with a faculty member and this standard is applied to online courses.

Course Cancellation Policy

The College reserves the right to cancel any scheduled course which does not have sufficient enrollment to justify, economically or educationally, teaching the course. Students will be notified of a cancellation at the first scheduled meeting of a course.

Dropping Courses

If a student's personal circumstances dictate the need to reduce his or her academic load, that student should confer with an advisor for assistance in adjusting the number of courses being taken. A grade of "W" will be given to students who officially withdraw from a course by the deadline noted in the academic calendar. Any drops after this will be made with the approval of the instructor and the Division Chair.

It is the student's responsibility to initiate the action necessary to drop courses under the conditions outlined above. This requires the completion of a petition for a course drop form available in the Office of Admissions on any NCTC Campus or by going to the NCTC website at www.nctc.edu and then Admissions. Online drops may be completed in a student's MyNCTC account as well. The request to drop form must be submitted on or before the last day to drop with a "W" (see Academic Calendar in front of catalog for specific date), and it is not available until the official date of record. Prior to the official date of record, a student should go to the Office of Admissions to complete the required drop form.

Students who register for courses are required to drop any courses they no longer wish to attend or a final grade will be assigned.

Instructors may drop students from courses for non-attendance by completing a petition for course withdrawal.

(6) Drop Limit - S.B. 1231 Legislation

Effective 2007, section 51.907 of the Texas Education Code applies to first-time freshman students who enroll in a Texas public institution of higher education in the fall semester of 2007 or thereafter. High school students currently enrolled in the North Central Texas College Dual Credit and Early Admission program are waived from this requirement until high school graduation.

Based on this law, any Texas Public institution of higher education may not permit students to withdraw more than six college level credit courses for unacceptable reasons during their entire undergraduate career without penalty. All college-level courses withdrawn after the oficial date of record are included in the six-course limit, including courses dropped at another Texas public institution of higher education, unless the student demonstrates to an appropriate college official that one of the following events occurred to the student during the semester or summer session:

- A severe illness or other debilitating condition that affects the student's ability to satisfactorily complete the course.
- The student's responsibility for the care of a sick, injured, or needy person if the provision of that care affects the student's ability to satisfactorily complete the course.
- The death of a person who is considered to be a member of the student's family or who is otherwise considered to have a sufficiently close relationship to the student that the person's death is considered to be a showing of good cause.
- The active duty service as a member of the Texas National Guard or the armed forces of the United State of either the student or a person who is considered to be a member of the student's family or who is otherwise considered to have a sufficiently close relationship to the student that the person's active military service is considered to be a showing of good cause.
- The change of the student's work schedule that is beyond the control of the student, and that affects the student's ability to satisfactorily complete the course.
- Other good cause as determined by the college official.

Contact the Registrar's Office for further details related to exceptions.

51.907 b.3 Withdraw from the Institution

Withdrawn from the Institution is defined as any student that has dropped all courses for the semester, including any mini-semesters.

The Office of Admission and Registrar is responsible for tracking the number of drops that students have accumulated at North Central Texas College and from any transfer institution of public higher education in Texas. These drops will be indicated on the student's NCTC transcript.

Course Drop Definition

A course drop, which will be recorded on the transcript, is defined as an affected credit course not completed by an undergraduate student who:

- is enrolled in the course by the official date of record*
- will receive a non-punitive grade of W.

  Official date of record varies according to the length of the course. The most common course lengths are listed below. For the official date of record for all other course lengths, please refer to the Academic Calendar.

COURSE LENGTH	DATE OF RECORD
3 week course	2nd class day
5 or 6 week course	4th class day
8 week course	6th class day
16 week course	12th class day

The following courses will be exempt from being counted as a withdrawal towards the limitation. The courses are as follows:

- College Preparatory course drops (including non-college-prep courses dropped as a result of non-attendance in the College Prep course)
- Co-requisite courses - courses that are linked together such as a lecture/lab class
- Dual credit courses - courses that are taken as dual credit while also enrolled in the high school

Drops that will count towards the 6 drop limit include:

- Students who are withdrawn from the institution for disciplinary reason.
- Students who are dropped for non-attendance by individual faculty members.
- Students who do not meet any of the exemptions listed above.

Complete Withdrawal

If a student wishes to withdraw from all courses, they must do so according to the above mentioned procedure. Once a grade has been given for a course, the student must initiate and complete the grade appeal process within one long semester of completion of the course. See section on Grade Appeal Process.

If a student withdraws completely from the College on or prior to the *course drop date deadline*, as defined above, a final grade of “W” will be recorded for each course in which the student is enrolled. Should a student withdraw completely from the College after the *course drop date deadline*, a final grade will be recorded for each course in which the student is enrolled at the discretion of the appropriate Dean with the advice and consultation of the instructor of record.

Medical Withdrawal

Policy

The Registrar (or designated representative) may grant medical withdrawals to students who must withdraw for medical reasons from all courses for which they are registered at NCTC. It is expected that the appeal will be filed as soon as possible, no later than a week prior to final exams.

Students who receive medical withdrawals after the last day to withdraw without receiving a grade shall receive either an "I" or a "W" in each course for which they were registered.

Procedures

1. Students (or their appointed representatives if they are unable to act for themselves) who seek to withdraw for medical reasons from all courses for which they are registered at NCTC shall, as soon as possible, request medical withdrawals in writing from the Registrar, submitting all appropriate documentation, including a statement from a physician or psychologist, with their written requests.
2. The documentation will be sent to the appropriate deans of the subject areas involved within the appeal. If the appeal involves multiple disciplines, then the request will be sent to the deans to discuss collaboratively providing a recommendation to the Office of Admissions and Registrar.
3. The Deans will be responsible for the validation of documentation.
4. The Registrar will inform the student and instructor of the decision in writing if the request is approved.

Faculty Withdrawals

If a faculty member withdraws a student who has exceeded the six drop limit and who does not meet any of the areas of exemption, the withdrawal slip will be sent back to the faculty member with an indication that the student can no longer be withdrawn from classes due to exceeding the "six drop limit". The faculty member will be required to give the student a grade.

Grades & Reports

Grades are reported and made a part of the official record, filed in the Registrar's Office, at the end of each semester. Students may view their grades online.

Minimum Grades for Good Academic Standing

All students enrolled in credit courses at North Central Texas College, whether on a full-time or part-time basis, must maintain a minimum cumulative grade point average GPA of at least 2.0 to remain in Good Academic Standing.

System of Grading

The standing of a student in each course is expressed by the following grades which are assigned for class work, examinations, and general classroom performance according to criteria set by the instructor.

Interpretations of these grades are:

- A — Excellent
- B — Good
- C — Average
- D — Poor
- F — Failure
- I — Incomplete
- W — Withdrew
- P — Pass
  ***Disclaimer**: Some departments and programs do not accept a grade of "D" as a passing grade.*

Grade Points

Letter grades are assigned numerical values, or **grade points**, as follows per semester hour:

- A = 4 grade points
- B = 3 grade points
- C = 2 grade points
- D = 1 grade point
- F = 0 grade points

Courses with a grade of "P", "W", or "I" are not assigned grade point values and are not considered in computing grade point average (GPA). When a course initially taken at NCTC is repeated at NCTC, the higher grade earned is included in the computation of the cumulative GPA.

A student's cumulative GPA is determined by dividing the total college-level grade points earned by the total number of college-level credit hours attempted. To illustrate, a student who has attempted 30 college-level credit hours, earning 60 college-level grade points, would have a cumulative GPA of 2.0. College Preparatory coursework is not use in the calculation of the cumulative GPA, however, the grades earned and hours attempted are used in the calculation of the current term GPA, for example Spring, Fall, or Summer GPA.

Pass/Fail Option

North Central Texas College permits enrollment in selected courses on a pass/fail option basis. In courses where this option is available to the student, the instructor can provide the necessary forms for selecting the pass/fail option. The forms must be completed by the student and instructor and returned to the Registrar's Office by the second Tuesday of the second week of the current semester. The pass/fail option will not be extended beyond this date.

Once the pass/fail option is processed, he or she may not return to a standard A, B, C, D, F evaluative system. It is not recommended to select the pass/fail option if the course in which the option is applied should be included as a part of the college major and expected to transfer that course to a senior college or university.

Performance requirements on the part of the student are the same regardless of the pass/fail option or the traditional A, B, C, D, F evaluative system. Courses taken on a pass/fail basis do not earn grade points, however, failing grades will be counted in the student's grade point average.

Incomplete Grades

A grade of "I" signifies incomplete course work. The intent of an "I" is to allow a student to complete a course when unforeseen circumstances hinder the student from being able to complete the course during the regular semester.

The student must follow these procedures:

- To receive an "I" in any course, a student must be in good standing in the course through the last day to drop.
- The student must petition the instructor in writing, and if the instructor agrees that the incomplete grade is reasonable, he or she will detail in writing the requirements necessary to complete the course and attach the Incomplete Grade form to the final grade roll.
- It is the student's responsibility to comply prior to the end of the next long semester or the grade will be changed to an "F".
- Instructors who wish to issue a grade of "I" must submit the Incomplete Grade form with the appropriate documentation to the Division Chair for approval. Once an incomplete is finished, the instructor must submit a Petition of Change of Grade form for final approval.

Student Grade Appeal

Any student wishing to appeal the final grade received in any course may do so according to the following procedure:

1. Collect all tests, assignments, class notes and other relevant materials and request a conference in writing with the instructor of the course in question. The same materials collected must be presented at each stage of the appeal process, with no addition or omission of items.
2. Present the case for grade appeal directly to the instructor.

3. If not satisfied with the decision of the instructor, the student has 10 calendar days to appeal in writing to the instructor’s Division Chair (see listing in College Personnel section of the Catalog). All tests, assignments, class notes and other relevant materials must be presented to the Department Chair or Program Coordinator.
4. If not satisfied with the decision of the Division Chair, the student has 10 calendar days to appeal in writing to the Academic Appeals Committee (contact information provided by the Division Chair). All tests, assignments, class notes and other relevant materials must be presented to the Committee.

Grade appeals may only be considered if the procedure has been followed explicitly in the order outlined. The grade appeal process must be initiated by the end of the sixth week of the next long semester. For more information students may consult Board Policy FLD (Local).

Academic Probation

A student whose cumulative GPA is less than 2.0 at the end of a Fall, Spring, or Summer semester for which the student is enrolled will be placed on Academic Probation. A student on Academic Probation is notified of this status through NCTC email and a notation on his or her transcript.

A student will remain on Academic Probation if the student's semester GPA exceeds 2.0 but the cumulative GPA is below 2.0. If at any time a student's cumulative GPA is above 2.0 then the student will subsequently be released from Academic Probation.

A student on Suspension from another college or university (as noted on the student's official transcript) will be required to submit an appeal to the Admissions Office of NCTC in order to be eligible for enrollment. If approved for enrollment, this student will automatically be placed on Academic Probation status at NCTC, and therefore MUST earn a GPA of at least 2.0 in the first semester at NCTC in order to avoid moving to Suspension status.

Academic Suspension

A student who is already on Academic Probation status will placed on Academic Suspension status if his or her cumulative GPA remains below 2.0 at the end of the next Fall, Spring, or Summer semester in which the student is enrolled, and the student's term GPA for that Fall, Spring, or Summer semester is also below 2.0.

A student placed on Academic Suspension is required to sit out the next long semester in which the student intended to enroll at NCTC unless the student completes the Appeal process and is approved for enrollment. Students approved for an Academic Suspension Appeal will be assigned an Academic Advisor, will be limited in the number of hours in which they can enroll, and will also have other obligations to meet during the appeal semester such as attending College Success seminars.

A student on Academic Suspension is notified of this status through Canvas communication, NCTC student and personal email, as well as a notation on the transcript and on the student's MyNCTC dashboard.

A student placed on Academic Suspension status whose Appeal has been denied or who does not Appeal but rather sits out the next semester(s) (i.e. sits out Summer and/or Fall if placed on Suspension after Spring, or sits out Spring if placed on Suspension after Fall), will have a Registration Hold placed on the student's account and must meet with an Academic Advisor in order to re-enroll for the next eligible semester. Also, this student will automatically be placed on Academic Probation status when the student does re-enroll at NCTC, and therefore MUST earn a term GPA of at least 2.0 in the first semester back at NCTC in order to avoid returning to Suspension status.

Permanent Academic Suspension

NCTC does not permanently suspend students for poor academic performance.

Numbering of Courses

Courses are designated by four-digit numbers. The first digit indicates the level at which the course is taught. For example, a 1 indicates a freshman level course and a 2 indicates a sophomore level course. The second digit indicates the semester hour value of the course. The third and fourth digits indicate the distinguishing number of the course. For example, Government (GOVT) 2305 is a sophomore (2) level, three-semester-hour (3) course. The distinguishing number of this particular government course is 05.

Student Classification

Freshmen are defined as students who have completed fewer than 30 semester hours of credit at the beginning of a registration period. Sophomores are defined as having completed 30 or more semester hours of credit.

Student Responsibilities

Campus Behavior

North Central Texas College reserves the right to take disciplinary measures appropriate to any violation and in keeping with its own best interests and the interests of other students. Such disciplinary action may result in a student being placed on probation or suspension from the College. In the latter case, a student will be given the opportunity to show his or her innocence or mitigating circumstances in a hearing before a Student

Services Committee. This committee may uphold previous decisions or refer the case to the Chancellor of the College for final review.

Student Records

Each individual student at NCTC is responsible for seeing that his/her records are kept accurate and up to date. If, after registration, students change their name, address, telephone number, social security number, etc., the Admissions/Registrar's Office should be notified as soon as possible.

Students who receive financial aid should also be sure that their mailing address is up to date in the Office of Financial Aid. North Central Texas College is not be responsible for financial aid award checks, grades or other documents/correspondence not received because of their failure to notify the Registrar of address changes.

Privacy of Information - North Central Texas College complies with all requirements of the Family Educational Rights & Privacy Act of 1974 (FERPA). As provided under this act, NCTC will-unless expressly requested in writing (to follow) not to do so by the student-release to the public, on request, certain student information. This will be restricted to "directory information," defined under FERPA as "not generally considered harmful or an invasion of privacy if disclosed." Directory information includes but is not limited to:

- Name, address, telephone number
- Student email
- Date and place of birth
- Participation in officially recognized activities and sports
- Major field of study
- Weight and height of athletes
- Enrollment status (full time, part time, etc.)
- Degrees and awards received
- Dates of attendance
- Previous high school and college attended
- Grade level

Directory information cannot include student identification numbers or social security numbers.

College Debts

Students having overdue books at the Library or owing fines and students indebted to the College or the College Bookstore will not be issued a transcript and will not be permitted to re-register until such debts are paid. Students must clear all debt to the College before withdrawing.

Student Rights Concerning Educational Records

Under FERPA

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. They include:

Right to Review Records
NCTC students have the right to inspect and review their education records within 45 days of the day the College receives a request for access. Students should submit to the Registrar a written request that identifies the record(s) they wish to inspect. The Registrar will make arrangements for access and notify the students of the time and place where the records may be inspected.

Right to Correct Errors
NCTC students have the right to request that an amendment be added to their educational records if they believe the records are inaccurate or misleading. They should provide this request to the Registrar, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading. The Registrar will notify the student of their judgement to ammend and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

Right to Disclose Information
NCTC students have the right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent. One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interests.

Right to File Complaint
Students have the right to file a complaint with the U.S. Department of Education concerning alleged failures by North Central Texas College to comply with the requirements of FERPA.

The name and address of the Office that administers FERPA complaints can be located at:

Family Policy Compliance Office
U.S Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-4605

Transfer of Courses to Senior Colleges

The hours earned at North Central Texas College in academic courses are generally accepted by other accredited colleges and universities to satisfy specific course requirements or to count as electives. Students who have gained proficiency through completion of course work from non-accredited institutions should consult the Provost regarding individual course evaluation.

Students planning to transfer to a four-year school, or other community college, should be aware that each school determines its own list of courses required for a particular kind of degree. Moreover, different colleges do not require all the same courses for the same major. Therefore, knowledge of the degree plan requirements at the institution to which the student plans to transfer is very important. Students can start to research these requirements by visiting the NCTC Transfer web page to access Transfer Guides for major universities, as well as Academic Pathways which outline the suggested courses you need to take for your intended college major.

NCTC counselors and advisors are familiar with course requirements at transfer colleges and will be glad to assist students in determining course equivalency and in choosing those courses which are appropriate to their educational objectives after they transfer.

Resolution of Transfer Disputes

For Lower Division Courses

The Texas Higher Education Coordinating Board has established the following policy to resolve disputes over transfer credit involving lower-division courses by public institutions of higher education.

The following procedures shall be followed:

1. If any institution of higher education does not accept course credit earned by a student at another institution of higher education, the receiving institution shall give written notice to the student and to the sending institution that transfer of the course credit is denied.
2. The two institutions and the student shall attempt to resolve the transfer of the course credit in accordance with Board rules and/or guidelines.
3. If the transfer dispute is not resolved to the satisfaction of the student or the sending institution within 45 days after the date the student received written notice of denial, the institution whose credit is denied for transfer shall notify the Commissioner of the denial.

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

Degree Requirements

As a two-year comprehensive community college, NCTC has the authority by the state of Texas to offer the following degrees:

- Associate of Arts (AA)
- Associate of Science (AS)
- Associate of Arts in Teaching (AAT)
- Associate of Applied Science (AAS)
- Level I Workforce Certificate
- Level II Workforce Certificate
- Occupational Skills Achievement Award

Overview of Degree Requirements

AA, AS and AAT degrees are an embodiment of NCTC's goal to provide quality freshman and sophomore level courses in arts and sciences that parallel the lower division offerings of four-year colleges and universities by offering a coherent sequence of courses with appropriate breadth and depth to prepare students for transfer to a university.

The AAS and certificates represent NCTC's goal to provide quality technical programs leading directly to careers in semi-skilled and skilled occupations by offering a coherent sequence of courses with appropriate breadth and depth to prepare students for success in the workforce.

To graduate, students must complete the degree requirements with a cumulative grade point average of 2.0.

Degree	Requirements	Semester Credit Hours
Associate of Arts (AA)	Core Curriculum Courses	42
	Electives*	18
	Total Minimum Required Hours	60
Associate of Science (AS)	Core Curriculum Courses	42
	Electives*	6 or 7
	Additional Advanced Mathematics Course	3 or 4
	Two Additional Science Courses	8
	Total Minimum Required Hours	60 or 61
Associate of Arts in Teaching (AAT)	Specific degree requirements for grades EC-6, 4-8, and Secondary are listed in current catalog	
Associate of Applied Sciences (AAS)	General Education Courses	15
Technical Courses (per degree plan)	Varies	Varies
Proficiency With Computers (per degree plan)	Varies	Varies

**Elective courses should be based on the degree requirements for your chosen Major Field of Study at the university you wish to attend. Transfer electives generally meet basic university degree requirements for a Major Field of Study. Recommended electives generally transfer, but they may not meet university Major Field of Study requirements. Either Transfer or Recommended electives will satisfy NCTC degree requirements.*

Official Transcripts

Official college transcripts may be requested online through Parchment. NCTC partners with Parchment to manage ordering, processing and secure delivery of official transcripts. All official transcripts to be sent electronically or mailed must be ordered through Parchment. Visit the NCTC website for additional information.

Official college transcripts may be picked up on campus from the Office of Admissions on the Gainesville, Corinth, Flower Mound, Bowie, and Graham campuses. A photo ID is required in order to pick up transcripts.

Current students are able to view and print unofficial transcripts online on MyNCTC. If a current student needs access to view their unofficial transcript online but has a transcript conversion hold, please email transcripts@nctc.edu for assistance with your student ID and full name.

Graduation Requirements

Application for Graduation

To ensure consideration as a candidate for a degree or certificate, the student should submit an application for graduation at the beginning of the semester in which a degree or certificate will be completed, or be identified as expected to graduate by the Registrar's Office. Students identified by this process will be notified by mail or email regarding their award. The application may be obtained online through MyNCTC or from the Office of Admissions.

Deadlines for submitting graduation applications are:

- May graduation - March 15
- December graduation - October 15.

All graduating students are encouraged to submit a graduation application, regardless of intent to participate in the ceremony to ensure the desired name is printed on the diploma as well as the correct address of mailing the diploma. Graduation applications received after the deadline will be processed and students are encouraged to attend, but the student's name may not be published in the graduation program.

An evaluation of course work submitted to fulfill degree requirements must be completed before candidacy for graduation is approved. Any student within 12 hours of finishing may participate in May commencement. Those applying for May graduation must fulfill all requirements by the end of the second summer session following the semester they applied. Diplomas are granted only after all requirements are met.

Requirements

North Central Texas College certifies graduates three times a year; in the fall, spring and summer semesters. North Central Texas College holds formal commencement ceremonies twice each year-in May and December. Students are encouraged to participate in spring or fall commencement ceremonies after applying to graduate. Diplomas are not awarded at commencement ceremonies and participation in the ceremonies is not a guarantee of degree completion. Degrees are officially conferred when the Registrar's Office certifies that all requirements have been met. Nevertheless, candidates for graduation are highly encouraged to attend and participate in the designated graduation ceremony. NCTC makes a special effort to give graduates (and their families) a beautiful and memorable ceremony to mark this important milestone in their lives. It truly is an event not to be missed.

There is no fee to participate in the commencement exercises; however, the student must purchase the required cap and gown from the NCTC campus bookstore in order to participate in the ceremony.

North Central Texas College reserves the right to post degrees and/or certificates for current or former students who have met completion requirements but have not applied

for graduation. Diplomas will be automatically issued and sent to the mailing address on file.

Graduation Honors

Graduation honors will be awarded for students with the following cumulative grade point averages earned by the end of the Fall semester prior to the May graduation ceremony and by the end of the summer session prior to the December graduation ceremony. A minimum of 29 hours (earned at NCTC by the end of the Fall semester prior to the May graduation ceremony and by the end of the summer session prior to the December graduation ceremony) will be required in order to be considered for graduation honors.

4.0 GPA — Summa cum laude

3.90 — 3.99 GPA Magna cum laude

Commencement

North Central Texas College certifies graduates three times a year; in the Fall, Spring, and Summer semesters. North Central Texas College holds formal commencement ceremonies twice each year-in May and December. Students are encouraged to participate in spring or fall commencement ceremonies after applying to graduate. Diplomas are not awarded at commencement ceremonies and participation in the ceremonies is not a guarantee of degree completion. Degrees are officially conferred when the Registrar's Office certifies that all requirements have been met. Nevertheless, candidates for graduation are highly encouraged to attend and participate in the designated graduation ceremony. NCTC makes a special effort to give graduates (and their families) a beautiful and memorable ceremony to mark this important milestone in their lives. It truly is an event not to be missed.

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North Central Texas College reserves the right to post degrees and/or certificates for current or former students who have met completion requirements but have not applied for graduation. Diplomas will be automatically issued and sent to the mailing address on file.

Catalog Restrictions

Students may graduate under any approved degree plan from the catalog in effect at the time of first enrollment at North Central Texas College, provided the catalog is still in effect, the current catalog, or a subsequent catalog in effect during enrollment as long as the program of study is still offered. In addition to this, the catalog may not be more than 5 years old and enrollment must have occurred during that year and earned college credit for work completed. The options above only apply provided the student meets the requirements not later than five years from the date of the catalog selected.

Reverse Transfer

A student can finish an associate's degree at NCTC after transferring to a university. Credits earned at a four-year college or university are evaluated to determine if the credits taken will fulfill requirements for an associate's degree.

If a student is interested in being considered for reverse transfer, then contact should be made with the appropriate office at the university or college. Check the NCTC website for more information.

Educational Intent

At the time of admission, students must identify their educational intent, i.e. to earn a certificate, to complete a degree or to transfer coursework for a bachelor's degree. Students must also identify a major. This information is kept on file in the Office of Admissions and Registrar. Students may change their educational intent and/or their major during the course of their education. A Records Maintenance Form must be filed in the Office of Admissions and Registrar to make the change official. Changes in educational intent and/or major are effective the following semester.

Instructional Division

The Instructional Division at NCTC is made up of eight major instructional areas with a Division Chair for each department who report to one of eight Deans, who in turn report to a Provost.

1. Visual and Performing Arts, Social Sciences, and English, Foreign Language and Speech
2. Math and Sciences
3. Career and Technical Education
4. Health Sciences
5. Adult and Continuing Education
6. Library Services
7. Student Success
8. Honors Studies

Arts and Sciences

Associate of Arts (AA), Associate of Science (AS), and the Associate of Art in Teaching (AAT) degrees are offered through the Arts & Sciences area, under the leadership of the Instructional Deans and Division Chairs. The instructional programs are organized according to major subject areas or disciplines, as follows:

- Department of English, Speech & Foreign Language
    - English
    - Foreign Language
    - Speech
- Department of Visual & Performing Arts
    - Drama
    - Music
    - Art
- Department of Mathematics
- Department of Science
    - Biology
    - Chemistry
    - Physics
    - Astronomy
    - Geology
- Department of Physical Education & Athletics
- Department of (AAT) Education
    - Early Childhood-Grade 6
    - Grades 4-8
    - Secondary (Grades 9-12)
    - Learning Frameworks

- Department of Social Sciences
  - # Government
  - # Economics #
  - History
  - # Humanities #
  - Philosophy #
  - Psychology #
  - Sociology
  - # Anthropology

Career & Technical Education

Associate of Applied Science (AAS) degrees and certifications are offered through the Career and Technical Education Division, under the leadership of the Instructional Dean and Division Chairs. The instructional programs, as listed, are organized according to major subject areas.

- Accounting
- Agriculture
- Barbering
- Business Management
- Computer Information Systems & Technology
- Computer Network Systems
- Cosmetology
- Criminal Justice
- CyberSecurity
- Database Management
- Engineering Technology
- Equine Science
- Esthetician
- Electrical Technician
- Farm & Ranch Management
- Gaming/Application Programming
- Horticulture
- Heating, Ventilation, and Air Conditioning
- Industrial Mechanics
- Machining Technology
- Web Design
- Welding

Health Sciences

Associate degrees and certifications are offered through the Health Sciences area, under the leadership of the Dean and Division Chairs. The instructional programs, as listed below, are organized according to major subject areas.

- Associate Degree Nursing
- Fire Sciences
- Emergency Medical Technology
- Licensed Vocational Nursing
- Radiological Technology
- Surgical Technology

Dual Credit Program

The Dual Credit program at NCTC provides an opportunity for eligible high school students to enroll in college-level courses to earn both college credit and high school credit simultaneously. Students may take NCTC classes at any NCTC campus, at their high schools, online, or any combination of the three. Refer to Admissions Information for eligibility requirements.

eCampus

The mission of the eLearning Department is to facilitate the continued growth and development of distance learning opportunities for a diverse and rapidly changing student population. The department strives to accommodate a wide range of online student needs and learner preferences.

Students can expect the same high-quality courses as those taught in the classroom. The content and transferability is identical to courses offered on campus. eCampus students follow the same admissions and registration procedures as on-campus students. A student may complete the core curriculum through online courses, and many technical program courses are available online.

Online courses require students to have an Internet connection to complete coursework. Students may use a personal computer in a setting that fits their needs. For those with limited connectivity, they may use NCTC General Access Lab computers on-campus. NCTC uses the Canvas Learning Management System for all online and hybrid courses. Face-to-face courses also use Canvas to log grade and attendance data and may use Canvas to deliver resources, activities, and assessments. Students use their assigned NetID to log in to Canvas.

An online course is delivered 80%-100% online. Most online courses are conducted completely online; however, some do require students come to campus for testing, etc.

A hybrid course is delivered 30%-79% online. Hybrid courses blend online and face-to-face delivery. Hybrid courses require some on-campus time yet offer the flexibility of fewer trips to campus. Generally, a hybrid course meets on campus one day a week to attend lab or classroom instruction.

Students should check specific course information by searching MyNCTC under Find Courses.

Adult Continuing Education (ACE)

The Division of Adult Continuing Education (ACE) at North Central Texas College provides non-credit learning options in workforce education and personal enrichment. In order to address the needs of an increasingly diverse student population, courses are flexibly scheduled at Cooke, Denton, Montague, and Young Counties.

Occupational training programs are a mainstay in the ACE division. Working hand-in-hand with employers and workforce development boards, NCTC develops curriculum to support ever-changing labor pool needs. With the understanding that many individuals need to prepare for a career change while in the workforce, the number of comprehensive workforce and certification programs offered entirely on-line has increased to 500+ topics.

NCTC is viewed as a customized training provider of choice in the region, working with employers to identify and implement specialized training objectives. Subsequent results prompt increased efficiency and employee retention, groom workers for upward mobility and improve the competitive stance of the organization. Additionally, professionals who require mandatory professional education look to NCTC to polish competencies.

Cultural/personal enrichment courses range from art, fitness, and gardening, to home décor, music, financial management, and language studies. Topics are modified regularly in alignment with popular trends. Students may even opt to pursue their personal interests using the distance education venue.

Computer classes teach basic to advanced technology skills like the Microsoft Suite, specific business applications such as Quickbooks, and trendy subjects such as digital photography.

Informational schedules are available each semester and may be viewed on the college web site, www.nctc.edu, under the Continuing Education link. Non-credit course registration is on-going throughout the year and encouraged at least seven business days prior to the class start.

The majority of ACE courses do not mandate prerequisites. However, some courses may be taken only by those students who meet age restrictions or pre-designated experience or licensure. Any specific eligibility criteria will be reflected on ace.nctc.edu

- Enrollment in all course topics is based upon a first-come, first-serve basis.
- All course topics require minimum enrollment for implementation.
- Continuing Education Units (CEUs), the nationally recognized means of recording and accounting for the various continuing education activities a person accumulates, are awarded for completion of courses. One (1) is awarded for every 10 contact hours of organized continuing adult education.

Conversion of Non-Credit to Credit

A student may enroll in select technical credit courses but choose to earn continuing education units (CEUs) instead of academic credit. This is referred to as concurrent enrollment. Upon course completion, the concurrently enrolled student receives a conventional letter grade, and the CEUs are posted to the student's combined transcript.

Within two years of course completion and enrollment as an undergraduate student, a student who has a passing conventional letter grade for a noncredit course may apply to have the CEUs earned for that course converted to regular semester-hour college credit. At this point, semester-hour credits earned are posted to the student's undergraduate academic transcript. Once converted to college credit, the course can count toward the requirements for a certificate or degree.

ACE Registration

Enrollment forms may be found in the course schedule or sent to students upon request. Registration can be conducted in person, by phone, fax or mail. Payment is required at the time of registration.

> **Note**: ACE offers a payment plan for workforce development courses/groups of courses ($199 or higher + fee total). Currently, the Division offers limited scholarships for courses pertaining to GED and other workforce certificates.

Gainesville Campus
Adult Continuing Education (ACE) Division
1525 W. California Street
Gainesville, TX 76240
(940) 668-3373
Fax (940) 668-6049

Corinth Campus
1404 N. Corinth Street, Suite 307
Corinth, TX 76208
(940) 668-3373
Fax (940) 498-6401

Bowie Campus
810 S. Mill Street
Bowie, TX 76230-1247
(940) 872-4002
Fax (940) 872-3065

Flower Mound Campus
1200 Parker Square
Flower Mound, TX 75028
(972) 899-8419
Fax (972) 899-8401

Honors Studies at NCTC

The Honors Program at North Central Texas College is an initiative designed to provide deserving area students with advanced learning and community leadership opportunities. Students in the program will be automatically considered for honors scholarships. Participating students will benefit from personalized learning plans, innovative and exemplary teaching, smaller class sizes, and guidance through the transfer process. Other advantages of honors study include service learning experiences and access to cultural and other special events. With completion of the requisite coursework, graduating and transferring students qualify to receive the Honors Program designation on transcripts, diplomas, and honors certificates.

Honors coursework emphasizes academic rigor and the development of both critical thinking and communication skills. Honors faculty develop courses in a variety of ways-course content can be organized topically or thematically, according to instructor expertise, and/or with an interdisciplinary focus. Regardless of approach, the instructional goal is to offer students competing perspectives within a global context, while engaging student intellectual curiosity. Honors subsections of core curriculum courses are offered each semester. Students who need coursework beyond what is offered may develop an even more personalized plan of study. Honors options can be created by contract with faculty and student collaboration. All honors coursework arrangements, whether contracts or subsections, need to be finalized by the second week of the semester. More information and the appropriate forms can be found in the Honors Handbook.

For more information, visit honors.nctc.edu or contact the Office of Honors Studies.

Jill Swarner
Honors Coordinator
(940) 665-7731, ext. 4301
jswarner@nctc.edu

Library Services

In addition to the main (Mary Josephine Cox) library on the Gainesville campus, NCTC has additional branch campus libraries on the Bowie, Corinth, and Flower Mound campuses. The Bowie Campus Library assists those on the Graham campus, which does not have a physical NCTC library.

In addition to traditional print resources, NCTC has an eBook collection and thousands of periodical titles (magazines, newspaper, journals, etc.) from online databases accessible from any computer on the college's intranet or remotely when not on a NCTC campus. For information on accessing resources remotely, students should contact the librarian on their NCTC campus. Students on the Graham campus should contact the librarian in the Bowie Campus Library.

Materials & Resources

The NCTC Libraries have over 45,000 materials (both print and media) available across four campus libraries and campus workstation access on the College's Intranet (during campus library operating hours) to over 70 electronic information sources which include periodical databases (index and full-text collections), newspaper archives, and over 25,000 eBooks. There is also 24/7 remote access to the electronic information sources through the MyNCTC portal.

The NCTC Libraries also have the following:

- Intra-campus loan service, allowing borrowing across campuses
- General Access Computer Labs available through each campus library*
- Special collections such as Graphic Novels and the Genealogical collection.
- Interlibrary Loan and TexShare Card program
- Ask-a-Librarian service
- Research assistance from professional librarians
- Citation help, both online and in-person
- Online subject guides
- Photocopiers and DVD players and monitors are available to students for In-Library Use Only within the campus libraries.

**The computer lab on the Graham campus is separate from and not maintained by the NCTC Libraries.*

Online, Web-Accessible Catalog

The online public access catalog (OPAC) identifies library items owned by the NCTC Libraries and is accessible from any NCTC workstation as well as via the Internet through the Library link on the NCTC website, MyNCTC portal, and on the NCTC Library website. The OPAC provides indexed access to books and audiovisual materials in the NCTC Libraries collection. Circulating items check out upon presentation of a NCTC photo identification card; students may request that items located at another NCTC campus library be sent to their NCTC home campus through the on-line catalog

and students who are unable to locate specific research materials within the NCTC Libraries collection are encouraged to inquire at the Circulation Desk for reference assistance, interlibrary loan services, and TexShare services. Students at the Graham campus may contact the librarian at the Bowie campus for assistance. For county residents, either a county resident card issued by the NCTC Libraries or a TexShare Card issued by a public library that is a member of TexShare will allow checkout of circulating items.

General Access Computer Labs

Computer Labs are located within the library at the Bowie, Corinth, Flower Mound, and Gainesville campuses. Lab hours are posted in the respective buildings and on the NCTC Libraries website. Only NCTC students may use the Computer Lab but there are two public access computers at the Mary Josephine Cox Library on the Gainesville campus for county users.

Intra-Campus and Interlibrary Loan Services

NCTC library items are sent between the NCTC campuses. A Statewide TexShare program provides two-day weekly courier services for interlibrary loan items from other Texas libraries and an additional interlibrary service provides postal services for delivery of library items from participating libraries throughout the USA. NCTC students and employees may inquire at the Circulation Desk on their respective campus (or those on the Graham campus will contact the librarian on the Bowie campus) to learn more about the interlibrary loan service.

If a citation found in an online periodical database does not provide a link to the full text of the article, students should check to see if the NCTC Libraries has a print subscription and if there is none, students may request the article through interlibrary loan. Contact a NCTC librarian for details.

Important Note

A hold is placed on records of any student having a currently overdue library item and a student's library record must be clear at the conclusion of each semester before transcripts of grades will be released or before he/she is allowed to re-enroll. Library circulation policy is posted on the Library website.

Saturday College

Saturday College at North Central Texas College is designed to fit the busy lifestyle of students who want to complete a college degree. The Saturday College reflects NCTC's commitment to the education of students of diverse ages and backgrounds by allowing students to earn credits toward four degree options by attending classes only one day a week.

Courses that require class attendance will be offered outside traditional teaching hours in blocks of time on Saturday. The courses will be delivered in such a way as to concentrate the learning experience using the facilities and staff of NCTC to offer the opportunity to complete a degree in the traditional classroom setting combined with online courses.

The Saturday College classes fulfill general education requirements for the state of Texas. Many courses will transfer with full credit between and among all public state-supported institutions of higher education within the state. Special articulation agreements between NCTC and the major universities in this region ensure students that their coursework will provide the step up to a higher degree if they wish. Students are advised to meet with their academic advisor prior to enrolling in the Saturday College so they can be assured that the courses they take meet their educational goals.

Saturday College classes are available at NCTC's Corinth and Flower Mound campuses. The same objectives and requirements that apply to the courses regularly taught on campus during the week also apply to Saturday College. Although the delivery methods vary, the content does not. Full-time faculty members and adjunct faculty who teach during the week also teach Saturday College courses.

Virtual College of Texas -VCT- Courses

Students may enroll in VCT courses within the following guidelines:

1. Students MUST register for online courses at NCTC as long as courses are open and meet the student's needs.
2. The fee charged by the provider college may not exceed $200.00.
3. Students may register only in VCT courses that are not available through NCTC in the online format and that have been approved by the appropriate department. However, students can contact other institutions directly to inquire about enrolling in their course.
4. Students who have enrolled in VCT courses and either dropped or failed for two consecutive semesters must enroll in and pass 12 hours of non-VCT courses before they may enroll in another VCT course.

NCTC Core Curriculum

To complete the 42 hour Core Curriculum, a student must earn the required number of semester credit hours according to the parameters described below.

Communication - 2 courses

ENGL 1301	COMPOSITION I	3 credit hours
ENGL 1302	COMPOSITION II	3 credit hours
ENGL 2311	TECHNICAL & BUSINESS WRITING	3 credit hours

6 credit hours - Select two courses from the list above.

Mathematics - 1 course

MATH 1314	COLLEGE ALGEBRA	3 credit hours
MATH 1316	PLANE TRIGONOMETRY	3 credit hours
MATH 1324	MATHEMATICS FOR BUSINESS & SOCIAL SCIENCES	3 credit hours
MATH 1325	CALCULUS FOR BUSINESS & SOCIAL SCIENCES	3 credit hours
MATH 1332	CONTEMPORARY MATHEMATICS	3 credit hours
MATH 1342	ELEMENTARY STATISTICAL METHODS	3 credit hours
MATH 2412	PRE-CALCULUS MATH	4 credit hours
MATH 2413	CALCULUS I	4 credit hours

3 - 4 credit hours - Select one course from the list above.

Life and Physical Sciences - 2 courses

ASTR 1403	STARS AND GALAXIES	4 credit hours
ASTR 1404	SOLAR SYSTEM	4 credit hours
BIOL 1406	BIOLOGY FOR SCIENCE MAJORS I	4 credit hours
BIOL 1407	BIOLOGY FOR SCIENCE MAJORS II	4 credit hours
BIOL 1408	BIOLOGY FOR NON-SCIENCE MAJORS I	4 credit hours
BIOL 1411	GENERAL BOTANY	4 credit hours
BIOL 1413	GENERAL ZOOLOGY	4 credit hours

Life and Physical Sciences - 2 courses

BIOL 2401	HUMAN ANATOMY AND PHYSIOLOGY I	4 credit hours
BIOL 2402	HUMAN ANATOMY AND PHYSIOLOGY II	4 credit hours
BIOL 2406	ENVIRONMENTAL BIOLOGY	4 credit hours
CHEM 1406	INTRODUCTORY CHEMISTRY	4 credit hours
CHEM 1411	GENERAL CHEMISTRY I	4 credit hours
CHEM 1412	GENERAL CHEMISTRY II	4 credit hours
GEOL 1401	EARTH SCIENCE FOR NON-MAJORS I	4 credit hours
GEOL 1402	EARTH SCIENCE FOR NON-MAJORS II	4 credit hours
HORT 1401	HORTICULTURE	4 credit hour
PHYS 1401	COLLEGE PHYSICS I	4 credit hours
PHYS 1402	COLLEGE PHYSICS II	4 credit hours
PHYS 1415	PHYSICAL SCIENCE	4 credit hours
PHYS 2425	UNIVERSITY PHYSICS I	4 credit hours
PHYS 2426	UNIVERSITY PHYSICS II	4 credit hours

6 credit hours - Select two courses from the list above.

Some courses require a prerequisite course.

Language, Philosophy, and Culture - 1 course

ENGL 2322	BRITISH LITERATURE I	3 credit hours
ENGL 2323	BRITISH LITERATURE II	3 credit hours
ENGL 2327	AMERICAN LITERATURE I	3 credit hours
ENGL 2328	AMERICAN LITERATURE II	3 credit hours
ENGL 2332	WORLD LITERATURE I	3 credit hours
ENGL 2333	WORLD LITERATURE II	3 credit hours
ENGL 2351	MEXICAN AMERICAN LITERATURE	3 credit hours
ENGL 2341	FORMS OF LITERATURE	3 credit hours
HIST 2321	WORLD CIVILIZATIONS I	3 credit hours
HIST 2322	WORLD CIVILIZATIONS II	3 credit hours
HUMA 1301	INTRODUCTION TO THE HUMANITIES I	3 credit hours

Language, Philosophy, and Culture - 1 course

PHIL 1301	INTRODUCTION TO PHILOSOPHY	3 credit hours
PHIL 2306	INTRODUCTION TO ETHICS	3 credit hours
SPAN 2311	INTERMEDIATE SPANISH I	3 credit hours

3 credit hours - Select one course from the list above.

Creative Arts - 1 course

ARTS 1301	ART APPRECIATION	3 credit hours
DANC 2303	DANCE APPRECIATION I	3 credit hours
DRAM 1310	INTRODUCTION TO THEATER	3 credit hours
DRAM 1330	STAGECRAFT I	3 credit hours
DRAM 2366	INTRODUCTION TO CINEMA	3 credit hours
MUSI 1306	MUSIC APPRECIATION	3 credit hours
MUSI 1310	AMERICAN MUSIC	3 credit hours

3 credit hours - Select one course from the list above.

History - 2 courses

HIST 1301	UNITED STATES HISTORY I	3 credit hours
HIST 1302	U.S. HISTORY FROM 1865	3 credit hours
HIST 2301	TEXAS HISTORY	3 credit hours

6 credit hours - Select two courses from the list above.

Government - 2 courses

GOVT 2305	FEDERAL GOVERNMENT (Federal constitution & topics)	3 credit hours
GOVT 2306	TEXAS GOVERNMENT (Texas constitution & topics)	3 credit hours

Social and Behavioral Sciences - 1 course

ANTH 2346	GENERAL ANTHROPOLOGY	3 credit hours
ANTH 2351	CULTURAL ANTHROPOLOGY	3 credit hours
ECON 2301	PRINCIPLES OF MACROECONOMICS	3 credit hours

Social and Behavioral Sciences - 1 course

ECON 2302	PRINCIPLES OF MICROECONOMICS	3 credit hours
PSYC 2301	GENERAL PSYCHOLOGY	3 credit hours
PSYC 2314	LIFESPAN GROWTH & DEVELOPMENT	3 credit hours
SOCI 1301	INTRODUCTION TO SOCIOLOGY	3 credit hours
SOCI 1306	SOCIAL PROBLEMS	3 credit hours
SPCH 1318	INTERPERSONAL COMMUNICATION	3 credit hours

3 credit hours - Select one course from the list above.

Component Area Option - 2 courses

SPCH 1315	PUBLIC SPEAKING	3 credit hours
SPCH 1321	BUSINESS AND PROFESSIONAL COMMUNICATION	3 credit hours
EDUC 1300	LEARNING FRAMEWORK	3 credit hours
PSYC 1300	LEARNING FRAMEWORK	3 credit hours

SPCH 1315 or SPCH 1321 AND EDUC 1300 or PSYC 1300 for a total of 6 hours

Associate of Arts in Teaching

The Associate of Arts in Teaching (AAT) degree offers the first two years of classes towards initial teacher certification. This degree is approved by the Texas Higher Education Coordinating Board approved collegiate degree program consisting of lower division courses intended for transfer to baccalaureate programs that lead to initial Texas teacher certification.

North Central Texas College has particular transfer agreements for this degree program with the University of North Texas, Texas Woman's University, Midwestern State University and Southeastern Oklahoma State University. Early Childhood—Grade 6 degree program is also designed to help teacher aides and paraprofessionals who seek college credit hours to comply with the No Child Left Behind Act. Substitute teachers would also benefit from the education courses offered in the degree program.

The AAT degree includes the complete core degree requirements as well as field of study and additional math and science courses. All courses lead to initial teacher certification programs at the four year university. Students are strongly encouraged to seek advisement for all AAT degree programs.

Most university teacher education programs require a 2.50 overall GPA and a 3.0 or higher in field of study courses. Each university also specifies a required minimum THEA score for entrance to the college of education.

AAT Early Childhood-Grade 6

The AAT Early Childhood-Grade 6 degree is appropriate for students who seek teacher certification in the following areas:

- EC-6 Generalist
- EC-6 Bilingual Generalist
- EC-6 ESL Generalist
- EC-6 other content area teaching fields/academic disciplines/interdisciplinary majors

AAT Grades 4-8

AAT Grades 4-8 degree is appropriate for students who seek teacher certification in the following areas:

- 4-8 Generalist
- 4-8 Bilingual Generalist
- 4-8 ESL Generalist
- 4-8 English Language Arts and Reading
- 4-8 English Language Arts and Reading/Social Studies
- 4-8 Mathematics
- 4-8 Mathematics/Science
- 4-8 Science

- 4-8 Social Studies
- 4-8 other content area teaching fields/academic disciplines/interdisciplinary majors

AAT Secondary Grades 8-12

AAT Secondary Grades 8-12 degree is appropriate for students who seek teacher certification in the following areas:

- Mathematics
- Science (Chemistry, Physics, Physical Science, or General Science)
- English Language Arts and Reading
- History
- Foreign Language

In order to successfully complete any of the AAT degree programs, students will be required to pass a criminal background check and complete a field experience lab component in each of their field of study courses.

AAT Early Childhood-Grade 6

Associate of Arts in Teaching

The Associate of Arts in Teaching degree (AAT) is a Texas Higher Education Coordinating Board-approved collegiate degree program consisting of lower-division courses intended for transfer to baccalaureate programs that lead to initial Texas teacher certification. The AAT degree as defined by the Coordinating Board is fully transferable to all Texas public universities. Because the AAT fulfills the requirements of the field of study curriculum statutes and Coordinating Board rules, all Texas public universities must accept the AAT curricula if they offer the applicable baccalaureate degrees leading to initial teacher certification. However, students who complete the AAT will be required to meet any and all entrance requirements of the receiving university and the educator preparation program, including grade point averages and/or testing requirements.

Upon Completion of this degree students will be able to:

- Demonstrate knowledge of the teaching profession's main tenets.
- Demonstrate an understanding of multicultural perspectives in education including special education, English as a Second Language (ESL), cultural differences, socioeconomic differences and issues dealing with urban, rural and suburban schools.
- Identify the major ideas and influences of major educational theorists.
- Categorize methods of teacher/parent communication into two distinct categories, one way communication and two way communications.

Students pursuing this degree typically incur tuition and fee costs of approximately $4,200 (In-District). Books and supplies constitute approximately an additional $1,500. Financing for this program may be available through grants, scholarships, loans, and institutional financing plans.

This program is designed to take 4 full-long semesters to complete and is comprised of the following suggested pathway or course of study. This degree can be completed either online or face-to-face contingent on course scheduling and availability.

First Semester	
ENGL 1301	Grammar & Composition I
HIST 1301	US History (*up to 1865*)
EDUC 1300	Learning Frameworks
MATH 1314	College Algebra
SOCI 1301	Intro to Sociology
Second Semester	
ENGL 1302	Grammar & Composition II
HIST 1302	US History (*from 1865*)
Non-Majors Science Core	BIOL 1408, BIOL 2406, PHYS 1415, GEOL 1401, GEOL 1402, ASTR 1403, or ASTR 1404

Second Semester	
MATH 1350	Mathematics for Teachers I
EDUC 1301*	Introduction to the Teaching Profession
Third Semester	
Non-Majors Science Core	BIOL 1408, BIOL 2406, PHYS 1415, GEOL 1401, GEOL 1402, ASTR 1403, or ASTR 1404
GOVT 2305	American National Government
MATH 1351	Mathematics for Teachers II
ENG 2327, or 2332	American Literature I, World Literature I
EDUC 2301*	Introduction Special Populations
Fourth Semester	
GOVT 2306	State & Local Government
Non-Majors Science Core	BIOL 1408, BIOL 2406, PHYS 1415, GEOL 1401, GEOL 1402, ASTR 1403, or ASTR 1404
SPCH 1315	Public Speaking
ARTS 1301	Arts Appreciation

* *Students may be required to pass a criminal background check to complete 16 observation hours for EDUC 1301 and EDUC 2301*

AAT in Grades 4-8 EC-12 Special Education

Associate of Arts in Teaching

The Associate of Arts in Teaching degree (AAT) is a Texas Higher Education Coordinating Board-approved collegiate degree program consisting of lower-division courses intended for transfer to baccalaureate programs that lead to initial Texas teacher certification. The AAT degree as defined by the Coordinating Board is fully transferable to all Texas public universities. Because the AAT fulfills the requirements of the field of study curriculum statutes and Coordinating Board rules, all Texas public universities must accept the AAT curricula if they offer the applicable baccalaureate degrees leading to initial teacher certification. However, students who complete the AAT will be required to meet any and all entrance requirements of the receiving university and the educator preparation program, including grade point averages and/or testing requirements.

Upon Completion of this degree students will be able to:

- Demonstrate knowledge of the teaching profession's main tenets.
- Demonstrate an understanding of multicultural perspectives in education including special education, English as a Second Language (ESL), cultural differences, socioeconomic differences and issues dealing with urban, rural and suburban schools.
- Identify the major ideas and influences of major educational theorists.
- Categorize methods of teacher/parent communication into two distinct categories, one way communication and two way communications.

Students pursuing this degree typically incur tuition and fee costs of approximately $4,200 (In-District). Books and supplies constitute approximately an additional $1,500. Financing for this program may be available through grants, scholarships, loans, and institutional financing plans.

This program is designed to take 4 full-long semesters to complete and is comprised of the following suggested pathway or course of study. This degree can be completed either online or face-to-face contingent on course scheduling and availability.

First Semester	
ENGL 1301	Grammar & Composition I
HIST 1301	US History (*up to 1865*)
EDUC 1300	Learning Frameworks
MATH 1314	College Algebra
SOCI 1301	Intro to Sociology
Second Semester	
ENGL 1302	Grammar & Composition II
HIST 1302	US History (*from 1865*)

Second Semester	
Non-Majors Science Core	BIOL 1408, BIOL 2406, PHYS 1415, GEOL 1401, GEOL 1402, ASTR 1403, or ASTR 1404
MATH 1350	Mathematics for Teachers I
EDUC 1301*	Introduction to the Teaching Profession
Third Semester	
Non-Majors Science Core	BIOL 1408, BIOL 2406, PHYS 1415, GEOL 1401, GEOL 1402, ASTR 1403, or ASTR 1404
GOVT 2305	American National Government
MATH 1351	Mathematics for Teachers II
ENG 2327, or 2332	American Literature I, World Literature I
EDUC 2301*	Introduction Special Populations
Fourth Semester	
GOVT 2306	State & Local Government
Non-Majors Science Core	BIOL 1408, BIOL 2406, PHYS 1415, GEOL 1401, GEOL 1402, ASTR 1403, or ASTR 1404
SPCH 1315	Public Speaking
ARTS 1301	Arts Appreciation

** Students may be required to pass a criminal background check to complete 16 observation hours for EDUC 1301 and EDUC 2301*

AAT in Grades 7-12 EC-12 Other than Special Education

Associate of Arts in Teaching

The Associate of Arts in Teaching degree (AAT) is a Texas Higher Education Coordinating Board-approved collegiate degree program consisting of lower-division courses intended for transfer to baccalaureate programs that lead to initial Texas teacher certification. The AAT degree as defined by the Coordinating Board is fully transferable to all Texas public universities. Because the AAT fulfills the requirements of the field of study curriculum statutes and Coordinating Board rules, all Texas public universities must accept the AAT curricula if they offer the applicable baccalaureate degrees leading to initial teacher certification. However, students who complete the AAT will be required to meet any and all entrance requirements of the receiving university and the educator preparation program, including grade point averages and/or testing requirements.

Upon Completion of this degree students will be able to:

- Demonstrate knowledge of the teaching profession's main tenets.
- Demonstrate an understanding of multicultural perspectives in education including special education, English as a Second Language (ESL), cultural differences, socioeconomic differences and issues dealing with urban, rural and suburban schools.
- Identify the major ideas and influences of major educational theorists.
- Categorize methods of teacher/parent communication into two distinct categories, one way communication and two way communications.

This program is designed to take 4 full-long semesters to complete and is comprised of the following suggested pathway or course of study. This degree can be completed either online or face-to-face contingent on course scheduling and availability.

First Semester	
ENGL 1301	Grammar & Composition I
HIST 1301	US History (*up to 1865*)
EDUC 1300	Learning Frameworks
MATH 1314	College Algebra
SOCI 1301	Intro to Sociology
Second Semester	
ENGL 1302	Grammar & Composition II
HIST 1302	US History (*from 1865*)
Non-Majors Science Core	BIOL 1408, BIOL 2406, PHYS 1415, GEOL 1401, GEOL 1402, ASTR 1403, or ASTR 1404
MATH 1350	Mathematics for Teachers I
EDUC 1301*	Introduction to the Teaching Profession

Third Semester	
Non-Majors Science Core	BIOL 1408, BIOL 2406, PHYS 1415, GEOL 1401, GEOL 1402, ASTR 1403, or ASTR 1404
GOVT 2305	American National Government
MATH 1351	Mathematics for Teachers II
ENGL 2322 ENGL 2327, or ENGL 2332	British Literature, American Literature I, World Literature I
EDUC 2301*	Introduction Special Populations
Fourth Semester	
GOVT 2306	State & Local Government
Non-Majors Science Core	BIOL 1408, BIOL 2406, PHYS 1415, GEOL 1401, GEOL 1402, ASTR 1403, or ASTR 1404
SPCH 1315	Public Speaking
ARTS 1301	Arts Appreciation

* *Students may be required to pass a criminal background check to complete 16 observation hours for EDUC 1301 and EDUC 2301*

Degree Plan

Degree is contingent on the transferring university's recommended or preferred course work for specific content area.The following pathways are provided only as a guide. Students should contact transferring university for approval.

- Biology
- Chemistry
- Visual Arts
- English
- History
- Kinesiology
- Mathematics

Curricula Career & Technical Education

To earn either an Associate of Applied Science Degree or a Certificate, students must achieve an overall grade point average of at least 2.0 and complete the minimum number of semester hours specified for each program. Fifteen of the semester hours required for completion of the degree or certificate must be completed at NCTC.
A student can refer to each individual program section in the following pages for requirements specific to those programs.

To verify entry-level workplace competencies, the institution must provide at least one of the following for each approved award (certificate or degree):

- A capstone experience
- Eligibility for a credentialing exam
- An external learning experience which should occur during the last semester of the student's educational program.

Specifics are listed within program information.

NCTC's Associate of Applied Science Degrees transfer into Bachelor of Applied Arts and Sciences degrees at several Texas universities. Check http://ntxccc.org/pathways to see which degrees transfer and to which universities.

For more information, contact the Division Chair, Program Coordinator, or the Dean of Career & Technical Education.

Accounting Program

Dee Amaradasa
Accounting Faculty
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damaradasa@nctc.edu

The Accounting program at North Central Texas College is designed to equip students with knowledge and skills directly applicable to a career in accounting. The program is also designed to provide quality workforce education to men and women seeking to qualify themselves for positions in the accounting industry.

Classes focus on the specific needs of the student, preparing them for work in a large or small business. The student can choose between two concentrations within the AAS program. The first is the accounting technician or bookkeeper that is tailored for the small business environment. The second is the staff accountant that places focus on large corporate accounting.

Students may pursue a certificate or an AAS in Accounting. All courses in the certificate apply towards the AAS with the accounting technician concentration.

Accounting OSA

Occupational Skills Award

Occupational Skills Award (OSA) in accounting is designed to prepare students with the skills needed to obtain the basic QuickBooks certification, explain the accounting cycle, and use accounting software.

	First Semester	
ACNT1303	INTRODUCTION TO ACCOUNTING I	3 credit hours
ACNT1304	INTRODUCTION TO ACCOUNTING II	3 credit hours
ACNT1311	INTRODUCTION TO COMPUTERIZED ACCOUNTING	3 credit hours
Total Credit Hours		9 credit hours

Accounting Technician Certificate

Level 1 Workforce Certificate

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Identify critical functional areas of accounting, including payroll, accounting software, managerial and financial processes.
- Utilize software in the accounting cycle for different transactions.

This certificate can be completed face-to-face with minimal online classes. The program is designed to take two semesters, or 32 weeks, to complete and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
BUSG1301	INTRODUCTION TO BUSINESS	3 credit hours
ACNT1303	INTRODUCTION TO ACCOUNTING I	3 credit hours
ACNT1304	INTRODUCTION TO ACCOUNTING II	3 credit hours
ACNT2311	MANAGERIAL ACCOUNTING	3 credit hours
ACNT1311	INTRODUCTION TO COMPUTERIZED ACCOUNTING	3 credit hours
Total Credit Hours:		15
	Second Semester	
ACNT1325	PRINCIPLES OF ACCOUNTING I	3 credit hours
ACNT1313	COMPUTERIZED ACCOUNTING APPLICATIONS	3 credit hours
ACNT1329	PAYROLL & BUSINESS TAX ACCOUNTING	3 credit hours
ACNT1305	FORENSIC ACCOUNTING	3 credit hours
ACNT2332	ACCOUNTING INFORMATION SYSTEMS	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 30

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 80% or higher to satisfy the capstone requirement. For more information about the Capstone Exam or to schedule to take the exam please contact Mrs. Amaradasa at damaradasa@nctc.edu

Accounting AAS

Associate of Applied Science

The Accounting Associate of Applied Science Degree is designed to equip students with the knowledge and skills directly applicable to a career as an Accounting Technician (Bookkeeper) or Staff Accountant. The program is also designed to provide a quality workforce education for positions in various levels of accounting and management. In addition to providing classroom-based course work, NCTC works with area employers to provide job training and experience to blend theory and practice.

The program has two career paths that are selected by the student. The two paths are separated by a concentration of courses. These courses are as follows:

Career Concentrations

Accounting Technician (Bookkeeper) See classes below	Staff Accountant See classes below
ACNT 1303 Intro to Accounting	ACCT 2301 Principles of Financial Accounting
ACNT 1304 Intro to Accounting II	ACCT 2302 Principles of Managerial Accounting
ACNT 2311 Managerial Accounting	ACNT 2331 Internal Control & Auditing
ACNT 1325 Principles of Accounting I	ACNT 2336 Financial Statement Analysis

All of the courses in the certificate program transfer directly into the degree.

Upon completion of the Associate of Applied Science Degree in Accounting, students will be able to:

- Demonstrate written and oral communication skills appropriate for a business environment.
- Plan, operate, and maintain an accounting system in business.
- Demonstrate foundational knowledge in accounting and the role in business.

The degree can be completed through a mix of face-to-face classes and online classes. The program is designed to take two years to complete and is comprised of the following suggested pathway or course of study.

Degree Requirements

First Semester		
EDUC 1300	LEARNING FRAMEWORK	3 credit hours
BUSG 1301	INTRODUCTION TO BUSINESS	3 credit hours
ACCT 2301	PRINCIPLES OF FINANCIAL ACCOUNTING	3 credit hours

OR		
ACNT 1303	INTRODUCTION TO ACCOUNTING I	3 credit hours
ACCT 2302	PRINCIPLES OF MANAGERIAL ACCOUNTING	3 credit hours
OR		
ACNT 1304	INTRODUCTION TO ACCOUNTING II	3 credit hours
ACNT 1313	COMPUTERIZED ACCOUNTING APPLICATION	3 credit hours
ACNT 1311	INTRODUCTION TO COMPUTERIZED ACCOUNTING	3 credit hours
Total Credit Hours:	**Second Semester**	18
ACNT 2331	INTERNAL CONTROL & AUDITING	3 credit hours
OR		
ACNT 1325	PRINCIPLES OF ACCOUNTING I	3 credit hours
ACNT 2336	FINANCIAL STATEMENT ANALYSIS	3 credit hours
OR		
ACNT 2311	MANAGERIAL ACCOUNTING PAYROLL & BUSINESS TAX	3 credit hours
ACNT 1329	ACCOUNTING FORENSIC	3 credit hours
ACNT 1305	ACCOUNTING ACCOUNTING	3 credit hours
ACNT 2332	INFORMATION SYSTEMS	3 credit hours
Total Credit Hours:	**Third Semester**	15
ACNT 2303	INTERMEDIATE ACCOUNTING I	3 credit hours
ACNT 2304	INTERMEDIATE ACCOUNTING II	3 credit hours
SPCH 1321	BUSINESS & PROFESSIONAL COMMUNICATIONS	3 credit hours

BUSG 2305	BUSINESS LAW/ CONTRACTS	3 credit hours
Total Credit Hours:		12
	Fourth Semester	
BCIS 1305	BUSINESS COMPUTER APPLICATIONS	3 credit hours
ECON 2302	PRINCIPLES OF MICROECONOMICS	3 credit hours
MATH 1314	COLLEGE ALGEBRA	3 credit hours
ENGL 2311	TECHNICAL & BUSINESS WRITING	3 credit hours
ACNT 2302	ACCOUNTING CAPSTONE	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 60

Capstone Requirement: Accounting Capstone ACNT 2302 This must be completed the last semester before graduation. Please contact Mrs. Amaradasa at damaradasa@nctc.edu for more information.

Agriculture Program

Lisa Bellows, Ph.D.
Science and Agriculture Division Chair
(940) 668-4252
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At NCTC we strive to continue to provide students with opportunities to obtain the knowledge and skills needed to compete in today's agricultural industry: providing a solid foundation for those who aspire to transfer to a senior university. Innovation, globalization, critical thinking, diversity, leadership, problem-solving, hands-on-experience are key words used in describing what we offer our students at North Central Texas College.

The Farm and Ranch curriculum provides a combination of agriculture, business, technology, and general education to prepare students for agricultural occupations.

Farm & Ranch Basic Certificate

Lisa Bellows, Ph.D.
Science and Agriculture Division Chair
(940) 668-4252
lbellows@nctc.edu

The Farm & Ranch Basic Certificate is designed for students who plan to pursue a career in the farming and ranching industry. The program provides practical and educational experiences in animal science, beef cattle production, pasture management, livestock business, animal nutrition, and computer applications specific to agriculture. Farm and Ranch students learn skills and practices applicable to the management of farms, ranches, and other agricultural businesses. All courses in the certificate apply toward the Farm & Ranch Certificate and the Farm and Ranch AAS.

COURSE NUMBER	COURSE TITLE	CREDIT HOURS
AGRI 1131	Agriculture Industry	1
AGRI 1325	Marketing of Ag Products	3
AGMG 2301	Livestock Business Management	3
AGME 1315	Farm and Ranch Shop Skills I	3
AGAH 1353	Beef Cattle Production	3
OR		
AGRI 2330	Wildlife Conservation & Management	3
AGCR 1371	Sustainable Agriculture	3
TOTAL HOURS		16

Farm & Ranch Certificate

Level 1 Workforce Certificate

Lisa Bellows, Ph.D.
Science and Agriculture Division Chair
(940) 668-4252
lbellows@nctc.edu

The Farm & Ranch Certificate is designed for students who plan to pursue a career in the farming and ranching industry. The program provides practical and educational experiences in animal science, beef cattle production, pasture management, livestock business, animal nutrition, and computer applications specific to agriculture. Farm and Ranch students learn skills and practices applicable to the management of farms, ranches, and other agricultural businesses. All courses in the certificate apply toward the Farm and Ranch AAS.

RUBRIC NUMBER	COURSE TITLE	SEMESTER CREDIT HOURS
FIRST SEMESTER		
AGRI 1131	Agriculture Industry	1
AGRI 1325	Marketing of Ag Products	3
AGMG 2301	Livestock Business Management	3
AGME 1315	Farm and Ranch Shop Skills 1	3
AGAH 1353 or AGRI 2330	Beef Cattle Production or Wildlife Conservation & Management	3
AGCR 1371	Sustainable Agriculture	3
TOTAL HOURS		16
SECOND SEMESTER		
AGRI 1407	Agronomy	4
AGRI 2321	Livestock Evaluation	3
AGCR 1341	Forage & Pasture Management	3
AGAH 1343 or AGCR 1307 or AGCR 2313	Animal Health or Range Management or Soil & Water Conservation	3
AGCR 1393 or AGAH 1347	Special Topics in Integrated Pest Mgmt. or Animal Reproduction	3
TOTAL HOURS	16	
DEGREE TOTAL HOURS		32

Last updated: 03/27/2019

Farm & Ranch Management AAS

Associate of Applied Science Degree

Lisa Bellows
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The Farm and Ranch AAS program is designed for students who plan to pursue a career in the farming and ranching industry. The program provides practical and educational experiences in animal science, beef cattle production, pasture management, livestock business, animal nutrition, and computer applications specific to agriculture. Students learn skills and practices applicable to the management of farms, ranches, and other agricultural businesses.

Upon completion of this Associate of Applied Science Degree, graduates will be able to:

- Identify plants and pests which are of economic importance to forage and livestock production.
- Ccorrectly perform applicable animal husbandry practices such as castration, tattooing, and injections.
- Utilize equipment owners' manual to properly set-up and maintain farm equipment.
- Restate the fundamental concepts of planting small grains either through preparing a seed bed or no-till method.
- Rrecommend modern feeding practices and nutritional principles to livestock feeding programs.

The program is designed to take two years to complete and is comprised of the following suggested pathway or course of study.

Degree Requirements

FIRST SEMESTER					
COURSE NUMBER	**COURSE TITLE**	**CREDIT HOURS**	**LECTURE HOURS**	**LAB HOURS**	**TOTAL CONTACT HOURS**
AGRI 1131	Agriculture Industry	1	32	0	32
AGRI 1325	Marketing of Ag Products	3	48	0	48
AGMG 2301	Livestock Business Management	3	48	0	48
AGME 1315	Farm and Ranch Shop Skills I	3	48	0	48

FIRST SEMESTER

COURSE NUMBER	COURSE TITLE	CREDIT HOURS	LECTURE HOURS	LAB HOURS	TOTAL CONTACT HOURS
AGAH 1353	Beef Cattle Production	3	48	0	48
OR					
AGRI 2330	Wildlife Conservation & Management	3	48	0	48
AGCR 1371	Sustainable Agriculture	3	48	24	72
TOTAL HOURS		16	272	24	296

SECOND SEMESTER

COURSE NUMBER	COURSE TITLE	CREDIT HOURS	LECTURE HOURS	LAB HOURS	TOTAL CONTACT HOURS
AGRI 1407	Agronomy	4	48	32	80
AGRI 2321	Livestock Evaluation	3	48	0	48
AGCR 1341	Forage & Pasture Management	3	48	32	80
AGAH 1343	Animal Health	3	48	0	48
OR					
AGCR 1307	Range Management	3	48	0	48
OR					
AGCR 2313	Soil & Water Conservation	3	48	0	48
AGCR 1393	Special Topics in Integrated Pest Mgmt.	3	48	0	48
OR					
AGAH 1347	Animal Reproduction	3	48	0	48
TOTAL HOURS		16	240	64	304
DEGREE TOTAL HOURS		32	512	88	600

THIRD SEMESTER

COURSE NUMBER	COURSE TITLE	CREDIT HOURS	LECTURE HOURS	LAB HOURS	TOTAL CONTACT HOURS
EDUC 1300	Learning Frameworks	3	48	0	48
ENGL 1301, 1302, or 2311	Composition I, Composition II, or Technical & Business Writing	3	48	0	48
BIOL 1411, 1413, or 2406	General Botany, General Zoology, or Environmental Biology	3	48	0	48
AGRI 1419	Animal Science	4	48	32	80
AGMG 2316	Ag Finance	3	48	0	48
TOTAL HOURS		16	240	32	272

FOURTH SEMESTER

COURSE NUMBER	COURSE TITLE	CREDIT HOURS	LECTURE HOURS	LAB HOURS	TOTAL CONTACT HOURS
Core	Social/ Behavioral	3	48	0	48
SPCH 1311, 1315 or 1321	Intro to Human Communication or Public Speaking or Business & Professional Communication	3	48	0	48
AGRI 2303	Agriculture Construction	3	48	0	48
OR					
AGAH 2312	Principles of Feeds and Feeding	3	48	0	48
AGMG 2380	Cooperative Education-	3	0	240	240

FOURTH SEMESTER					
COURSE NUMBER	**COURSE TITLE**	**CREDIT HOURS**	**LECTURE HOURS**	**LAB HOURS**	**TOTAL CONTACT HOURS**
	Agriculture Business & Management, General				
TOTAL HOURS		12	144	240	384
DEGREE TOTAL HOURS		60	896	360	1256

AWARD OF FARM & RANCH ASSOCIATE OF APPLIED SCIENCE DEGREE

Capstone Requirement: AGMG 2380 Cooperative Education - Agricultural Business and Management, General is the capstone requirement and may not be substituted. It should be taken the last semester before graduation.

Business Management Program

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The Business Management program at North Central Texas College is designed to equip students with knowledge and skills directly applicable to a career in management, as well as to update and sharpen personal management skills. The program is also designed to provide quality workforce education to men and women seeking to qualify themselves for positions of managerial responsibility in business and industry.

Classes focus on the specific needs of the student, whether that is to work for a large corporation or to manage a business as a sole proprietor. Students may pursue a certificate or an AAS in Business Management. All courses in the certificate apply towards the AAS.

Business Management Certificate

Level 1 Workforce Certificate

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Identify the business functions of accounting, finance, management, and marketing.
- Understand the theories of trade flow.

Gainful Employment Disclosure

This certificate can be completed either completely face-to-face or through a mix of face-to-face classes and online classes. The program is designed to take two semesters, or 32 weeks, to complete and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
ACNT 1303	INTRODUCTION TO ACCOUNTING I	3 credit hours
BUSG 1304	FINANCIAL LITERACY	3 credit hours
HRPO 2301	HUMAN RESOURCES MANAGEMENT	3 credit hours
BUSG 1301	INTRODUCTION TO BUSINESS	3 credit hours
IBUS 1305	INTRODUCTION TO INTERNATIONAL BUSINESS AND TRADE	3 credit hours
MRKG 1301	CUSTOMER RELATIONSHIP MANAGEMENT	3 credit hours
Total Credit Hours:		18
	Second Semester	
ACNT 1311	INTRODUCTION TO COMPUTERIZED ACCOUNTING	3 credit hours
OR		
ACCT 2302	PRINCIPLES OF MANAGERIAL ACCOUNTING	3 credit hours
POFT 2312	BUSINESS CORRESPONDENCE AND COMMUNICATION	3 credit hours
MRKG 1311	PRINCIPLES OF MARKETING	3 credit hours
BMGT 1327	PRINCIPLES OF MANAGEMENT	3 credit hours
BMGT 2309	LEADERSHIP	3 credit hours
POFT 1220	JOB SEARCH SKILLS	2 credit hours
Total Credit Hours:		17

Total Credit Hours: 35

Capstone Requirement: POFT 1220 Job Search Skills is the capstone requirement.

Business Management AAS

Associate of Applied Science Degree

The Business Management Associate of Applied Science Degree is designed to equip students with knowledge and skills directly applicable to a career in management or supervision, as well as to update and sharpen personal management skills. It is also aimed at providing quality workforce education for positions of managerial responsibility in business and industry. In addition to providing classroom-based course work, the College works with local and area employers to provide on-the-job training experiences to bridge the gap between theory and practice.
Upon completion of the Associate of Applied Science Degree, students will be able to:

- Demonstrate written and oral communication skills appropriate for business situations.
- Plan the operations of a business across functional areas.
- Demonstrate the ability to perform basic financial analysis.
- Demonstrate an understanding of global dimensions of business including sociocultural, political, legal, financial, technological, and economic environments.

This degree can be completed through a mix of face-to-face classes and online classes. The program is designed to take two years to complete and is comprised of the following suggested pathway or course of study.

Degree Requirements

	First Semester	
ACNT 1303	INTRODUCTION TO ACCOUNTING I	3 credit hours
OR		
ACCT 2301	PRINCIPLES OF FINANCIAL ACCOUNTING	3 credit hours
BUSG 1304	FINANCIAL LITERACY	3 credit hours
HRPO 2301	HUMAN RESOURCE MANAGEMENT	3 credit hours
BUSG 1301	INTRODUCTION TO BUSINESS	3 credit hours
MRKG 1301	CUSTOMER RELATIONS MANAGEMENT	3 credit hours
Total Credit Hours:		15
	Second Semester	
ACNT 1311	INTRODUCTION TO COMPUTERIZED ACCOUNTING	3 credit hours
OR		

ACCT 2302	PRINCIPLES OF MANAGERIAL ACCOUNTING	3 credit hours
POFT 2312	BUSINESS CORRESPONDENCE AND COMMUNICATION	3 credit hours
MRKG 1311	PRINCIPLES OF MARKETING	3 credit hours
BMGT 1327	PRINCIPLES OF MANAGEMENT	3 credit hours
BMGT 2309	LEADERSHIP	3 credit hours
Total Credit Hours:		15
	Third Semester	
BCIS 1305	BUSINESS COMPUTER APPLICATIONS	3 credit hours
IBUS 1305	INTRODUCTION TO INTERNATIONAL BUSINESS AND TRADE	3 credit hours
HRPO 2307	ORGANIZATIONAL BEHAVIOR	3 credit hours
BUSG 2305	BUSINESS LAW/ CONTRACTS	3 credit hours
ARTS 1301	ART APPRECIATION	3 credit hours
Total Credit Hours:		15
	Fourth Semester	
ENGL 1301	COMPOSITION I	3 credit hours
SPCH 1321	BUSINESS & PROFESSIONAL COMMUNICATION	3 credit hours
OR		
SPCH 1315	PUBLIC SPEAKING	3 credit hours
OR		
SPCH 1318	INTERPERSONAL COMMUNICATION	3 credit hours
OR		
SPCH 1311	INTRODUCTION TO SPEECH COMMUNICATION	3 credit hours
ECON 2301	PRINCIPLES OF MACROECONOMICS	3 credit hours
MATH 1342	ELEMENTARY STATISTICAL METHODS	3 credit hours

OR		
MATH 1314	COLLEGE ALGEBRA	3 credit hours
OR		
MATH 1332	CONTEMPORARY MATHEMATICS	3 credit hours
BUSG 2380	COOPERATIVE EDUCATION - BUSINESS/COMMERCE, GENERAL	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 60

Capstone Requirement: BUSG 2380 Cooperative Education - Business General is the capstone requirement and may not be substituted. It should be taken the last semester before graduation.

Computer Information Systems & Technology (CITE) Program

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The Computer Information Systems & Technology (CITE) curriculum is designed to prepare students for careers in the high demand Information Technology segment of the workforce.

Each area of the curriculum provides entry level skills, or prepares the student for industry certification in the chosen field of study. The CITE program curriculum has been developed with the assistance and advice of an advisory council which is composed of service area industry professionals.

Students may pursue an Occupational Skills Award, Level 1 Workforce Certificate, or an Associate of Applied Science degree.

The degree and certificate programs will provide the student with skills in industry standard software and hardware. The program provides skills in computer applications, performing critical thinking, and the application of ethics in their daily operations.

> **Prerequisite***:* Students in this program must be able to keyboard at a minimum rate of 40 words per minute. Those who cannot meet this requirement must take a keyboarding class to improve their skills prior to enrollment.

Computer Help Desk OSA

Occupational Skills Award

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This Computer Help Desk Occupational Skill Award can be completed through a mix of face-to-face and online classes. The award is designed to take 16 weeks to complete and is comprised of the following suggested pathway or course of study.

Occupational Skills Award Requirements

	First Semester	
ITNW 1358	NETWORK+	3 credit hours
ITSC 1325	PERSONAL COMPUTER HARDWARE	3 credit hours
EECT 1300	TECHNICAL CUSTOMER SERVICE	3 credit hours
Total Credit Hours:		9

Total Credit Hours: 9

Computer Information Systems & Technology Certificate

Level 1 Workforce Certificate

Curriculum provides similar classes to the degree programs, however there are no academic classes in the certificate. A student that commences study as a certificate student and later desires to complete the degree program will find that the classes taken for a certificate will readily transfer to the degree program.

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Communicate technical issues related to computer hardware, software, and networks through presentations and reports.
- Comprehend and resolve common desktop and network issues.

Gainful Employment Disclosure

This certificate can be completed through a mix of face-to-face, hybrid, and online classes. Several of the courses are offered in an 8-week term, rather than a 16-week term. The program is designed to take two semesters, or 32 weeks to complete, and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
ITSC 1316	LINUX INSTALLATION AND CONFIGURATION	3 credit hours
IMED 1316	WEB PAGE DESIGN I	3 credit hours
ITSE 2321	OBJECT-ORIENTED PROGRAMMING	3 credit hours
ITNW 1358	NETWORK+	3 credit hours
ITSC 1325	PERSONAL COMPUTER HARDWARE	3 credit hours
Total Credit Hours:		15
	Second Semester	
ARTC 1325	INTRODUCTION TO COMPUTER GRAPHICS	3 credit hours
EECT 1300	TECHNICAL CUSTOMER SERVICE	3 credit hours
ITSE 2302	INTERMEDIATE WEB PROGRAMMING	3 credit hours
ITSW 1307	INTRODUCTION TO DATABASE	3 credit hours
ITSE 1302	COMPUTER PROGRAMMING	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 30

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with the Division Chair.

Computer Information Systems &Technology AAS

Associate of Applied Science Degree

Upon completion of the Associate of Applied Science degree, students will be able to:

- Communicate technical issues related to computer hardware, software, and networks through presentations and reports.
- Analyze and troubleshoot common hardware issues.
- Analyze and troubleshoot common software issues.
- Demonstrate the ability to work effectively in teams.

This degree can be completed through a mix of face-to-face, hybrid, and online classes. Several of the courses are offered in an 8-week term, rather than a 16-week term. The program is designed to take two years to complete and is comprised of the following suggested pathway or course of study

Degree Requirements

	First Semester	
ITSC 1316	LINUX INSTALLATION AND CONFIGURATION	3 credit hours
IMED 1316	WEB PAGE DESIGN I	3 credit hours
ITNW 1358	NETWORK+	3 credit hours
ITSE 2321	OBJECT-ORIENTED PROGRAMMING	3 credit hours
ITSC 1325	PERSONAL COMPUTER HARDWARE	3 credit hours
Total Credit Hours:		15
	Second Semester	
ARTC 1325	INTRODUCTION TO COMPUTER GRAPHICS	3 credit hours
EECT 1300	TECHNICAL CUSTOMER SERVICE	3 credit hours
ITSE 2302	INTERMEDIATE WEB PROGRAMMING	3 credit hours
ITSW 1307	INTRODUCTION TO DATABASE	3 credit hours
ITSE 1302	COMPUTER PROGRAMMING	3 credit hours
Total Credit Hours:		15
	Third Semester	
ENGL 1301	COMPOSITION I	3 credit hours

ARTC 1302	DIGITAL IMAGING I (PHOTOSHOP)	3 credit hours
IMED 1345	INTERACTIVE DIGITAL MEDIA	3 credit hours
OR		
ITNW 1313	COMPUTER VIRTUALIZATION	3 credit hours
INEW 2334	ADVANCED WEB PROGRAMMING	3 credit hours
OR		
ITNW 1335	INFORMATION STORAGE & MANAGEMENT	3 credit hours
ITSE 2317	JAVA PROGRAMMING	3 credit hours
Total Credit Hours:		15
	Fourth Semester	
ENGL 2311	TECHNICAL & BUSINESS WRITING	3 credit hours
MATH 1332	CONTEMPORARY MATHEMATICS	3 credit hours
ARTS 1301	ART APPRECIATION	3 credit hours
GOVT 2305	FEDERAL GOVERNMENT (Federal constitution & topics)	3 credit hours
OR		
CORE	SOCIAL/BEHAVIORAL SCIENCE CORE	3 credit hours
ITSC 2380	COOPERATIVE EDUCATION-COMPUTER & INFORMATION	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 60

Capstone Requirement: ITSC 2380 Cooperative Education - Computer and Information Sciences is a capstone experience and may not be substituted. It should be taken the last semester before graduation. The cooperative education course combines classroom learning with work experience and a lecture component.

Cosmetology Program

Gainesville Campus Only

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All NCTC Cosmetology program curriculum is governed by the Texas Department of Licensing and Regulations (TDLR) and helps prepare graduates to take the associated state TDLR examination.

Three Cosmetology Level 1 Workforce Certificates are available

- Cosmetology
- Esthetician
- Cosmetology Instructor.

To enroll in any Cosmetology certificate program, student must:

- Be at least 17 years of age by state licensure testing date
- Have obtained a high school diploma or the equivalent of, i.e., GED
- Apply to NCTC and complete the college orientation
- Complete required Cosmetology department paperwork
- Complete financial aid forms if applicable
- Provide applicable transcripts
- Pay $25 fee to the Texas Department of Licensing and Regulation for a student permit

Cosmetology to Class A Barber Crossover

Occupational Skills Award

The primary purpose of the Cosmetology to Class A Barber Crossover program is to train individuals who hold a cosmetology operator license in the State of Texas to provide the services of a Barber. The courses consist of 25 hours in theory and 275 hours in practical training. The subjects covered include History of Barbering, Shaving, Men's Haircutting and Tapering, Beard and Mustache Trimming and Design, and Hair Color Review. To become a licensed Barber in a Cosmetology Crossover program you must:

- Hold an active Texas Cosmetology Operator (or Cosmetology Operator Instructor) license;
- Complete the 300 hour barbering course in a TDLR-licensed barber school;
- Pass the required Class A Barber written and practical exams; and
- Submit an application with required fee

This certificate is offered only through face-to-face classes. The program is designed to take 16 weeks to complete (attending four days per week - three evenings plus Saturdays) and is comprised of the following suggested pathway or course of study.

Student are required to wear professional business attire or scrubs and will be required to purchase a black barber jacket monogrammed with first and last name.

Certificate Requirements

	First Semester	
BARB 1307	INTRODUCTION TO HAIR DESIGN	3 credit hours
BARB 2431	ADVANCED BARBER STYLING	4 credit hours
BARB 2441	ADVANCED BARBER STYLING II	4 credit hours
Total Credit Hours:		11

Total Credit Hours: 11

Cosmetology Certificate

Level 1 Workforce Certificate

The 42 semester hour curriculum in cosmetology leads to a Level 1 Workforce Certificate and helps prepare graduates to take the state TDLR Cosmetology Examination. Successful completion of the examination will allow graduates to practice as a licensed cosmetologist in the state of Texas.

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Demonstrate introductory skills, professional ethics, and safety and sanitation procedures as required by the Texas Department of Licensing and Regulations
- Provide safe and appropriate care to clients receiving hair, skin or nail services
- Use effective communication skills with client
- Demonstrate proficiency in business and ethical practices relating to the field of Cosmetology
- Demonstrate the skills and knowledge required for successful completion of the state licensing examination

Gainful Employment Disclosure

Fees associated with the Cosmetology Certificate are as follows:

- Kit costs, which include all supplies needed during course of program, approximately $1900. This fee includes trolley, set of professional shears, all professional electric tools, and all hair supplies needed (i.e., combs/brushes, coloring bowls/brushes, capes, clips, pins, manicuring set, etc.). Kit fees will be divided between first two semesters and will be included in tuition.
  - First semester kit will be approximately $1375
  - Second semester kit will be approximately $527.
- Textbooks, approximately $328 new
- Uniform will consist of professional solid black clothing. Will be required to purchase a vest or smock. Must monogram NCTC Cosmetology logo and name on top for $13.
- Fees to take state licensure exams, $126

This certificate is offered only through face-to-face classes. The program is designed to take three semesters, or 42 weeks, to complete. Students may enter the program at the beginning of each semester (Fall, Spring and Summer)*.

* *Student will enroll in four (4) courses in the fall and spring; and three (3) courses in the summer. Student must meet with an advisor in the Cosmetology Department to determine course selection each semester.*

The program is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
CSME 1401	ORIENTATION TO COSMETOLOGY	4 credit hours
CSME 1405	FUNDAMENTALS OF COSMETOLOGY	4 credit hours
CSME 1410	INTRODUCTION TO HAIR-CUTTING AND RELATED THEORY	4 credit hours
CSME 1453	CHEMICAL REFORMATION AND RELATED THEORY	4 credit hours
Total Credit Hours:		16
	Second Semester	
CSME 2501	THE PRINCIPLES OF HAIR COLORING AND RELATED THEORY	5 credit hours
CSME 2410	ADVANCED HAIR-CUTTING AND RELATED THEORY	4 credit hours
CSME 1443	MANICURING AND RELATED THEORY	4 credit hours
CSME 1491	SPECIAL TOPICS - FACIALS & RELATED THEORY	4 credit hours
Total Credit Hours:		17
	Third Semester	
CSME 2237	ADVANCED COSMETOLOGY TECHNIQUES	2 credit hours
CSME 2343	SALON DEVELOPMENT	3 credit hours
CSME 2441	PREPARATION FOR TEXAS DEPARTMENT OF LICENSING AND REGULATIONS	4 credit hours
Total Credit Hours:		9

Total Credit Hours: 42

Verification of Workplace Competencies: Eligibility to sit for TDLR Cosmetology Operator's License exam.

Cosmetology Instructor Certificate

Level 1 Workforce Certificate

The NCTC Cosmetology Instructor program curriculum is mandated by the Texas Department of Licensing and Regulations. The 15 semester hour curriculum leads to a Certificate of Completion and helps prepare graduates to take the TDLR Cosmetology Instructor Examination. Successful completion of the examination will allow graduates to practice as a licensed cosmetology instructor in the state of Texas.

In addition to the above requirements, to enroll in the Cosmetology Instructor Certificate Program, student must:

- Be at least 18 years of age by state licensure testing date
- Hold a current Texas Cosmetology Operator, Esthetician or Manicurist license
- Have at least one year of verifiable salon/spa experience prior to enrollment

Upon completion of this program, student will be able to:

- Explain, design and implement teaching methodologies and lesson plans
- Demonstrate effective classroom/clinic management
- Identify the laws and rules of the state licensing agency
- Demonstrate the skills and knowledge required for successful completion of the state licensing examination

Gainful Employment Disclosure

Fees associated with the degree are as follows:

- Textbooks, approximately $268
- $17 name badge
- $120 fee is required for state board licensure exams

This certificate is offered only through face-to-face classes. The program is designed to take 16 weeks to complete (attending four days per week) and is comprised of the following suggested pathway or course of study.

Student may wear professional business attire or scrubs with NCTC logo and name monogrammed on top.

Certificate Requirements

	First Semester	
CSME 1534	COSMETOLOGY INSTRUCTOR I	5 credit hours
CSME 1535	ORIENTATION TO THE INSTRUCTION OF COSMETOLOGY	5 credit hours
CSME 2514	COSMETOLOGY INSTRUCTOR II	5 credit hours
Total Credit Hours:		15

Total Credit Hours: 15

Criminal Justice Program

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Criminal Justice is an enjoyable and rewarding career with a variety of job opportunities. Students seeking a degree in this area will receive exceptional preparation for employment in the fields of law enforcement, corrections, probation/parole, forensics and investigation. An Associate of Arts Degree, Associate of Applied Science Degree, a Level 1 Workforce Certificate, and an Occupational Skills Award are available in this program.

Criminal Justice Management

Occupational Skills Awards

The Occupational Skills Awards in Criminal Justice Management is designed to equip individuals working in the field of Criminal Justice with knowledge and skills directly applicable to a supervisory role and to qualify those seeking a promotion for managerial responsibility.

	First Semester	
CJSA 2302	POLICE MANAGEMENT, SUPERVISION, AND RELATED TOPICS	3 credit hours
CJSA 2334	CONTEMPORARY ISSUES	3 credit hours
BMGT 1327	PRINCIPLES OF MANAGEMENT	3 credit hours
BMGT 2309	LEADERSHIP	3 credit hours
Total Credit Hours		12 credit hours

Criminal Justice Certificate

Level 1 Workforce Certificate

This certificate provides students with the necessary skills and academic requirements to qualify for employment in a criminal justice agency. All the courses completed in the certificate program are part of the AAS degree and may be directly transferred into the degree program. Students seeking a certificate cannot enroll in CJSA 2388.

Experiential Credit is available for students currently working in the field of Criminal Justice. For more information, see the Division Chair.

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Display critical thinking skills related to areas in the criminal justice field.
- Demonstrate professional, ethical, respectful conduct to those of diverse cultures, customs and beliefs in stressful situations.
- Communicate both verbally and in writing in areas related to the criminal justice field.
- Demonstrate the ability to use appropriate employment strategies relevant to positions in criminal justice.

Gainful Employment Disclosure

This certificate can be completed either completely face-to-face or through a mix of face-to-face classes and online classes. The program is designed to take two semesters, or 32 weeks, to complete and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
CRIJ 1301	INTRODUCTION TO CRIMINAL JUSTICE	3 credit hours
CJSA 1348	ETHICS IN CRIMINAL JUSTICE	3 credit hours
CJSA 1317	JUVENILE JUSTICE SYSTEM	3 credit hours
CRIJ 2313	CORRECTIONAL SYSTEMS & PRACTICES	3 credit hours
CRIJ 2328	POLICE SYSTEMS & PRACTICES	3 credit hours
Total Credit Hours:		15
	Second Semester	
CJSA 1342	CRIMINAL INVESTIGATION	3 credit hours
CRIJ 1310	FUNDAMENTALS OF CRIMINAL LAW	3 credit hours

CRIJ 1306	COURT SYSTEMS & PRACTICES	3 credit hours
CJSA 1325	CRIMINOLOGY	3 credit hours
CJSA 2334	CONTEMPORARY ISSUES IN CRIMINAL JUSTICE	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 30

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with the Division Chair.

Criminal Justice AAS

Associate of Applied Science Degree

The AAS in Criminal Justice degree is 60 credit hours in length. The AAS degree may be transferred to local universities for those students wishing to obtain a BAAS degree. Transferring students should check with the university he/she plan to transfer to for information about the number of classes that can be transferred. Experiential Credit may be available for students currently working in the field of Criminal Justice. For more information, see the Division Chair. (Dr. Cherly Gary-Furdge)

Upon completion of the Associate of Applied Science Degree, students will be able to:

- Exhibit critical thinking skills related to areas in the Criminal Justice Field.
- Demonstrate professional, ethical, respectful conduct to those of diverse cultures, customs and beliefs in stressful situations.
- Communicate both verbally and in writing on areas related to the criminal justice field.
- Demonstrate the ability to use employment strategies related to the field of criminal justice.

This degree can be completed through a mix of face-to-face, hybrid, and online classes. The program is designed to take two years, or 64 weeks, to complete and is comprised of the following suggested pathway or course of study.

Degree Requirements

	First Year First Semester	
CRIJ 1301	INTRODUCTION TO CRIMINAL JUSTICE	3 credit hours
CJSA 1348	ETHICS IN CRIMINAL JUSTICE	3 credit hours
CJSA 1317	JUVENILE JUSTICE SYSTEM	3 credit hours
CRIJ 2313	CORRECTIONAL SYSTEMS & PRACTICES	3 credit hours
CRIJ 2328	POLICE SYSTEMS & PRACTICES	3 credit hours
Total Credit Hours:		15
	First Year Second Semester	
CJSA 1342	CRIMINAL INVESTIGATION	3 credit hours
CRIJ 1310	FUNDAMENTALS OF CRIMINAL LAW	3 credit hours
CRIJ 1306	COURT SYSTEMS & PRACTICES	3 credit hours

CJCR 1304	PROBATION & PAROLE	3 credit hours
CJSA 2334	CONTEMPORARY ISSUES IN CRIMINAL JUSTICE	3 credit hours
Total Credit Hours:		15
	Second Year First Semester	
CJSA 1325	CRIMINOLOGY	3 credit hours
ENGL 1301	COMPOSITION I	3 credit hours
SPCH 1315	PUBLIC SPEAKING	3 credit hours
OR		
SPCH 1321	BUSINESS AND PROFESSIONAL COMMUNICATION	3 credit hours
SOCI 1301	INTRODUCTION TO SOCIOLOGY	3 credit hours
MATH 1314	COLLEGE ALGEBRA	3 credit hours
OR		
MATH 1342	ELEMENTARY STATISTICAL METHODS	3 credit hours
OR		
MATH 1332	CONTEMPORARY MATHEMATICS	3 credit hours
Total Credit Hours:		15
	Second Year Second Semester	
GOVT 2305	FEDERAL GOVERNMENT (Federal constitution & topics)	3 credit hours
PSYC 2301	GENERAL PSYCHOLOGY	3 credit hours
ENGL 2311	TECHNICAL& BUSINESS WRITING	3 credit hours
CORE	LANGUAGE, PHILOSOPHY, AND CULTURE/OR CREATIVE ARTS	3 credit hours
CJSA 2388	INTERNSHIP	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 60

Capstone Requirement: CJSA 2388 Internship - Criminal Justice/Safety Studies is the capstone requirement and may not be substituted. It should be taken the last semester before graduation.

> **Note:** *Most agencies require a criminal background check as part of the internship hiring process. Having a criminal record may prevent you from being accepted in an internship program.*

Cyber Security Program

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The CyberSecurity program prepares the student for entry into this exciting field by providing introductory training in fundamental security concepts, firewalls and network security, basic scripting, operating systems security, intrusion detection, and incident response.

The CyberSecurity program curriculum has been developed with the assistance and advice of an advisory council which is composed of service area industry professionals.

Prerequisite: Students in this program must be able to keyboard at a minimum rate of 40 words per minute (WPM). Those who cannot meet this requirement must take a keyboarding class to improve their skills prior to enrollment.
Note: It is highly recommended that students have some knowledge of computer networking before beginning this program.

Cyber Security Certificate

Level 1 Workforce Certificate

The Certificate Program provides similar classes to the degree program, however, there are no academic classes in these individual curricula. A student that commences study as a certificate student and later desires to complete the degree program will find that the classes taken for a certificate will readily transfer to the degree program.

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Use tools to enhance network security.
- Configure network protocol.
- Identify sources of computer threats and evaluate potential practices, tools, and technologies to protect individual network systems.
- Communicate technical issues related to network systems and security through presentations and reports.

Gainful Employment Disclosure

This certificate can be completed through a mix of face-to-face, hybrid and online classes. Several of the courses are offered in an 8-week term, rather than a 16-week term. The program is designed to take two semesters, or 32 weeks to complete, and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
ITSY 1342	INFORMATION TECHNOLOGY SECURITY	3 credit hours
ITSC 1316	LINUX INSTALLATION AND CONFIGURATION	3 credit hours
ITCC 1414	CCNA 1: INTRODUCTION TO NETWORKS	4 credit hours
ITCC 1440	CCNA 2: ROUTING AND SWITCHING ESSENTIALS	4 credit hours
ITNW 1313	COMPUTER VIRTUALIZATION	3 credit hours
Total Credit Hours:		17
	Second Semester	
ITSY 2300	OPERATING SYSTEM SECURITY	3 credit hours
ITSY 2301	FIREWALLS AND NETWORK SECURITY	3 credit hours

ITSY 2330	INTRUSION DETECTION	3 credit hours
EECT 1300	TECHNICAL CUSTOMER SERVICE	3 credit hours
ITSY 2342	INCIDENT RESPONSE & HANDLING	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 32

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with the Division Chair.

Cyber Security AAS

Associate of Applied Science Degree

Upon completion of the Associate of Applied Science Degree, students will be able to:

- Demonstrate written and verbal communication of technical issues related to network systems and network security through presentations and reports.
- Demonstrate IT professionalism and working knowledge of their IT field.
- Demonstrate the ability to work effectively in teams.
- Describe the cyber threat landscape.
- Identify corrective action against network threats.

This degree can be completed through a mix of face-to-face, hybrid, and online classes. Several of the courses are offered in an 8-week term, rather than a 16-week term. The program is designed to take two years, or 64 weeks, to complete and is comprised of the following suggested pathway or course of study.

Degree Requirements

	First Semester	
ITSY 1342	INFORMATION TECHNOLOGY SECURITY	3 credit hours
ITSC 1316	LINUX INSTALLATION AND CONFIGURATION	3 credit hours
ITCC 1414	CCNA 1: INTRODUCTION TO NETWORKS	4 credit hours
ITCC 1440	CCNA 2: ROUTING AND SWITCHING ESSENTIALS	4 credit hours
ITNW 1313	COMPUTER VIRTUALIZATION	3 credit hours
Total Credit Hours:		17
	Second Semester	
ITSY 2300	OPERATING SYSTEM SECURITY	3 credit hours
ITSY 2301	FIREWALLS AND NETWORK SECURITY	3 credit hours
ITSY 2330	INTRUSION DETECTION	3 credit hours
EECT 1300	TECHNICAL CUSTOMER SERVICE	3 credit hours
ITSY 2342	INCIDENT RESPONSE & HANDLING	3 credit hours

Total Credit Hours:		15
	Third Semester	
ITSY 2343	COMPUTER SYSTEM FORENSICS	3 credit hours
MATH 1332	CONTEMPORARY MATHEMATICS	3 credit hours
ENGL 1301	COMPOSITION I	3 credit hours
ITSY 2359	SECURITY ASSESSMENT AND AUDITING	3 credit hours
GOVT 2305	FEDERAL GOVERNMENT (Federal constitution & topics)	3 credit hours
Total Credit Hours:		15
	Fourth Semester	
ENGL 2311	TECHNICAL & BUSINESS WRITING	3 credit hours
ITSY 2445	NETWORK DEFENSE AND COUNTERMEASURES	4 credit hours
ARTS 1301	ART APPRECIATION	3 credit hours
ITSY 2382	COOPERATIVE EDUCATION COMP & INFO SYS SEC	3 credit hours
Total Credit Hours:		13

Total Credit Hours: 60

Capstone Requirement: ITSY 2382 Cooperative Education - Computer and Information Systems Security is a capstone experience and may not be substituted. It should be taken the last semester before graduation. The cooperative education course combines classroom learning with work experience and a lecture component.

Database Program

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The Database Management Certificate and Database Administration Associate of Applied Science programs at NCTC are designed to prepare students for a career in the use of specialized software to store and organize data. The curriculum provides learning opportunities and hands-on training in the fundamentals of web programming, Oracle, and the most up-to-date database programs.

Program curriculum has been developed with the assistance and advice of an advisory council which is composed of service area industry professionals.

Prerequisite: Students in this program must be able to keyboard at a minimum rate of 40 words per minute (WPM). Those who cannot meet this requirement must take a keyboarding class to improve their skills prior to enrollment.

Database Management Certificate

Level 1 Workforce Certificate

The Certificate Program provides similar classes to the degree programs, however there are no academic classes in these individual curricula. A student that commences study as a certificate student and later desires to complete the degree program will find that the classes taken for a certificate will readily transfer to the degree program.

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Design and generate tables, forms and reports.
- Communicate technical issues related to database systems through presentations and reports.

Gainful Employment Disclosure

This Level 1 Workforce Certificate can be completed through a mix of face-to-face, hybrid and online classes. Several of the courses are offered in an 8-week term, rather than a 16-week term. The program is designed to take two semesters, or 32 weeks to complete, and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
ITSW 1307	INTRODUCTION TO DATABASE	3 credit hours
ITSE 2321	OBJECT-ORIENTED PROGRAMMING	3 credit hours
ITNW 1358	NETWORK+	3 credit hours
EECT 1300	TECHNICAL CUSTOMER SERVICE	3 credit hours
ITSE 1303	INTRODUCTION TO MySQL	3 credit hours
Total Credit Hours:		15
	Second Semester	
ITSE 1345	INTRODUCTION TO ORACLE SQL	3 credit hours
ITSY 1342	INFORMATION TECHNOLOGY SECURITY	3 credit hours
ITSE 2317	JAVA PROGRAMMING	3 credit hours
ITSE 2302	INTERMEDIATE WEB PROGRAMMING	3 credit hours
ITSW 2337	ADVANCED DATABASE	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 30

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with the Division Chair.

Database Management AAS

Associate of Applied Science Degree

Upon completion of the Associate of Applied Science, students will be able to:

- Demonstrate the ability to work effectively in teams.
- Design, implement, and analyze relational database tables.
- Communicate technical issues related to database administration through presentations and reports.
- Demonstrate database administration concepts, relevant alternatives and decision recommendations.

The Associate of Applied Science can be completed through a mix of face-to-face, hybrid, and online classes. Several of the courses are offered in an 8-week term, rather than a 16-week term. The program is designed to take two years, or 64 weeks, to complete and is comprised of the following suggested pathway or course of study.

Degree Requirements

	First Semester	
ITSW 1307	INTRODUCTION TO DATABASE	3 credit hours
ITSE 2321	OBJECT-ORIENTED PROGRAMMING	3 credit hours
ITNW 1358	NETWORK+	3 credit hours
EECT 1300	TECHNICAL CUSTOMER SERVICE	3 credit hours
ITSE 1303	INTRODUCTION TO MySQL	3 credit hours
Total Credit Hours:		15
	Second Semester	
ITSE 1345	INTRODUCTION TO ORACLE SQL	3 credit hours
ITSY 1342	INFORMATION TECHNOLOGY SECURITY	3 credit hours
ITSE 2317	JAVA PROGRAMMING	3 credit hours
ITSE 2302	INTERMEDIATE WEB PROGRAMMING	3 credit hours
ITSW 2337	ADVANCED DATABASE	3 credit hours
Total Credit Hours:		15
	Third Semester	
ENGL 1301	COMPOSITION I	3 credit hours
ARTS 1301	ART APPRECIATION	3 credit hours

ITSE 2354	ADVANCED ORACLE PL/SQL	3 credit hours
ITSE 2356	ORACLE DATABASE ADMINISTRATION I	3 credit hours
MATH 1342	ELEMENTARY STATISTICAL METHODS	3 credit hours
Total Credit Hours:		15
	Fourth Semester	
ENGL 2311	TECHNICAL & BUSINESS WRITING	3 credit hours
ITSE 2333	IMPLEMENTING A DATABASE ON MICROSOFT SQL SERVER INFORMATION	3 credit hours
ITNW 1335	STORAGE AND MANAGEMENT	3 credit hours
GOVT 2305	FEDERAL GOVERNMENT	3 credit hours
ITSE 2380	COOPERATIVE EDUCATION-COMPUTER PROGRAMMER	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 60

Capstone Requirement: ITSE 2380 Cooperative Education - Computer Programming/ Programmer, General is the capstone requirement and may not be substituted. It should be taken the last semester before graduation.

Electrical Technician Program

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Electrical Technicians are a targeted occupation by the local workforce boards and demand is high for those seeking a career in the electrical field. Electrical apprentices can earn from $9.95 per hour up to $18.83 per hour. The Electrical Technician Program is an Approved Texas Electrician Apprenticeship Program with the Texas Department of License and Regulation.

Since a basic knowledge of electron theory as well as the ability to calculate the electrical values of series, parallel and combination circuits is needed to succeed in the field, the initial training begins with electrical fundamentals, as well as electrical safety, which make up the foundation for a career in the field of electricity. The electrical technician also must understand the operating principles for solid state and conventional controls along with their application, and single and three phase motors, transformers and their principles of operation. In addition, the technician must understand the fundamental concept of programmable logic controllers, principles of operation and numbering systems as applied to electrical controls. To this end, training continues with the focus on motor control, motors, transformers, and programmable logic controllers. This will broaden the job opportunities for a student in the various fields of plant maintenance and industrial applications.

Electrical Technician OSA

Occupational Skills Award

The award can be completed face to face and through an online industrial mathematics course. The program is designed to take one semester or 16 weeks to complete and comprised of the following suggested pathway or course of study.

Occupational Skills Award Requirements

	First Semester	
ELPT 1319	FUNDAMENTALS OF ELECTRICITY I	3 credit hours
ELPT 1341	MOTOR CONTROL	3 credit hours
ELPT 2305	MOTORS AND TRANSFORMERS	3 credit hours
ELPT 2319	PROGRAMMABLE LOGIC CONTROLLERS I	3 credit hours
Total Credit Hours:		12

Total Credit Hours: 12

Engineering Technology Program

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Engineering Technology Faculty
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The Engineering Technology Program offers training using Autodesk software, an industry standard used around the world. Students can work toward an Engineering Technology Workforce Certificate or an Associate of Applied Science Degree. In addition to CAD, students will study structural drafting, solid modeling and design, electromechanical drafting and geometric dimensioning.

Graduates may be employed in the aircraft industry, architectural firms, engineering firms, electronics firms and other industries in jobs such as civil drafter, architectural drafter, pipeline drafter, automotive design drafter, and technical illustrator.

Note: Formerly Drafting Technology Program

Engineering Technology Certificate

Level 1 Workforce Certificate

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Apply engineering practices to CAD drawings using multiple industry examples.
- Demonstrate basic drafting proficiency, including the ability to use industry-standard software to generate 2D and 3D drawings.
- Demonstrate oral and written communication skills expected of a future professional in the engineering field.
- Demonstrate foundational computer literacy skills such as opening files, saving files, knowledge of Autodesk software and commands, and the ability to create a computer generated drawing.

Gainful Employment Information

This certificate can be completed face-to-face with minimal online classes. The program is designed to take two semesters, or 32 weeks, to complete and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
DFTG 1305	TECHNICAL DRAFTING	3 credit hours
DFTG 1309	BASIC COMPUTER-AIDED DRAFTING	3 credit hours
DFTG 1317	ARCHITECTURAL DRAFTING/ RESIDENTIAL	3 credit hours
DFTG 1333	MECHANICAL DRAFTING	3 credit hours
DFTG 2340	SOLID MODELING/ DESIGN	3 credit hours
Total Credit Hours:		15
	Second Semester	
DFTG 2306	MACHINE DESIGN	3 credit hours
DFTG 2300	INTERMEDIATE ARCHITECTURAL DRAFTING-RESIDENTIAL	3 credit hours
DFTG 2302	MACHINE DRAFTING	3 credit hours
DFTG 2319	INTERMEDIATE COMPUTER-AIDED DRAFTING	3 credit hours

DFTG 2317	DESCRIPTIVE GEOMETRY	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 30

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with Mr. Ouchley. You may contact him at jouchley@nctc.edu

Engineering Technology AAS

Associate of Applied Science

All of the courses completed in the certificate program transfer directly into the degree.

Upon completion of the Associate of Applied Science degree, students will be able to:

- Apply engineering practices to CAD drawings using multiple industry examples.
- Demonstrate basic drafting proficiency, including the ability to use industry-standard software to generate 2D and 3D drawings.
- Demonstrate oral and written communication skills expected of a future professional in the engineering field.
- Demonstrate computer literacy skills such as opening files, saving files, knowledge of Autodesk software and commands, and the ability to create a computer generated drawing.

The degree can be completed through a mix of face-to-face classes and online classes. The program is designed to take two years to complete and is comprised of the following suggested pathway or course of study.

Degree Requirements

	First Semester	
DFTG 1305	TECHNICAL DRAFTING	3 credit hours
DFTG 1309	BASIC COMPUTER-AIDED DRAFTING	3 credit hours
DFTG 1317	ARCHITECTURAL DRAFTING/ RESIDENTIAL	3 credit hours
DFTG 1333	MECHANICAL DRAFTING	3 credit hours
DFTG 2340	SOLID MODELING/ DESIGN	3 credit hours
Total Credit Hours:		15
	Second Semester	
DFTG 2306	MACHINE DESIGN	3 credit hours
DFTG 2300	INTERMEDIATE ARCHITECTURAL DRAFTING-RESIDENTIAL	3 credit hours
DFTG 2302	MACHINE DRAFTING	3 credit hours
DFTG 2319	INTERMEDIATE COMPUTER-AIDED DRAFTING	3 credit hours

DFTG 2317	DESCRIPTIVE GEOMETRY	3 credit hours
Total Credit Hours:		15
	Third Semester	
DFTG 1302	INTRODUCTION TO TECHNICAL ANIMATION AND RENDERING	3 credit hours
DFTG 2328	ARCHITECTURAL DRAFTING - COMMERCIAL	3 credit hours
DFTG 1358	ELECTRICAL/ ELECTRONIC DRAFTING	3 credit hours
DFTG 2330	CIVIL DRAFTING	3 credit hours
ARTS 1301	ART APPRECIATION	3 credit hours
Total Credit Hours:		15
	Fourth Semester	
DFTG 2386	INTERNSHIP-DRAFTING AND DESIGN TECHNOLOGY/ TECHNICIAN, GENERAL	3 credit hours
MATH 1314	COLLEGE ALGEBRA	3 credit hours
OR		
MATH 1342	ELEMENTARY STATISTICAL METHODS	3 credit hours
ECON 2301	PRINCIPLES OF MACROECONOMICS	3 credit hours
OR		
ECON 2302	PRINCIPLES OF MICROECONOMICS	
SPCH 1315	PUBLIC SPEAKING	3 credit hours
OR		
SPCH 1321	BUSINESS AND PROFESSIONAL COMMUNICATION	3 credit hours
OR		
SPCH 1311	INTRODUCTION TO SPEECH COMMUNICATION	3 credit hours
GOVT 2305	FEDERAL GOVERNMENT (Federal constitution & topics)	3 credit hours
OR		

GOVT 2306	TEXAS GOVERNMENT (Texas constitution & topics)	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 60

Capstone Requirement: DFTG 2386 All students must complete an internship. This must be completed the last semester before graduation. Please meet with Mr. Zach Ouchley at jouchley@nctc.edu for more information.

Equine Program

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North Central Texas College's Equine Program is located in the heart of the horse industry of North Texas on their Gainesville campus. The horse industry is a highly diverse industry that supports a wide variety of activities in all regions of the country. Of the approximately 9.2 million horses in the US, nearly 1 million of those reside in Texas. The Equine Science program at NCTC offers a great deal of hands-on experience in training, breeding and management, as well as classroom instruction on the science and business aspects of the horse industry.

Students in the Equine Program not only have the opportunity to work and gain practical skills within the program but directly with many of the outstanding professionals and facilities in the area as well, thereby gaining important skills, work experience, and contacts within the industry. The diverse student population encompasses individuals from many levels of experience, disciplines, and background including international students that come to study in the program.

In addition to formal academic instruction, NCTC Equine offers equine related extracurricular activities including Stock Horse, Judging, and IHSA Western Show Teams. These teams give students the chance to compete in an intercollegiate format that will contribute invaluable life lessons as part of their educational experience.

Equine Science Basic Certificate

Level 1 Certificate

Equine Science Basic Certificate curriculum focuses on the business and managerial aspects of running an equine facility, whether this is as a sole proprietor or for a public, working ranch, or private equine facility. Coursework may also be applied to Equine Science Certificate as well as Equine Science AAS Degree program. Some of the careers available to graduates include, Breeding Farm/General Farm Mgt., Vet Technician, Bloodstock Agent, Horse Show Manager, Sales Prep and Marketing, and a variety of related Industry Retail/Sales.

Upon completion of the Basic Certificate, students will be able to:

- Propose managerial practices relevant to the equine industry
- Evaluate form to function regarding conformation, and performance of horses
- Utilize relevant computer programs commonly used in equine businesses.

Gainful Employment Disclosure

The program is designed to take 16 weeks to complete and is comprised of the following suggested pathway or course of study.

Certificate Requirements

RUBRIC NUMBER	COURSE TITLE	SEMESTER CREDIT HOURS
AGEQ 1411	Equine Science	4
AGEQ 1305	Equine Enterprise Management	3
AGEQ 1315	Horse Evaluation I	3
AGME 1315	Farm and Ranch Shop Skills I	3
AGEQ 1319 or AGEQ 1370 or AGEQ 1401	Western Horsemanship I or Principles of Ranch Riding I (Team) or Equine Behavior and Training I	3-4
TOTAL HOURS		16-17

Equine Science Certificate

Equine Science Certificate curriculum focuses on physiology of reproduction as well as the business and management aspects of this side of the equine industry. Some of the careers available to graduates include, Breeding Farm/General Farm Mgt., Vet Technician, Laboratory and Research vocations, Pedigree Analysis, Bloodstock Agent, Sales Prep and Marketing, and related Industry Retail/Sales.

Upon completion of the Level 1 Workforce Certificate , students will be able to:

- Identify the major horse breeds and describe their characteristics.
- Demonstrate correct and safe handling of horses.
- Discuss the management practices used at a breeding farm, and the reasoning behind these practices.
- Perform basic skills necessary for employment at a typical breeding operation.
- Restate proper management procedures during gestation and foaling, as well as basic semen collection, evaluation, insemination, and semen transportation

Gainful Employment Disclosure

This certificate is only offered in face-to-face delivery. The program is designed to take 32 weeks to complete and is comprised of the following suggested pathway or course of study.

Certificate Requirements

RUBRIC NUMBER	COURSE TITLE	SEMESTER CREDIT HOURS
FIRST SEMESTER		
AGEQ 1411	Equine Science	4
AGEQ 1305	Equine Enterprise Management	3
AGEQ 1315	Horse Evaluation I	3
AGME 1315	Farm and Ranch Shop Skills I	3
AGEQ 1319 or AGEQ 1370 or AGEQ 1401	Western Horsemanship I or Principles of Ranch Riding I (Team) or Equine Behavior and Training I	3-4
TOTAL HOURS		16-17
SECOND SEMESTER		
AGEQ 1350	Equine Reproduction	3
AGEQ 2310	Equine Business Management	3
AGEQ 2311	Equine Science II	3
AGEQ 2339 or AGEQ 1371 or AGEQ 2401	Western Horsemanship II or Principles of Ranch	3-4

	Horse II (Team) or Equine Behavior and Training II	
AGRI 1325 or AGCR 1307	Marketing of Ag Products or Range Management	3
Total Hours		15-16
Degree Total Hours		31-32

Equine Science AAS

Associate of Applied Science Degree

Course work in the Equine Science Degree focuses on the physiological and behavioral science aspects of the horse and related industry professions. The curriculum also prepares students for further academic study and transfer of credits toward a bachelor's degree in an equine or Agriculture related degrees. Some of the careers available to graduates include Vet Technician, Breeding Farm/General Farm Mgt., Training/Riding Instructor, College Professor/Instructor, Extension Horse Specialist, and Ag. Agent, and Equine Pharmaceuticals, Equine Nutritionist and related Industry Retail/Sales.

Upon completion of the Associate of Applied Science Degree, students will be able to:

- Discuss various diseases and ailments in a horse
- Perform basic medical care of horses
- Identify lameness that afflict horses
- Summarize the functional components of a bit and explain the action of different bit types in the horse's mouth
- Explain the anatomy and physiology of the horses' digestive system.
- Recommend nutritional consideration and feeding practices to meet the needs of individual horses.

This degree is completed primarily face-to-face, however some of the core curriculum requirements may be completed online or at other NCTC campuses. The program is designed to take two years to complete and is comprised of the following suggested pathway or course of study.

Degree Requirements

RUBRIC NUMBER	COURSE TITLE	SEMESTER CREDIT HOURS
FIRST SEMESTER		
AGEQ 1411	Equine Science	4
AGEQ 1305	Equine Enterprise Management	3
AGEQ 1315	Horse Evaluation I	3
AGRI 1315	Farm and Ranch Shop Skills I	3
AGEQ 1319 or AGEQ 1370 or AGEQ 1401	Western Horsemanship I or Principles of Ranch Riding I (Team) or Equine Behavior and Training I	3-4
TOTAL HOURS		16-17
SECOND SEMESTER		
AGEQ 1350	Equine Reproduction	3

AGEQ 2310	Equine Business Management	3
AGEQ 2311	Equine Science II	3
AGEQ 2339 or AGEQ 1371 or AGEQ 2401	Western Horsemanship II or Principles of Ranch Horse II (Team) or Equine Behavior and Training II	3-4
AGRI 1325 or AGCR 1307	Marketing of Ag Products or Range Management	3
TOTAL HOURS		15-16
THIRD SEMESTER		
AGEQ 2373	Introduction Veterinary Tech	3
AGEQ 2371 or AGEQ 1322 or AGEQ 2315	Advanced Ranch Riding or Fundamentals of Riding Instruction or Horse Evaluation II (Team option only)	3
EDUC 1300	Learning Frameworks	3
ENGL 1301, 1302, or 2311	Composition I, Composition II, or Technical & Business Writing	3
BIOL 1411, 1413, or 2406	General Botany, General Zoology, or Environmental Biology	4
TOTAL HOURS		16
FOURTH SEMESTER		
Social/Behavioral AGRI 2317	Introduction to Agriculture Economics	3
SPCH 1315 or SPCH 1321	Public Speaking or Business & Professional Communication	3
AGEQ 2372 or AGEQ 2374	Advanced Reining or Basics of Dressage	3
AGEQ 2386	Internship Equestrian/ Equine Studies	3
AGRI 1131	Agriculture Industry	1
TOTAL HOURS		13
DEGREE TOTAL HOURS		60-62

Capstone Requirement: AGEQ 2386 Internship - Equestrian/Equine Studies is the capstone requirement and may not be substituted. It should be taken the last semester before graduation.

Esthetician Program

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The NCTC Esthetician Program curriculum is governed by the Texas Department of Licensing and Regulations. The 23 semester hour Esthetician curriculum leads to a Level 1 Workforce Certificate and helps prepare graduates to take the TDLR Esthetics Examination. Successful completion of the examination will allow graduates to practice as a licensed esthetician in the state of Texas.

To enroll in the Esthetician certificate program, student must:

- Be at least 17 years of age by state licensure testing date
- Have obtained a high school diploma or the equivalent of, i.e., GED
- Apply to NCTC and complete the college orientation
- Complete required Cosmetology department paperwork
- Complete financial aid forms if applicable
- Provide applicable transcripts
- Pay $25 fee to the Texas Department of Licensing and Regulation for student permit

Esthetician Certificate

Level 1 Workforce Certificate

Upon completion of the Level 1 Workforce Certificate, student will be able to:

1. Demonstrate proper skincare applications
2. Determine the basic physiology of the skin
3. Demonstrate the skills and knowledge required for successful completion of the state licensing examination

Gainful Employment Disclosure

Fees associated with the Esthetician Certificate are as follows:

- Textbooks, approximately $357 if purchased new
- $25 fee for student permit issued by TDLR
- $1000 large makeup kit, includes case, enough products to work as a makeup artist and five certifications
- $300 Dermalogica Kit
- Scrubs with NCTC logo and name embroidered on top. Color determined each semester.

This certificate is offered only through face-to-face classes. The program is designed to take two semesters, or 32 weeks, to complete and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
CSME 1248	PRINCIPLES OF SKIN CARE	2 credit hours
CSME 1420	ORIENTATION TO FACIAL SPECIALIST	4 credit hours
CSME 1447	PRINCIPLES OF SKIN CARE/FACIALS AND RELATED THEORY	4 credit hours
Total Credit Hours:		10
	Second Semester	
CSME 1421	PRINCIPLES OF FACIAL AND SKIN CARE TECHNOLOGY I	4 credit hours
CSME 1545	PRINCIPLES OF FACIAL AND SKIN CARE TECHNOLOGY II	5 credit hours
CSME 2431	PRINCIPLES OF FACIALS AND SKIN CARE TECHNOLOGY III	4 credit hours
Total Credit Hours:		13

Total Credit Hours: 23

Game Design & Application Programming Program

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The Gaming & Application Programming Associate of Applied Science Degree and the Game Design Certificate are designed to prepare students for a variety of careers in gaming and mobile app design. The curriculum provides learning and hands-on training in a variety of skills related to this exciting field, including game development, application programming, animation programming, and video game design.

Upon completion of these programs, students may work for gaming companies and businesses that use multimedia artists and animators, graphic designers, video game developers, and application programmers.

Program curriculum has been developed with the assistance and advice of an advisory council which is composed of service area industry professionals.

Prerequisite: Students in this program must be able to keyboard at a minimum rate of 40 words per minute. Those who cannot meet this requirement must take a keyboarding class to improve their skills prior to enrollment.

Game Design Certificate

Level 1 Workforce Certificate

The Certificate Program provides similar classes to the degree program; however, there are no academic classes in these individual curricula. A student that commences study as a certificate student and later desires to complete the degree program will find that the classes taken for a certificate will readily transfer to the degree program.

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Identify the software development cycle.
- Conceive, design, and build a simple computer game.
- Communicate technical issues related to game design through presentations and reports.

Gainful Employment Disclosure

This Level 1 Workforce Certificate can be completed through a mix of face-to-face, hybrid and online classes. Several of the courses are offered in an 8-week term, rather than a 16-week term. The program is designed to take two semesters, or 32 weeks to complete, and is comprised of the following suggested pathway or course of study.

Certificate Requirements

First Semester		
ARTC 1325	INTRODUCTION TO COMPUTER GRAPHICS	3 credit hours
GAME 1306	DESIGN AND CREATION OF GAMES	3 credit hours
ITSE 2321	OBJECT-ORIENTED PROGRAMMING	3 credit hours
ITSE 1333	MOBILE APPLICATIONS DEVELOPMENT	3 credit hours
GAME 1309	INTRODUCTION TO ANIMATION PROGRAMMING	3 credit hours
Total Credit Hours:		15
Second Semester		
GAME 1343	GAME AND SIMULATION PROGRAMMING I	3 credit hours
GAME 2342	GAME DEVELOPMENT USING C++	3 credit hours
EECT 1300	TECHNICAL CUSTOMER SERVICE	3 credit hours
GAME 1328	VIDEO GAME DESIGN	3 credit hours

ITSE 2310	iOS APPLICATION PROGRAMMING	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 30

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with the Division Chair.

Game Design & Application Programming AAS

Associate of Applied Science Degree

Upon completion of the Associate of Applied Science, students will be able to:

- Communicate technical issues related to gaming and application programming through presentations and reports, both written and verbal.
- Demonstrate the ability to work effectively in teams.
- Develop and manipulate digital media products.
- Demonstrate an understanding of data structures, variables and classes.
- Build a portfolio.

The Associate of Applied Science can be completed through a mix of face-to-face, hybrid, and online classes. Several of the courses are offered in an 8-week term, rather than a 16-week term. The program is designed to take two years, or 64 weeks, to complete and is comprised of the following suggested pathway or course of study.

Degree Requirements

	First Semester	
ARTC 1325	INTRODUCTION TO COMPUTER GRAPHICS	3 credit hours
GAME 1306	DESIGN AND CREATION OF GAMES	3 credit hours
ITSE 2321	OBJECT-ORIENTED PROGRAMMING	3 credit hours
ITSE 1333	MOBILE APPLICATIONS DEVELOPMENT	3 credit hours
GAME 1309	INTRODUCTION TO ANIMATION PROGRAMMING	3 credit hours
Total Credit Hours:		15
	Second Semester	
GAME 1343	GAME AND SIMULATION PROGRAMMING I	3 credit hours
GAME 2342	GAME DEVELOPMENT USING C++	3 credit hours
EECT 1300	TECHNICAL CUSTOMER SERVICE	3 credit hours
GAME 1328	VIDEO GAME DESIGN	3 credit hours
ITSE 2310	iOS APPLICATION PROGRAMMING	3 credit hours

Total Credit Hours:		15
	Third Semester	
IMED 1345	INTERACTIVE DIGITAL MEDIA	3 credit hours
ITSE 2343	ADVANCED MOBILE PROGRAMMING	3 credit hours
ITSE 2317	JAVA PROGRAMMING	3 credit hours
GAME 1303	INTRO TO GAME DESIGN AND DEVELOPMENT	3 credit hours
ENGL 1301	COMPOSITION I	3 credit hours
Total Credit Hours:		15
	Fourth Semester	
MATH 1332	CONTEMPORARY MATHEMATICS	3 credit hours
ARTS 1301	ART APPRECIATION	3 credit hours
GOVT 2305	FEDERAL GOVERNMENT (Federal constitution & topics)	3 credit hours
ENGL 2311	TECHNICAL & BUSINESS WRITING	3 credit hours
GAME 2308	PORTFOLIO FOR GAME DEVELOPMENT	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 60

Capstone Requirement: GAME 2308 Portfolio for Game Development is a capstone experience and may not be substituted. It should be taken the last semester before graduation.

Heating, Ventilation & Air Conditioning Program

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Heating, Ventilation and Air Conditioning technology (HVAC) is considered a high demand occupation throughout Texas. HVAC technicians install and maintain heating and air conditioning units and may work for a general contractor, in building maintenance, for companies that build the HVAC units, and in sales of HVAC equipment. HVAC technicians should display manual dexterity, be able to apply concepts to real life situations, and develop good customer service habits.

Beginning HVAC students can earn an EPA 608 Certification, which will enable them to handle Freon and dispose and recover refrigerants. Students can also become a Certified HVAC Technician through the Texas Department of License and Regulation (TDLR) when they complete their required first semester courses. North Central Texas College is recognized as an HVAC training site with the Texas Department of License and Regulation. Building Science is also included in the first semester of HVAC courses. Building science is a growing trade all by itself in the state of Texas, as conservation of energy and building efficiency now have to meet required standards. The building science training includes blower door technology training, duct tightness, and effective insulation evaluation.

Beginning HVAC technicians can expect to earn between $15 and $18 per hour, and pay increases substantially in urban areas. Advanced HVAC Technicians can earn a contractor's license after completing four years in the field as an HVAC technician. With an HVAC contractor license, they can start their own business, or work as an advanced technician making between $20 and $30 per hour.

Students may pursue:

- Basic Level 1 Workforce Certificate
- Level 1 Workforce Certificate
- Associate of Applied Science Degree.

Heating, Ventilation & Air Conditioning Basic Certificate

Level 1 Workforce Certificate

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Demonstrate communication skills.
- Demonstrate the attributes of a positive work ethic.
- Demonstrate eye and hand coordination and dexterity.
- Demonstrate the application of and the ability to use the common hand tools used in the Heating Ventilation and Air Conditioning trade.

Gainful Employment Disclosure

The certificate can be completed through a mix of face-to-face and online classes. The program is designed to take one semester, or 16 weeks to complete and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
HART 1307	REFRIGERATION PRINCIPLES	3 credit hours
HART 1301	BASIC ELECTRICITY FOR HVAC	3 credit hours
HART 1356	EPA RECOVERY CERTIFICATION PREPARATION	3 credit hours
HART 1341	RESIDENTIAL AIR CONDITIONING	3 credit hours
HART 2341	COMMERCIAL AIR CONDITIONING	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 15

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with the Department Chair.

Heating, Ventilation & Air Conditioning Certificate

Level 1 Workforce Certificate

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Demonstrate communication skills.
- Demonstrate the attributes of a positive work ethic.
- Demonstrate eye and hand coordination and dexterity.
- Demonstrate the application of and the ability to use the common hand tools used in the Heating Ventilation and Air Conditioning trade.
- Demonstrate form perception and spatial relations in the application of methods of installation of Heating, Ventilation and Air Conditioning equipment.

Gainful Employment Disclosure

The certificate can be completed through a mix of face-to-face and online classes. The program is designed to take one year, or 42 weeks to complete and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
HART 1307	REFRIGERATION PRINCIPLES	3 credit hours
HART 1301	BASIC ELECTRICITY FOR HVAC	3 credit hours
HART 1356	EPA RECOVERY CERTIFICATION PREPARATION	3 credit hours
HART 1341	RESIDENTIAL AIR CONDITIONING	3 credit hours
HART 2341	COMMERCIAL AIR CONDITIONING	3 credit hours
Total Credit Hours:		15
	Second Semester	
HART 2345	RESIDENTIAL AIR CONDITIONING SYSTEMS DESIGN	3 credit hours
HART 2358	TESTING, ADJUSTING, AND BALANCING HVAC SYSTEMS	3 credit hours
HART 2342	COMMERCIAL REFRIGERATION	3 credit hours

HART 2349	HEAT PUMPS	3 credit hours
HART 2301	AIR CONDITIONING AND REFRIGERATION CODES	3 credit hours
Total Credit Hours:		15
	Third Semester (Summer)	
TECM 1301	INDUSTRIAL MATHEMATICS	3 credit hours
Total Credit Hours:		3

Total Credit Hours: 33

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with the Department Chair.

Heating, Ventilation & Air Conditioning AAS

Associate of Applied Science Degree

The Heating, Ventilation and Air Conditioning program is designed to prepare students to install and maintain heating and air conditioning units. HVAC techs may work for general contractors in building maintenance, for companies that build the units, and in sales. Heating, Ventilation and Air Condition is considered a high-demand occupation throughout Texas.
Curriculum includes hands-on training that teaches the student how to safely handle, dispose, and recover refrigerants and in the course of the training the student will acquire an EPA 608 certification for handling refrigerants. Building science is also included in the curriculum in order to provide the student with a full understanding that the HVAC equipment and the building envelope are a system that works together. This building science includes blower door training, duct tightness testing and effective insulation evaluation. Upon completion of the HVAC degree, the student can be a registered certified technician in the State of Texas.

Upon completion of the Associate of Applied Science Degree, students will be able to:

- Demonstrate mechanical reasoning.
- Demonstrate the attributes of working collaboratively or independently under supervision.
- Demonstrate the proper setup and the use of basic procedures related to the Heating Ventilation and Air Conditioning field.
- Demonstrate the application of and the ability to properly use specialty tools used in the Heating Ventilation and Air Conditioning field.

This degree can be completed through a mix of face-to-face classes and online classes. The program is designed to take two years to complete and is comprised of the following suggested pathway or course of study.

Degree Requirements

	First Semester	
HART 1307	REFRIGERATION PRINCIPLES	3 credit hours
HART 1301	BASIC ELECTRICITY FOR HVAC	3 credit hours
HART 1356	EPA RECOVERY CERTIFICATION PREPARATION	3 credit hours
HART 1341	RESIDENTIAL AIR CONDITIONING	3 credit hours
HART 2341	COMMERCIAL AIR CONDITIONING	3 credit hours
Total Credit Hours:		15

Second Semester		
HART 2345	RESIDENTIAL AIR CONDITIONING SYSTEMS DESIGN	3 credit hours
HART 2358	TESTING, ADJUSTING, AND BALANCING HVAC SYSTEMS	3 credit hours
HART 2342	COMMERCIAL REFRIGERATION	3 credit hours
HART 2349	HEAT PUMPS	3 credit hours
HART 2301	AIR CONDITIONING AND REFRIGERATION CODES	3 credit hours
Total Credit Hours:		15
Third Semester (Summer)		
TECM 1301	INDUSTRIAL MATHEMATICS	3 credit hours
Total Credit Hours:		3
Fourth Semester		
OSHT 1320	ENERGY INDUSTRIAL SAFETY	3 credit hours
ELPT 2305	MOTORS AND TRANSFORMERS	3 credit hours
ENGL 1301	COMPOSITION I	3 credit hours
GOVT 2306	TEXAS GOVERNMENT	3 credit hours
Total Credit Hours:		12
Fifth Semester		
HART 2334	ADVANCED AIR CONDITIONING CONTROLS	3 credit hours
MATH 1333	CONTEMPORARY MATHEMATICS	3 credit hours
SPCH 1311	INTRODUCTION TO SPEECH COMMUNICATION	3 credit hours
ARTS 1301	ART APPRECIATION	3 credit hours
HART 2380	COOPERATIVE EDUCATION	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 60

Capstone Requirement: HART 2380 Cooperative Education - is the capstone requirement and may not be substituted. It should be taken the last semester before graduation.

Horticulture Program

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The NCTC Horticulture Program is one of the few programs of its kind, providing a broad, technical education in the field of horticulture, emphasizing practical knowledge while preparing students to work in multiple facets of the industry, including landscaping, floristry, horticulture crop production, and greenhouse management. Students learn a variety of horticultural techniques such as plant propagation, organic gardening, soil preparation, plant identification, and pest management. Courses are taught using a range of teaching methods consisting of hands-on labs, one-on-one instruction, field trips, and lectures. A dynamic and diverse field, horticulture is among the few to bridge the gap between science, art, business, and technology. Horticulture is not only a multi-billion dollar industry that offers increasing job opportunities for students seeking careers in the area, but horticulture also offers countless opportunities for hobbyists.

The program is designed to equip students with knowledge and skills directly applicable to a career in horticulture, providing quality workforce education for those seeking to enter the field of horticulture. Classes focus on the specific needs of the student, whether that is to work for a large corporation or to manage a horticulture business as a sole proprietor.

The Landscape Design Occupational Skills Award, Horticulture Management Certificate, and Sustainable Horticulture Certificate are all available in this program.

Landscape Design OSA

Occupational Skills Award

The Occupational Skills Award is a short program designed for the student primarily interested in landscape design as a career.

Occupational Skills Award Requirements

	First Semester	
HALT 1422	LANDSCAPE DESIGN	4 credit hours
HALT 1333	LANDSCAPE IRRIGATION	3 credit hours
Total Credit Hours:		7
	Second Semester	
HALT 1353	LANDSCAPE COMPUTER DESIGN	3 credit hours
Total Credit Hours:		3

Total Credit Hours: 10

Horticultural Management Certificate

Level 1 Workforce Certificate

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Identify and perform basic horticultural techniques and procedures of growing vegetables, fruits, nuts, flowers and other ornamentals.
- Discuss and apply the principles and elements of design as used in landscape design and floral composition and use appropriate terminology for describing and interpreting the design principles in a landscape or floral composition.
- Identify garden pests and recommend both traditional and non-traditional control measures.
- Propagate herbaceous and woody plants

Gainful Employment Disclosure

This certificate is offered through a combination of hybrid and face-to-face classes. The program is designed to take 48 weeks to complete and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
FMKT 1301	FLORAL DESIGN	3 credit hours
HALT 1372	NATURALISTIC HORTICULTURE	3 credit hours
HALT 1331	WOODY PLANTS	3 credit hours
HORT 1401	HORTICULTURE	4 credit hour
HALT 2321	SMALL FARMING	3 credit hours
OR		
HALT 1333	LANDSCAPE IRRIGATION	3 credit hours
OR		
HALT 1353	LANDSCAPE COMPUTER DESIGN	3 credit hours
OR		
HALT 2307	FOOD CROPS	3 credit hours
Total Credit Hours:		16
	Second Semester	
HALT 1303	HERBACEOUS PLANTS	3 credit hours
HALT 2308	GREENHOUSE MANAGEMENT	3 credit hours
HALT 1422	LANDSCAPE DESIGN	4 credit hours
HALT 2321	SMALL FARMING	3 credit hours

OR		
HALT 1333	LANDSCAPE IRRIGATION	3 credit hours
OR		
HALT 1353	LANDSCAPE COMPUTER DESIGN	3 credit hours
OR		
HALT 2307	FOOD CROPS	3 credit hours
Total Credit Hours:		13

Total Credit Hours: 29

Sustainable Horticulture Certificate

Level 1 Workforce Certificate

The Sustainable Horticulture Certificate is a 15 credit hour program focusing on creating productive gardens by encouraging biological diversity. Students will explore procedures of sustainable agriculture systems, plant production in a greenhouse setting, landscaping techniques that encourage biodiversity and organic food production.

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Discuss the sustainable management practices used on a small farm and the reasoning behind these practices.
- Develop biodiversity in a landscape.
- Produce crops in a small farm setting as well as in a greenhouse environment.
- Create and manage sustainable horticultural soils.

Gainful Employment Disclosure

This Level 1 Workforce Certificate can be completed through all face-to-face classes. The program is designed to take two semesters, or 32 weeks to complete, and is comprised of the following suggested pathway or course of study.

Certificate Requirements

First Semester		
AGCR 1371	SUSTAINABLE AGRICULTURE	3 credit hours
HALT 1372	NATURALISTIC HORTICULTURE	3 credit hours
HALT 2307	HORTICULTURAL FOOD CROPS	3 credit hours
Total Credit Hours:		9
Second Semester		
HALT 2308	GREENHOUSE MANAGEMENT	3 credit hours
HALT 2321	SMALL FARMING	3 credit hours
Total Credit Hours:		6

Total Credit Hours: 15

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with the Division Chair.

Horticulture AAS

Associate of Applied Science Degree

Upon completion of the Associate of Applied Science degree, graduates will be able to:

- Identify, propagate, and cultivate horticultural crops.
- Apply the principles and elements of design to create landscape and floral designs.
- Analyze and adjust soil conditions to maximize production of horticultural crops.
- Grow horticultural crops in protected environments.
- Identify garden pests and recommend control measures.

The Associate of Applied Science degree can be completed through a mix of face-to-face, hybrid, and online classes. The program is designed to take two years, or 64 weeks to complete, and is comprised of the following suggested pathway or course of study.

Degree Requirements

	First Semester	
HALT 2307	HORTICULTURAL FOOD CROPS	3 credit hours
FMKT 1301	FLORAL DESIGN	3 credit hours
HALT 1331	WOODY PLANT MATERIALS	3 credit hours
HORT 1401	HORTICULTURE	4 credit hour
HALT 1372	NATURALISTIC HORTICULTURE	3 credit hours
Total Credit Hours:		16
	Second Semester	
HALT 2321	SMALL FARMING	3 credit hours
HALT 2308	GREENHOUSE MANAGEMENT	3 credit hours
HALT 1303	HERBACEOUS PLANTS	3 credit hours
AGCR 1371	INTRO TO SUSTAINABLE AGRICULTURE	3 credit hours
HALT 1422	LANDSCAPE DESIGN	4 credit hours
Total Credit Hours:		16
	Third Semester	
HALT 1353	LANDSCAPE COMPUTER DESIGN	3 credit hours
HALT 1307	PLANT DISEASES	3 credit hours
ARTS 1301	ART APPRECIATION	3 credit hours
OR		

CORE	Core Humanities/Fine Arts	3 credit hours
ENGL 1301	COMPOSITION I	3 credit hours
BUSG 1301	INTRODUCTION TO BUSINESS	3 credit hours
Total Credit Hours:		15
	Fourth Semester	
HALT 1333	LANDSCAPE IRRIGATION	3 credit hours
SOCI 1301	INTRODUCTION TO SOCIOLOGY	3 credit hours
OR		
CORE	CORE SOCIAL/ BEHAVIORAL SCIENCE	3 credit hours
SPCH 1315	PUBLIC SPEAKING	3 credit hours
OR		
CORE	CORE COMMUNICATIONS/ SPEECH	3 credit hours
HALT 2480	COOPERATIVE EDUCATION - APPLIED HORTICULTURE & HORTICULTURAL OPERATIONS, GEN	4 credit hours
Total Credit Hours:		13

Total Credit Hours: 60

Capstone Requirement: HALT 2280 Cooperative Education - is the capstone requirement and may not be substituted. It should be taken the last semester before graduation.

Industrial Mechanics Program

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The Industrial Mechanics program is designed to prepare students for employment in institutional power plants and maintaining machines in manufacturing facilities. According to the Bureau of Labor Statistics, the outlook for industrial mechanics is growing faster than average. Most industrial mechanics are employed full time during regular business hours. However, mechanics may be on call during the night or weekends.

Beginning industrial mechanics can expect to make between $14 and $16 per hour, while experienced industrial mechanics can make upwards of $22 per hour.

Curriculum includes hands-on training in troubleshooting and repair of electrical, mechanical, pneumatic, hydraulic and pump systems. Training in programmable logic controllers and the ability to troubleshoot them is also part of the curriculum, included in the electrical training for the mechanical technology program. All the courses include the technology training behind each of the courses that are offered.

Industrial Mechanics OSA

Occupational Skills Award

The Occupational Skills Award can be completed face-to-face or through a mix of face-to-face classes and online classes. The award is designed to take 16 weeks to complete and is comprised of the following suggested pathway or course of study.

Occupational Skills Award Requirements

	First Semester	
DFTG 1309	BASIC COMPUTER-AIDED DRAFTING	3 credit hours
INMT 1305	INTRODUCTION TO INDUSTRIAL MAINTENANCE	3 credit hours
HYDR 1345	HYDRAULICS AND PNEUMATICS	3 credit hours
INMT 2303	PUMPS, COMPRESSORS & MECHANICAL DRIVES	3 credit hours
Total Credit Hours:		12

Total Credit Hours: 12

Industrial Mechanics Certificate

Level 1 Workforce Certificate

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Demonstrate communication skills.
- Demonstrate the attributes of a positive work ethic.
- Demonstrate eye and hand coordination and dexterity.
- Demonstrate the application of and the ability to properly use the common hand tools.
- Demonstrate form perception and spatial relations in the common construction of hydraulics, pneumatics.
- Demonstrate the skills necessary for maintaining Programmable Logic Controllers (PLC).

Gainful Employment Disclosure

This certificate can be completed through a mix of face-to-face and online classes. The program is designed to take one year, or 42 weeks, to complete and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
DFTG 1309	BASIC COMPUTER-AIDED DRAFTING	3 credit hours
INMT 1305	INTRODUCTION TO INDUSTRIAL MAINTENANCE	3 credit hours
HYDR 1345	HYDRAULICS AND PNEUMATICS	3 credit hours
INMT 2303	PUMPS, COMPRESSORS & MECHANICAL DRIVES	3 credit hours
Total Credit Hours:		12
	Second Semester	
ELPT 1319	FUNDAMENTALS OF ELECTRICITY I	3 credit hours
ELPT 1341	MOTOR CONTROL	3 credit hours
ELPT 2305	MOTORS AND TRANSFORMERS	3 credit hours
ELPT 2319	PROGRAMMABLE LOGIC CONTROLLERS I	3 credit hours
TECM 1301	INDUSTRIAL MATHEMATICS	3 credit hours

Total Credit Hours:		15
	Third Semester (Summer)	
INMT 2345	INDUSTRIAL TROUBLESHOOTING	3 credit hours
Total Credit Hours:		3

Total Credit Hours: 30

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with the Division Chair.

Industrial Mechanics AAS

Associate of Applied Science Degree

Upon completion of the Associate of Applied Science Degree, students will be able to:

- Demonstrate mechanical reasoning, form perception and spatial relations.
- Demonstrate the attributes of working collaboratively or independently under supervision.
- Demonstrate the proper setup of basic industrial mechanics equipment.
- Demonstrate the application of and the ability to properly use specialty tools used in the industrial mechanics trade.
- Demonstrate form perception and spatial relations in the common construction of pumps and motors drives installation and operation.
- Demonstrate the skills necessary for programming Programmable Logic Controllers (PLC).

This degree can be completed through a mix of face-to-face classes and online classes. The program is designed to take two years to complete and is comprised of the following suggested pathway or course of study.

Degree Requirements

	First Semester	
DFTG 1309	BASIC COMPUTER-AIDED DRAFTING	3 credit hours
INMT 1305	INTRODUCTION TO INDUSTRIAL MAINTENANCE	3 credit hours
HYDR 1345	HYDRAULICS AND PNEUMATICS	3 credit hours
INMT 2303	PUMPS, COMPRESSORS & MECHANICAL DRIVES	3 credit hours
Total Credit Hours:		12
	Second Semester	
ELPT 1319	FUNDAMENTALS OF ELECTRICITY I	3 credit hours
ELPT 1341	MOTOR CONTROL	3 credit hours
ELPT 2305	MOTORS AND TRANSFORMERS	3 credit hours
ELPT 2319	PROGRAMMABLE LOGIC CONTROLLERS I	3 credit hours
TECM 1301	INDUSTRIAL MATHEMATICS	3 credit hours
Total Credit Hours:		15

Third Semester (Summer)		
INMT 2345	INDUSTRIAL TROUBLESHOOTING	3 credit hours
Total Credit Hours:		3
Fourth Semester		
ELPT 1325	NATIONAL ELECTRICAL CODE I	3 credit hours
SPCH 1318	INTERPERSONAL COMMUNICATION	3 credit hours
OR		
SPCH 1311	INTRODUCTION TO SPEECH COMMUNICATION	3 credit hours
OSHT 1320	ENERGY INDUSTRIAL SAFETY	3 credit hours
BMGT 2309	LEADERSHIP	3 credit hours
ENGL 1301	COMPOSITION I	3 credit hours
Total Credit Hours:		15
Fifth Semester		
MATH 1314	COLLEGE ALGEBRA	3 credit hours
OR		
MATH 1332	CONTEMPORARY MATHEMATICS	3 credit hours
ARTS 1301	ART APPRECIATION	3 credit hours
BMGT 1327	PRINCIPLES OF MANAGEMENT	3 credit hours
GOVT 2306	TEXAS GOVERNMENT	3 credit hours
INMT 2380	COOPERATIVE EDUCATION-MANUFACTURING TECHNOLOGY	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 60

Capstone Requirement: INMT 2380 Cooperative Education is the capstone experience and may not be substituted. It should be taken the last semester before graduation.

Machining Technology Program

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The Machining Technology program is designed to prepare students for a career as a machinist. Machinists typically work at factories, plants, or on construction sites. According to the Bureau of Labor Statistics, the outlook for machinists is growing faster than average.

Most machinists are employed full-time during regular business hours. Beginning machinists can expect to make around $15 per hour, while experienced machinists can earn upwards of $20 per hour.

Curriculum includes hands-on training that teaches the student layout, blueprints, jig bore and grinder, precision measuring, CNC, lathes, G Codes, tool paths, and precision production. Curriculum also includes introduction to manual lathes and converting them to G codes, inputting the G codes into the CNC lathes or mills and producing a part or product.

Students may pursue:

- Basic Level 1 Workforce Certificate
- Level 1 Workforce Certificate
- AAS in Machining Technology.

Basic Machining Certificate

Level 1 Workforce Certificate

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Demonstrate communication skills.
- Demonstrate proper workplace safety practices.
- Demonstrate the use of basic machining procedures.

Gainful Employment Disclosure

This certificate can be completed in face-to-face classes. The program is designed to take one semester, or 16 weeks, to complete and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
MCHN 1338	BASIC MACHINE SHOP I	3 credit hours
MCHN 2303	FUNDAMENTALS OF COMPUTER NUMERICAL CONTROLLED (CNC) MACHINE CONTROLS	3 credit hours
MCHN 1343	MACHINE SHOP MATHEMATICS	3 credit hours
MCHN 1302	PRINT READING FOR MACHINING TRADES	3 credit hours
MCHN 1341	BASIC MACHINE SHOP II	3 credit hours
Total Credit Hours:		15

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with the Division Chair.

Machining Technology Certificate

Level 1 Workforce Certificate

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Demonstrate communication skills.
- Demonstrate proper workplace safety practices.
- Demonstrate the use of basic machining procedures.
- Demonstrate the ability to use the precision measuring tools.
- Demonstrate the ability to use the proper tool necessary for the related task to be performed.
- Demonstrate pattern development for the machining trade.

Gainful Employment Disclosure

This certificate can be completed through a mix of face-to-face and online classes. The program is designed to take one year, or 42 weeks, to complete and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
MCHN 1338	BASIC MACHINE SHOP I	3 credit hours
MCHN 2303	FUNDAMENTALS OF COMPUTER NUMERICAL CONTROLLED (CNC) MACHINE CONTROLS	3 credit hours
MCHN 1343	MACHINE SHOP MATHEMATICS	3 credit hours
MCHN 1302	PRINT READING FOR MACHINING TRADES	3 credit hours
MCHN 1341	BASIC MACHINE SHOP II	3 credit hours
Total Credit Hours:		15
	Second Semester	
DFTG 1309	BASIC COMPUTER-AIDED DRAFTING	3 credit hours
MCHN 2431	OPERATION OF CNC TURNING CENTERS	4 credit hours
MCHN 2434	OPERATION OF CNC MACHINING CENTERS	4 credit hours
METL 1301	INTRODUCTION TO METALLURGY	3 credit hours
Total Credit Hours:		14

Third Semester		
MCHN 2435	ADVANCED CNC MACHINING	4 credit hours
MCHN 1326	INTRODUCTION TO COMPUTER-AIDED MANUFACTURING	3 credit hours
Total Credit Hours:		7

Total Credit Hours: 36

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with the Division Chair.

Machining Technology AAS

Associate of Applied Science Degree

Upon completion of the Associate of Applied Science, students will be able to:

- Demonstrate mechanical reasoning, form perception and spatial relations.
- Demonstrate the attributes of a positive work ethic.
- Demonstrate eye and hand coordination.
- Demonstrate the application of and the ability to use the common hand tools.
- Demonstrate the ability to use the proper tool necessary for the related task to be performed.
- Demonstrate the perception and spatial relations in the applications of geometric construction.

This degree can be completed through a mix of face-to-face and online classes. The program is designed to take two years to complete and is comprised of the following suggested pathway or course of study.

Degree Requirements

	First Semester	
MCHN 1338	BASIC MACHINE SHOP I	3 credit hours
MCHN 2303	FUNDAMENTALS OF COMPUTER NUMERICAL CONTROLLED (CNC) MACHINE CONTROLS	3 credit hours
MCHN 1343	MACHINE SHOP MATHEMATICS	3 credit hours
MCHN 1302	PRINT READING FOR MACHINING TRADES	3 credit hours
MCHN 1341	BASIC MACHINE SHOP II	3 credit hours
Total Credit Hours:		15
	Second Semester	
DFTG 1309	BASIC COMPUTER-AIDED DRAFTING	3 credit hours
MCHN 2431	OPERATION OF CNC TURNING CENTERS	4 credit hours
MCHN 2434	OPERATION OF CNC MACHINING CENTERS	4 credit hours
METL 1301	INTRODUCTION TO METALLURGY	3 credit hours
Total Credit Hours:		14

	Third Semester (Summer)	
MCHN 2435	ADVANCED CNC MACHINING	4 credit hours
MCHN 1326	INTRODUCTION TO COMPUTER-AIDED MANUFACTURING	3 credit hours
Total Credit Hours:		7
	Fourth Semester	
OSHT 1313	ACCIDENT PREVENTION, INSPECTION AND INVESTIGATION	3 credit hours
ENGL 1301	COMPOSITION I	3 credit hours
GOVT 2306	TEXAS GOVERNMENT	3 credit hours
MATH 1333	CONTEMPORARY MATHEMATICS	3 credit hours
Total Credit Hours:		12
	Fifth Semester	
SPCH 1311	INTRODUCTION TO SPEECH COMMUNICATION	3 credit hours
BMGT 1327	PRINCIPLES OF MANAGEMENT	3 credit hours
ARTS 1301	ART APPRECIATION	3 credit hours
MCHN 2380	COOPERATIVE EDUCATION-MACHINE TOOL TECHNOLOGY/ MACHINIST	3 credit hours
Total Credit Hours:		12

Total Credit Hours: 60

Capstone Requirement: MCHN 2380 Cooperative Education - Machine Tool Technology/Machinist is the capstone requirement and may not be substituted. It should be taken the last semester before graduation.

Networkworking Technology Program

Susan Svane
Division Chair Information Technology
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The Networking Technology Program is an exciting opportunity for those who find interest in computer networking. The curriculum provides learning opportunities and hands-on training in the fundamentals of CISCO, Network Security, Linux, and the Microsoft Windows Server platform.

Our labs offer all required equipment as outlined in the CISCO Networking Academy®, as well as the most current versions of Windows Server.

Upon completion of the program, students may find employment with high-tech firms, school districts, Internet provider companies, government agencies, and other businesses that employ skilled networking technicians.

The Networking curriculum has been developed with the assistance and advice of an advisory council which is composed of service area industry professionals.

Prerequisite: Students in this program must be able to keyboard at a minimum rate of 40 words per minute (WPM). Those who cannot meet this requirement must take a keyboarding class to improve their skills prior to enrollment.

CISCO Basic Certificate

The Cisco Basic Level 1 Workforce Certificate is designed for students interested in completing only the four Cisco courses required for certification.

Upon completion of the Level 1 Workforce Certificate students will be able to:

- Identify and describe networking architecture.
- Explain the basic principles of routing and routing protocols.
- Configure routers and switches.
- Configure and troubleshoot network devices.

Gainful Employment Disclosure

Students successfully completing the program are eligible to sit for Cisco CCENT exam and CCNA Routing and Switching exam 200-125.

This certificate can be completed face-to-face. The program is designed to take two semesters, or 32 weeks, to complete and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
ITCC 1414	CCNA 1: INTRODUCTION TO NETWORKS	4 credit hours
ITCC 1440	CCNA 2: ROUTING AND SWITCHING ESSENTIALS	4 credit hours
Total Credit Hours:		8
	Second Semester	
ITCC 2412	CCNA 3: SCALING NETWORKS	4 credit hours
ITCC 2413	CCNA 4: CONNECTING NETWORKS	4 credit hours
Total Credit Hours:		8

Total Credit Hours: 16

Verification of Workplace Competencies: Eligibility to sit for Cisco CCENT exam and CCNA Routing and Switching exam 200-125.

Computer Network Systems Certificate

Level 1 Workforce Certificate

Curriculum provides similar classes to the degree program however there are no academic classes in the certificate. A student that commences study as a certificate student and later desires to complete the degree program will find that the classes taken for the certificate will readily transfer to the degree program.

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Communicate technical issues related to computer networks through presentations and reports.
- Demonstrate working knowledge of the OSI and TCP layered models..

Gainful Employment Disclosure

The certificate can be completed through a mix of face-to-face and online classes. The program is designed to take one year, or 32 weeks, to complete, and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
ITSC 1325	PERSONAL COMPUTER HARDWARE	3 credit hours
ITNW 1358	NETWORK+	3 credit hours
ITSC 1316	LINUX INSTALLATION AND CONFIGURATION	3 credit hours
EECT 1300	TECHNICAL CUSTOMER SERVICE	3 credit hours
ITNW 1308	IMPLEMENTING AND SUPPORTING CLIENT SYSTEMS	3 credit hours
Total Credit Hours:		15
	Second Semester	
ITSY 1342	INFORMATION TECHNOLOGY SECURITY	3 credit hours
ITNW 1313	COMPUTER VIRTUALIZATION	3 credit hours
ITNW 1353	SUPPORTING NETWORK SERVER INFRASTRUCTURE	3 credit hours
ITNW 1354	IMPLEMENTING AND SUPPORTING SERVERS	3 credit hours
Total Credit Hours:		12

** Capstone for this certificate will consist of passing a comprehensive departmental exam.*

Total Credit Hours: 27

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with the Division Chair.

CISCO System Certificate

Curriculum provides similar classes to the degree program, however, there are no academic classes in the certificate. A student that commences study as a certificate student and later desires to complete the degree program will find that the classes taken for the certificate will readily transfer to the degree program.

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Communicate technical issues related to computer networks through presentations and reports.
- Demonstrate working knowledge of the OSI and TCP layered models.

Gainful Employment Disclosure

Students successfully completing this program are eligible to sit for Cisco CCENT exam and CCNA Routing and Switching exam 200-125.

Gainful Employment Disclosure

The certificate can be completed through a mix of face-to-face and online classes. The program is designed to take one year, or 32 weeks, to complete, and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
ITSC 1316	LINUX INSTALLATION AND CONFIGURATION	3 credit hours
ITNW 1308	IMPLEMENTING AND SUPPORTING CLIENT OPERATING SYSTEMS	3 credit hours
ITCC 1414	CCNA 1: INTRODUCTION TO NETWORKS	4 credit hours
ITCC 1440	CCNA 2: ROUTING AND SWITCHING ESSENTIALS	4 credit hours
Total Credit Hours:		14
	Second Semester	
ITCC 2412	CCNA 3: SCALING NETWORKS	4 credit hours
ITCC 2413	CCNA 4: CONNECTING NETWORKS	4 credit hours
ITNW 1313	COMPUTER VIRTUALIZATION	3 credit hours

ITNW 1353	SUPPORTING NETWORK SERVER INFRASTRUCTURE	3 credit hours
EECT 1300	TECHNICAL CUSTOMER SERVICE	3 credit hours
Total Credit Hours:		17

Total Credit Hours: 31

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with the Division Chair.

Computer Network Systems AAS

Associate of Applied Science Degree

Upon completion of the Associate of Applied Science Degree, students will be able to:

- Communicate technical issues related to computer networks through presentations and reports, both written and verbal.
- Demonstrate the ability to work effectively in teams.
- Demonstrate the ability to implement network design and construct network info structure.
- Demonstrate working knowledge of the OSI and TCP layered models.

This degree can be completed through a mix of face-to-face, hybrid and online classes. Several of the courses are offered in an 8-week term, rather than a 16-week term. The program is designed to take two years to complete and is comprised of the following suggested pathway or course of study.

Degree Requirements

	First Semester	
ITSC 1316	LINUX INSTALLATION AND CONFIGURATION	3 credit hours
ITNW 1308	IMPLEMENTING AND SUPPORTING CLIENT OPERATING SYSTEMS	3 credit hours
ITCC 1414	CCNA 1: INTRODUCTION TO NETWORKS	4 credit hours
ITCC 1440	CCNA 2: ROUTING AND SWITCHING ESSENTIALS	4 credit hours
Total Credit Hours:		14
	Second Semester	
ITCC 2412	CCNA 3: SCALING NETWORKS	4 credit hours
ITCC 2413	CCNA 4: CONNECTING NETWORKS	4 credit hours
ITNW 1313	COMPUTER VIRTUALIZATION	3 credit hours
ITNW 1353	SUPPORTING NETWORK SERVER INFRASTRUCTURE	3 credit hours
Total Credit Hours:		14

	Third Semester	
ITNW 1354	IMPLEMENTING AND SUPPORTING SERVERS	3 credit hours
ITSY 1342	INFORMATION TECHNOLOGY SECURITY	3 credit hours
ITNW 1335	INFORMATION STORAGE AND MANAGEMENT	3 credit hours
ENGL 1301	COMPOSITION I	3 credit hours
ITSC 2325	ADVANCED LINUX	3 credit hours
Total Credit Hours:		15
	Fourth Semester	
MATH 1332	CONTEMPORARY MATHEMATICS	3 credit hours
ENGL 2311	TECHNICAL & BUSINESS WRITING	3 credit hours
ARTS 1301	ART APPRECIATION	3 credit hours
EECT 1300	TECHNICAL CUSTOMER SERVICE	3 credit hours
GOVT 2305	FEDERAL GOVERNMENT	3 credit hours
ITNW 2280	COOPERATIVE EDUCATION-COMPUTER SYSTEMS NETWORKING	2 credit hours
Total Credit Hours:		17

Total Credit Hours: 60

Capstone Requirement: ITNW 2280 Cooperative Education - Computer Systems Networking and Telecommunications is the capstone requirement and may not be substituted. It should be taken the last semester before graduation.

Web Development Program

Susan Svane
Chair Information Technology Division
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The Web Development curriculum is designed to prepare students for careers in the high demand of Web Development segment of the workforce.

Each area of the curriculum provides entry level skills and prepares the student for industry certification in the chosen field of study. The curriculum has been developed with the assistance and advice of an advisory council which is composed of service area industry professionals.

Prerequisite: Students in this program must be able to keyboard at a minimum rate of 40 words per minute. Those who cannot meet this requirement must take a keyboarding class to improve their skills prior to enrollment.

Web Development Certificate

Level 1 Workforce Certificate

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Design and implement a dynamic website.
- Communicate technical issues related to web design through presentations and reports.

Gainful Employment Disclosure

This certificate can be completed completely through a mix of face-to-face classes and online classes. The program is designed to take one year or 32 academic weeks to complete and is comprised of the following suggested pathway or course of study.

Certificate Requirements

	First Semester	
ARTC 1302	DIGITAL IMAGING I (PHOTOSHOP)	3 credit hours
IMED 1316	WEB PAGE DESIGN I	3 credit hours
ARTC 1325	INTRODUCTION TO COMPUTER GRAPHICS	3 credit hours
ITSE 2321	OBJECT-ORIENTED PROGRAMMING	3 credit hours
ITSE 1302	COMPUTER PROGRAMMING	3 credit hours
Total Credit Hours:		15
	Second Semester	
ITSE 2302	INTERMEDIATE WEB PROGRAMMING	3 credit hours
ITSW 1307	INTRODUCTION TO DATABASE	3 credit hours
IMED 1345	INTERACTIVE DIGITAL MEDIA	3 credit hours
INEW 2334	ADVANCED WEB PROGRAMMING	3 credit hours
ITSE 2317	JAVA PROGRAMMING	3 credit hours
EECT 1300	TECHNICAL CUSTOMER SERVICE	3 credit hours
Total Credit Hours:		18

Total Credit Hours: 33

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with the Division Chair.

Welding Technology Program

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The Welding Technology program is designed to prepare students for the high-demand field of welding. Welders work with aluminum, stainless steel and mild metals in manufacturing, oil fields, design, farming and ranching. Beginning welders may work on assembly lines, but can advance to precision welders, quality control, and sales. Many welders decide to work for themselves, and some specialize in underwater welding, decorative metal work, and automobile body welding. North Texas welders can expect to earn between $12 and $20 per hour, based on experience and welding skill.

Curriculum includes hands-on training in multiple welding processes including Oxy-Fuel and Cutting, Shielded Metal Arc, Gas Metal Arc, Gas Tungsten Arc, and Flux Cored Arc. It also includes blueprint reading for welders and welding technology for each of the five processes that are taught. Students are required to pass two welding tests for each process and can receive a qualification for each of the successful completion of a welding test in a process. The tests given are common welding tests that are used to qualify welders in industry today. Students completing the program may be qualified in a number of processes.

Students may pursue:

- Basic Level 1 Workforce Certificate
- Level 1 Workforce Certificate
- AAS in Welding.

Basic Welding Technology Certificate

Level 1 Workforce Certificate

Upon successful completion of the Basic Welding Level 1 Workforce Certificate, students will be able to:

- Demonstrate communication skills.
- Demonstrate proper safety practices in the workplace.
- Demonstrate basic welding techniques.

Gainful Employment Disclosure

The Basic Welding Level I Workforce Certificate can be completed in one 16-week semester through a mix of face-to-face and online classes. The certificate is designed to prepare the student with the basic welding skills and technical knowledge for an entry-level position in the welding industry. The certificate is comprised of the following suggested pathway or course of study.

Basic Welding Technology Certificate

	First Semester	
WLDG 1313	INTRODUCTION TO BLUEPRINT READING FOR WELDERS	3 credit hours
WLDG 1407	INTRODUCTION TO WELDING USING MULTIPLE PROCESSES	4 credit hours
WLDG 2413	INTERMEDIATE WELDING USE MULTIPLE PROCESSES	4 credit hours
WLDG 1427	WELDING CODES AND STANDARDS	4 credit hours
Total Credit Hours:		15

Total Credit Hours: 15

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with the Division Chair.

Welding Technology Certificate

Level 1 Workforce Certificate

Upon completion of the Level 1 Workforce Certificate, students will be able to:

- Demonstrate communication skills.
- Demonstrate proper safety practices in the workplace.
- Demonstrate basic welding techniques.
- Demonstrate the basic use of cutting tools.
- Demonstrate the ability to use the proper tool necessary for the related task to be performed.
- Demonstrate proper welding joint design and proper joint preparation.

Gainful Employment Disclosure

This certificate can be completed through a mix of face-to-face and online classes. The program is designed to take 42 weeks, to complete and is comprised of the following suggested pathway or course of study.

Level 1 Workforce Certificate

	First Semester	
WLDG 1313	INTRODUCTION TO BLUEPRINT READING FOR WELDERS	3 credit hours
WLDG 1407	INTRODUCTION TO WELDING USING MULTIPLE PROCESSES	4 credit hours
WLDG 2413	INTERMEDIATE WELDING USE MULTIPLE PROCESSES	4 credit hours
WLDG 1427	WELDING CODES AND STANDARDS	4 credit hours
Total Credit Hours:		15
	Second Semester	
WLDG 2447	ADVANCED GAS METAL ARC WELDING (GMAW)	4 credit hours
WLDG 1435	INTRODUCTION TO PIPE WELDING	4 credit hours
TECM 1301	INDUSTRIAL MATH	3 credit hours
OSHT 1320	ENERGY INDUSTRIAL SAFETY	3 credit hours
Total Credit Hours:		14

Third Semester (Summer)

WLDG 2352	ADVANCED FLUX CORED ARC WELDING	3 credit hours
Total Credit Hours:		3 credit hours

Total Credit Hours: 32

Capstone Requirement: Students completing the certificate must pass a comprehensive program exam with a score of 70% or higher to satisfy the capstone requirement. Exam must be scheduled with the Division Chair.

Welding Technology AAS

Associate of Applied Science Degree

Upon completion of the Associate of Applied Science Degree, students will be able to:

- Demonstrate mechanical reasoning, form perception and spatial relations.
- Demonstrate the attributes of a positive work ethic.
- Demonstrate eye and hand coordination and dexterity.
- Demonstrate the ability to use common metal working tools.
- Demonstrate the ability to use the proper tool necessary for the related task to be performed.
- Demonstrate the perception and spatial relations in the applications of geometric construction.

This degree can be completed through a mix of face-to-face classes and online classes. The program is designed to take two years to complete and is comprised of the following suggested pathway or course of study.

Associate of Applied Science Degree

	First Semester	
WLDG 1313	INTRODUCTION TO BLUEPRINT READING FOR WELDERS	3 credit hours
WLDG 1407	INTRODUCTION TO WELDING USING MULTIPLE PROCESSES	4 credit hours
WLDG 2413	INTERMEDIATE WELDING USE MULTIPLE PROCESSES	4 credit hours
WLDG 1427	WELDING CODES AND STANDARDS	4 credit hours
Total Credit Hours:		15
	Second Semester	
WLDG 2447	ADVANCED GAS METAL ARC WELDING (GMAW)	4 credit hours
WLDG 1435	INTRODUCTION TO PIPE WELDING	4 credit hours
TECM 1301	INDUSTRIAL MATH	3 credit hours
OSHT 1320	ENERGY INDUSTRIAL SAFETY	3 credit hours
Total Credit Hours:		14

Third Semester (Summer)		
WLDG 2352	ADVANCED FLUX CORED ARC WELDING	3 credit hours
Total Credit Hours:		3 credit hours
Fourth Semester		
WLDG 2432	WELDING AUTOMATION	4 credit hours
WLDG 1317	INTRODUCTION TO LAYOUT AND FABRICATION	3 credit hours
ENGL 1301	COMPOSITION I	3 credit hours
GOVT 2306	TEXAS GOVERNMENT	3 credit hours
Total Credit Hours:		13
Fifth Semester		
BMGT 2309	LEADERSHIP	3 credit hours
MATH 1333	CONTEMPORARY MATHEMATICS	3 credit hours
SPCH 1311	INTRODUCTION TO SPEECH COMMUNICATION	3 credit hours
ARTS 1301	ART APPRECIATION	3 credit hours
WLDG 2380	COOPERATIVE EDUCATION-WELDING TECHNOLOGY	3 credit hours
Total Credit Hours:		15

Total Credit Hours: 60

Capstone Requirement: WLDG 2380 Cooperative Education - Welding Technology is the capstone requirement and may not be substituted. It should be taken the last semester before graduation.

Curricula Health Sciences

North Central Texas College's Division of Health Sciences includes the following courses of study:

- Associate Degree Nursing (ADN) - for students wishing to qualify for licensure as Registered Nurses (RNs)
- Emergency Medical Services (EMS) - for students wishing to qualify for certification as EMTs
- Fire Sciences - for students wishing to qualify for Texas Fire Fighter certification
- Radiological Technology - for students wishing to qualify for registry as Radiological Technologists
- Surgical Technology - for students wishing to qualify for certification as Surgical Technologists
- Vocational Nursing (LVN) - for students wishing to qualify for licensure as Licensed Vocational Nurses (LVNs)

To earn either an Associate degree or Certificate, students must achieve an overall grade point average of at least 2.0 and complete the minimum number of semester hours specified for each program. Eighteen of the semester hours required for completion of the degree/certificate must be taken at NCTC.

NOTE: Admission to Health Sciences/Nursing Programs

Admission to a Health Sciences or Nursing program is contingent upon admission to North Central Texas College; however, granting of admission to the College does not guarantee admission to a Health Sciences or Nursing program. Refer also to specific programs on the following pages for any additional admission requirements.

Associate Degree Nursing (ADN) Program

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Faculty Lead, Associate Degree Nursing
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North Central Texas College's Associate Degree in Nursing program is located on the Gainesville campus and is approved by the Texas Board of Nursing and has full accreditation from the Accreditation Commission for Education in Nursing Inc.

ACEN
3343 Peachtree Rd NE Suite 850
Atlanta, GA 30326
(404) 975-5000

Programmatic Outcomes

Upon completion of an Associate Degree in Nursing a student should be able to:

Act as a Member of the Profession

- Function within the nurse's legal scope of practice and in accordance with the policies and procedures of the employing health care institution or practice setting.
- Assume responsibility and accountability for the quality of nursing care provided to patients and their families.
- Participate in activities that promote the development and practice of professional nursing.
- Demonstrate responsibility for continued competence in nursing practice, and develop insight through reflection, self-analysis, self-care, and lifelong learning.

Become a Provider of Patient-Centered Care.

- Use clinical reasoning and knowledge based on the diploma or associate degree nursing program of study and evidence-based practice outcomes a basis for decision making in nursing practice.
- Determine the physical and mental health status, needs, and preferences of culturally, ethnically, and socially diverse patients and their families based upon interpretation of comprehensive health assessment findings compared with

evidence-based health data derived from the diploma or associate degree nursing program of study.
- Analyze assessment data to identify problems,formulate goals/outcomes, and develop plans of care for patients and their families using information from evidence-based practice in collaboration with patients, their families, and the interdisciplinary health care team.
- Provide safe, compassionate, comprehensive nursing care to patients and their families through a broad array of health care services.
- Implement the plan of care for patients and their families within legal, ethical, and regulatory parameters and in consideration of disease prevention, wellness, and promotion of healthy lifestyles.
- Evaluate and report patient outcomes and responses to therapeutic interventions in comparison to benchmarks from evidence-based practice and plan follow-up nursing care.
- Develop, implement, and evaluate teaching plans for patients and their families to address health promotion, maintenance and restoration.
- Coordinate human, information, and material resources in providing care for patients and their families.

Serve as a Patient Safety Advocate

- Demonstrate knowledge of the Texas Nursing Practice Act and the Texas Board of NursingRules that emphasize safety, as well as all federal, state, and local government and accreditation organization safety requirements and standards.
- Implement measures to promote quality and a safe environment for patients, self, and others.
- Formulate goals and outcomes using evidence-based data to reduce patient risks.
- Obtain instruction, supervision, or training as needed when implementing nursing procedures or practices.
- Comply with mandatory reporting requirements of the Texas Nursing Practice Act.
- Accept and make assignments and delegate tasks that take into consideration patient safety and organizational policy.

Become a Member of the Health Care Team

- Coordinate, collaborate, and communicate with patients, their families, and the interdisciplinary health care team to plan, deliver, and evaluate patient-centered care.
- Serve as a health care advocate in monitoring and promoting quality and access to health care for patients and their families.
- Refer patients and their families to resources that facilitate continuity of care, health promotion, maintenance, and restoration and ensure confidentiality and communicate and collaborate in a timely manner with members of the interdisciplinary health care team to promote and maintain optimal health status of patients and their families.
- Communicate and manage information using technology to support decision making to improve patient care.

- Assign and/or delegate nursing care to other members of the health care team based upon an analysis of patient or unit need.
- Supervise nursing care provided by others for whom the nurse is responsible by using evidence-based nursing practice.

Admission

To be officially admitted to the Associate Degree in Nursing program at NCTC students must meet qualification requirements beyond college standards and carefully follow the step-by-step process outlined below.

Attending an Associate Degree in Nursing program information session is recommended, but not mandatory. Times and locations for the information sessions are posted and updated on the Information Session link of the nursing program website. Applying for the next class has additional detailed information regarding testing including a checklist of things needed before making application to the program.

Step One

A student may apply for Admission to NCTC through Apply Texas or print the NCTC Admissions Application in PDF format. Complete the college admission process as outlined on https://www.applytexas.org

An applicant should submit official transcripts from every college attended by sending them to the Admissions Office. To complete the process, an applicant should submit a Degree Audit/Transcript Evaluation form to the NCTC Admissions Office. This must be done early enough so that a degree audit can be completed by the Admissions Office before making application to the nursing program.

Step Two

Once all admission requirements are met, an applicant will be notified by the Admissions Office of acceptance to NCTC. At this point an applicant may begin the process of registering for the pre-requisite and general academic (non-nursing) courses as needed.

Step Three

After an applicant has completed steps one and two, an applicant should apply for admission to the Associate Degree in Nursing Program. Associate Degree Nursing Applications should be submitted online to the myNCTC page. Copies of transcripts from all colleges other than NCTC and a copy of a degree audit must be provided at the time submission. Applications may be completed between:

- March 1–31 for Fall Semester admission
- August 1–31 for Spring Semester admission
- Transition LVN to RN—February 1-28 for Summer admission

If an applicant is not admitted to the Associate Degree in Nursing Program after submitting an application, they must submit a new application during the next application period in order to be considered for admission in subsequent semesters.

Step Four

An applicant's transcript will be evaluated to determine eligibility for the Associate Degree in Nursing program. Refer to the Points requirement.

Applicants will be ranked according to application points and scores on the TEAS Entrance Exam:

- Application points will be given for the prerequisite courses including Anatomy & Physiology I, Anatomy & Physiology II
- Points may be deducted for any prerequisite course that was repeated.
- The TEAS Entrance Exam consists of four areas; Reading, Math, Writing, and Science. Applicants will be given point based on their scores.

Step Five

Candidates with the highest application points will be considered for admission to the Associate Degree Nursing Program. Applicants may not take the entrance exam more than twice during an academic year (August through July). Applicants accepted into the program will be registered in nursing courses by the nursing program. Students do not enroll themselves in nursing courses.

Any applicant wishing to re-apply for the following semester must go through the admission process again in order to be considered.

Step Six

Those students selected for admission will be sent details on the following items:

- Physical Examination form signed by a physician
- Proof of major medical insurance coverage or accident insurance coverage.
- Malpractice insurance. This is added to the tuition/fees bill at the time of registration. Malpractice insurance must be renewed each fall semester.
- A Urine Drug Screen will be required of all students. The nursing office will arrange this.
- Proof of current CPR certification (American Heart Association - Basic Life Support)
- Meet the required Immunizations

Students must complete a total of 60 semester credit hours — 36 in Nursing courses and 24 in pre-requisites and required support courses in order to complete the degree requirements for an Associate Degree in Nursing. The Associate Degree in Nursing program is designed to be completed in four long semesters.

Students in the Transition program may complete less hours - a total of 52 hours - to provide credit for LVN licensure. The LVN Transition Program is 12 months.

Program Progression

Nursing courses are grouped in progressive levels of complexity, and students must successfully complete all course work in one level before progressing to the next.

In order to succeed in the Associate Degree in Nursing Program students must:

- Make a grade of “C” or higher in all required courses
- Adhere to the program’s course of study– including completion of support courses
- Maintain current CPR certification and immunization status.
- Successfully complete the Clinical Math Exams each semester. Failure to meet math requirements will result in a clinical failure and dismissal from the nursing program.

Students will not be allowed to continue in the Associate Degree in Nursing program without satisfying these criteria. However, when deficiencies are corrected, the student may petition to be readmitted to the appropriate courses. Students will be allowed to continue only with approval of the ADN Program Admission, Progression,and Advisement (APA) Committee.

Transfers

Transfer is considered on a space available basis. Applicants must meet all requirements of the nursing program in addition to those of North Central Texas College.

- All college credits from other institutions will be evaluated on an individual basis to determine their possible application to the nursing curriculum requirements.
- A letter grade of "C" or better is required for transfer for all previous nursing courses and academic support courses.
- Previous nursing courses must be from a regionally accredited program of nursing. A transfer will not be considered if the student has missed a full semester of enrollment in a nursing program.
- Students who have not been academically successful in other nursing programs will not be considered for transfer.
- Students who have not been academically successful in other nursing programs will not be considered for transfer.
- The student must submit
    - A letter stating the reason for transfer
    - Course descriptions and/or course syllabi for previous nursing courses
    - Resume of previous clinical experience to include documentation of skills provided by the faculty of the transferring school.
    - Letter of recommendation from the Department Head of the school from which the applicant is transferring.
- Students will be evaluated on an individual basis by the Division Chair to determine their level of entry.

Grading Policy

Course grades (non-clinical performance) are based on a numerical average with corresponding letter grades. A grade of “C” or higher is required in all courses in the Associate Degree in Nursing curriculum. Grades will not be rounded.

- 90-100 = A
- 81-89 = B
- 75-80 = C
- 66-74 = D
- 65 or lower = F

About Clinicals

Clinical courses require students to travel to sites off the college campus. Clinical sites include - but are not limited to - hospitals and other health care facilities in Gainesville, Muenster, Sherman, Denton, Decatur, Corinth, Flower Mound, Ardmore and Lewisville. Students must be prepared to drive to any of these locations for clinicals.

Students not successful in completing any course in their first semester are required to reapply to the program and start the process from the beginning. Refer to the NCTC Associate Degree Nursing Student Handbook for more detailed information about this procedure.

Summary of Costs for ADN Students

The total per-semester cost for the Associate Degree in Nursing Program at North Central Texas College is the sum of:

- Tuition
- “Combined” student fees (such as malpractice insurance and testing fees)
- Textbooks
- Supplies and incidentals
- Nursing kits

Supplies & Incidentals

Students admitted to the ADN program are required to buy:

- Uniforms – specific scrubs for class and clinical
- Patches
- Lab coat
- Nursing shoes
- Stethoscope
- Skills kit
- Wristwatch with a second hand
- Students will need normal school supplies
- Access to instructional technologies

Other costs include Major Medical Insurance

- Physical examination and immunizations
- CPR training
- Graduation fees
- State Board of Nursing fees
- NCLEX-RN testing fees.

ADN students must have access to a computer with internet access.

Credit Hours

- A 1:1 ratio is used for lecture hours – 1 lecture hour is equivalent to one credit.
- A 2:1 ratio is used to determine lab hours to credit hours – 2 lab hours are equivalent to 1 credit.
- A 3:1 ratio is used to determine clinical hours – 3 clinical hours are equivalent to 1 credit.

See catalog course descriptions for the number of hours, lecture, laboratory, and clinical hours required for each course.

Graduation

Graduates may apply to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN), which is administered by the Texas Board of Nursing. Graduates become RNs once the NCLEX-RN is passed.

Graduates must pass the state-mandated jurisprudence exam with a minimum grade of 75 before applying for the NCLEX-RN.

NCTC Associate Degree in Nursing graduates are encouraged to continue nursing education toward a bachelor's degree or higher. Associate Degree in Nursing students completing requirements for their Associate of Applied Science Degree are highly encouraged, as are all graduates, to participate in the College’s formal commencement ceremonies.

Eligibility for Licensure

It is important to understand the licensing process of the Texas Board of Nursing (BON) in order to minimize potential problems nursing graduates might experience in obtaining a nursing license. Schools of nursing do not have the authority to grant licensure for LVN’s or RN’s. The nursing program is granted permission from the BON to educate and train individuals to apply to take the licensing exams. Individual graduates must apply to the Texas Board of Nursing to take the licensing exam.

Nursing students enrolled or planning to enroll in a nursing program who have reason to believe that they might be ineligible for licensure must provide the BON with information and they will determine eligibility for licensure. The BON will ask candidates the following.

Answers to issues related to eligibility are available on the Board of Nursing website under FAQ's for new students.

Board of Nursing FAQ

Specific question related to licensure of individuals with Criminal History is Rule 213.28

Common eligibility issues that may need to be addressed by the BON include answering yes to any criminal offense, including those pending appeal. The BON will ask the following.

Have you

- Been convicted of a misdemeanor?
- Been convicted of a felony?
- Pled nolo contender, no contest, or guilty?
- Received deferred adjudication?
- Been placed on community supervision or court-ordered probation, whether or not adjudicated guilty?
- Been sentenced to serve jail or prison time or court-ordered confinement?
- Been granted pre-trial diversion?
- Been arrested or have any pending criminal charges?
- Been cited or charged with any violation of the law?
- Been subject of a court-martial; Article 15 violation; or received any form of military judgment, punishment, or action?

Results of the DPS/FBI Background check and fingerprint scan may prohibit final admission to the program until the Declaratory Order is received by the student from the BON. The student must inform the Division Chair of the outcome of the petition for Declaratory Order by providing a copy of the clearance letter received from the BON, the Declaratory Order with or without conditions received from the BON, or the letter of denial received by the BON.

Essential Physical Competencies for Nursing

In response to the Americans with Disabilities Act, a national survey of administrators of health care facilities, which employ nurses, validated a list of essential competencies a nurse must possess in order to function safely and effectively in a variety of clinical settings.

Results indicate that relatively high numbers of activities were identified in each essential competency category by the health care agencies as being necessary for nursing practice.

These competencies include:

- extended walking and standing daily
- ability to grasp, push, and/or pull
- ability to bend and stoop
- moving quickly in response to an emergency using upper body movements
- ability to reach
- carrying and moving equipment

- reaching and/or lifting

Other essential competencies identified for nursing care include:

- vision acuity to allow detecting physical changes such as cyanosis; ability to discriminate small print
- hearing that allows responding to physical and verbal cues
- a sense of touch that allows for assessment and palpation
- manual dexterity that allows for skill performance
- communicate effectively and efficiently in English in both oral and written forms
- cognitive ability to exercise good judgment
- attention to detail and ability to complete tasks within required time limits

Adaptations most frequently reported as being used by nursing staff were hearing aids, adaptive phones, and calculators.

The ADN Program has accepted these competencies as expectation for success in the program. Applicants may be asked to complete a Functional Abilities Performance upon conditional acceptance into the program.

BSN Pathway

The Associate Degree in Nursing program at NCTC partners with major universities to offer students the opportunity for a smoother transition from Associate Degree in Nursing to Bachelor of Science in Nursing through the Consortium for the Advancement of Baccalaureate Nursing Education in Texas (CABNET) agreement. Since the BSN Pathway curriculum has been standardized, students that graduate with an Associate Degree in Nursing from NCTC, pass the NCLEX-RN, and complete all BSN pre-requisite courses will be able to complete the BSN program with 30 hours of online courses at one of our partner universities.

Vocational Nursing (LVN) Program

Dr. Jane Leach, RNC, CNE
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The Vocational Nursing program is fully approved by the Texas Board of Nursing (BON) and is a certificate program. This program is designed to prepare entry-level practitioners to provide direct care to patients of all age groups under the supervision of a registered nurse or licensed physician. Emphasis is placed upon the ability to make sound judgements based on the knowledge of scientific principles and the ability to utilize technical skills in a variety of settings.

Classes are admitted in the fall semester on the Gainesville, Corinth, Bowie and Graham campuses and in the spring semester on Gainesville Campus. The program is 12 months in length. Upon successful completion of the program, the student will be awarded a certificate of completion and is eligible to make application to write the National Council Licensing Examination - Practical Nurse (NCLEX-PN).

Students admitted to the online e-campus are enrolled in the spring semester. The online curriculum is identical to the one taken by students in the traditional classroom; however, e-campus students will have clinical experiences assigned on weekends. The students accepted to the e-campus will complete the curriculum in 12 months, will be awarded a certificate of completion, and will be eligible to make application to write the NCLEX-PN.

Classroom and online instruction is correlated with clinical practice where students apply the theory and skills of nursing in giving direct care to patients. Active, student-centered learning is the goal. Students will participate in a combination of classroom, hybrid and online learning during the course of the program. Clinical experiences are offered in a variety of settings such as hospitals, long-term care, physician's offices, home health facilities and community venues. Graduates successfully completing the program demonstrate the following program learning outcomes:

- **Provider of Patient-Centered Care**
  - Assist in determining health status/needs
  - Assist in formulating goals/outcomes
  - Implement plan of care within legal and ethical parameters
  - Implement teaching plan for the client and family with common health problems
  - Assist in evaluation of client's responses and outcomes

- # Provide safe, compassionate basic nursing care to assigned multiple clients
- # Use problem-solving approach for decision making in practice

- **Member of a Healthcare Team**
  - # Participate as an advocate in activities to promote and improve healthcare to patients and families
  - # Communicate patient data using appropriate, available technology
  - # Communicate and collaborate in a timely manner with clients and health care team members in all aspects of patient care delivery
  - # Participate in identification of client needs for community resources that facilitate continuity of care and maintain confidentiality
  - # Participate in support of structured health care setting
  - # Supervise nursing care provided by others for whom the nurse is responsible
- **Member of a Profession**
  - # Demonstrate accountability for own nursing practice
  - # Participate as advocate for improving the health care team
  - # Demonstrate behaviors that promote vocational nursing
  - # Function within the nurse's legal scope of practice and in accordance with policies and procedures of the employing healthcare institution

- **Patient Safety Advocate**
  - # Demonstrate knowledge of Texas Nursing Practice Act and the Texas Board of Nursing Rules that emphasize safety, as well as state, federal, and local regulations for accreditation of employment agency
  - # Implement measures to promote quality and a safe environment for all
  - # Assist in formulating goals and outcomes to reduce patient risks
  - # Obtain instruction and supervision as needed when implementing direct patient care
  - # Comply with mandatory reporting requirements of the Texas Nursing Practice Act
  - # Accept and make assignments that take into consideration patient safety and organization policies

Career Opportunities

Vocational nurses practice under the direct supervision of registered nursing staff and physicians. They may perform basic nursing duties independently or may assist registered nurses or physicians in more complex nursing situations. The average entry level salary for vocational nurses ranges from $40,000 to $49,000. Employment may occur in hospitals, extended care facilities, doctor's offices, home health organizations and a variety of other health care settings.

Eligibility for Licensure

It is important to understand the licensing process of the Texas Board of Nursing (BON) in order to minimize potential problems nursing graduates might experience in obtaining a nursing license. Schools of nursing do not have the authority to grant licensure for LVN’s or RN’s. The nursing program is granted permission from the BON to educate

and train individuals to apply to take the licensing exams. Individual graduates must apply to the Texas Board of Nursing to take the licensing exam.

Nursing students enrolled or planning to enroll in a nursing program who have reason to believe that they might be ineligible for licensure must provide the BON with information and they will determine eligibility for licensure. The BON will ask candidates the following.

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- Been sentenced to serve jail or prison time or court-ordered confinement?
- Been granted pre-trial diversion?
- Been arrested or have any pending criminal charges?
- Been cited or charged with any violation of the law?
- Been subject of a court-martial; Article 15 violation; or received any form of military judgment, punishment, or action?
- Results of the DPS/FBI Background check and fingerprint scan may prohibit final admission to the program until the Declaratory Order is received by the student from the BON. The student must inform the Division Chair of the outcome of the petition for Declaratory Order by providing a copy of the clearance letter received from the BON, the Declaratory Order with or without conditions received from the BON, or the letter of denial received by the BON.

Admission

Students seeking admission to the Vocational Nursing program must first apply for and be accepted for admission to North Central Texas College. Faculty will advise students of special admission requirements for the Vocational Nursing program. The admissions process requires that a student attend an information session, complete an application for admission to NCTC and an application to the Vocational Nursing program. In addition, the student must submit an official high school transcript, notarized home school academic record or documented proof of GED certification. For more information regarding the LVN program contact the Vocational Nursing office at (940) 668-4291.

Being granted admission to the College does not guarantee admission to the Vocational Nursing program. Before admission to the program will be considered-on a space-available basis-applicants must attend an information session, take an entrance exam and achieve satisfactory scores. The information sessions are conducted on selected dates during the school year. To view these dates and additional information on how to gain admission to the College and enroll in the program, an applicant can contact the Vocational Nursing office at (940) 668-4291 or may access the information on the NCTC web site.

Admission criteria have been established and enrollment is limited. Acceptance is based upon the applicant's performance on pre-admission testing. All students completing the admissions process for the LVN program are notified of their status via email from the office of Vocational Nursing. Students accepted into the program will then complete a urine drug screen and a criminal background check prior to admissions. All International students must meet with the International Advisor in the Admissions and Registrar's Office.

Advanced Placement

Students who have been enrolled in other nursing programs may be eligible for advanced placement into the second semester of the NCTC Vocational Nursing Program. Students seeking advanced placement must make a formal application to the Vocational Nursing Program, including copies of all transcripts from prior nursing programs, and make an appointment for an interview with the program director.

Progression Criteria

Students must make a "C" or better in all classroom and clinical courses to progress within the Vocational Nursing program. Students not meeting this standard will be unable to continue in the program; however, they may be readmitted one time, if qualified, on a space-available basis.

Readmission

Any student who has an interruption in the normal progression of his/her nursing studies, whether by failure or withdrawal, may apply for readmission to the Vocational Nursing Department Director. In order for an application for readmission to be considered, it must be reviewed by the Vocational Nursing program faculty; therefore, it should be submitted 2-3 months prior to the desired starting date.

A completed application for readmission must include: (1) a new application, (2) a current transcript and (3) a written request identifying the reason(s) the program was interrupted and (4) actions taken to ensure success if readmission is granted. Readmission may include stipulations such as requiring that the student repeat and pass (C or higher) courses and clinicals they had previously taken and passed with a C or higher. When a course is repeated, the most recent grade will determine progression in the Program. Faculty may also require that applicants for readmission follow and complete the admission process in effect for first time applicants.

Grading Policy

Grades in classroom work are based on numerical averages, with corresponding letter grades assigned, providing all required assignments have been satisfactorily completed. Students must make at least a "C" in each theory course, including Anatomy and Physiology courses, and in each clinical practicum in order to progress within the program. The point system used within the Vocational Nursing Program is:

A = 90-100% B = 80-89% C = 77-79% D = 66-76% F = 0-65%

Program Cost

Basic tuition and fees for nursing students are figured just as they are for all other students; however, due to the special nature of the program, students will have some additional costs that they should be aware of:

- Laboratory fees will be charged for all courses requiring a lab (in addition to the classroom lecture). For VN students, a lab fee will be charged for each course designed as a "clinical" and for the "skills" course.
- Fees in addition to lab fees will be due at the time of course registration for such things as supplies, standardized tests, malpractice insurance. These fees may vary from year to year but specific information can be obtained from the Vocational Nursing Office.
- Nursing textbooks are highly specialized medical books and can be expensive. For students not yet officially admitted to the VN program and who may be taking general education courses, textbook costs will vary according to which particular courses are taken, but, on average, plan to spend about $300 per semester hour for books. The approximate cost of the Vocational Nursing Program is $6,200 to $8,400. The cost of the textbooks are included in the tuition and fees charged at registration for the first semester. Students receive a package of books that can be picked up in the campus bookstore after proof of payment from the Business Office.

Supplies and Incidentals

Once admitted to the Program, VN students will need to buy school clinical uniforms (plus patches), a lab jacket, shoes, and a stethoscope. A good wristwatch with a second hand is also needed. Also, the student will need normal school supplies, the LVN Student skills kit, and other costs will include such items as state board fees. Some of these expenses will not be incurred until the latter part of the program.

Health Insurance

Students will need to show proof of Major Medical Insurance or Accidental Injury Medical Insurance before going to clinical agencies.

Immunizations

Students accepted into the LVN program must show proof of the following immunizations:

- One dose of tetanus-diptheria-pertussis (TDAP) toxoid in the last 10 years
- Two doses of measles vaccine, administered since 1968
- Two doses of rubella vaccine
- Two doses of mumps vaccine
- Complete Hepatitis B vaccine. This series takes 6 months to complete
- Two doses of varicella (chicken pox) These must be administered at least 8 weeks apart.
- A statement from parents or physician that you had chicken pox is NOT sufficient proof.
- One influenza vaccine (given seasonally for the flu)
- Serologic (blood test) proof of immunity or serologic evidence of infection, is acceptable in lieu of the vaccinations.
- All students must have negative results of two Mantoux TB tests or a negative chest x-ray report prior to admission

Essential Physical Competencies for Nursing

In response to the Americans with Disabilities Act, a national survey of administrators of health care facilities, which employ nurses, validated a list of essential competencies a nurse must possess in order to function safely and effectively in a variety of clinical settings.

Results indicate that relatively high numbers of activities were identified in each essential competency category by the health care agencies as being necessary for nursing practice.

These competencies include:

- extended walking and standing daily
- ability to grasp, push, and/or pull
- ability to bend and stoop
- moving quickly in response to an emergency using upper body movements
- ability to reach
- carrying and moving equipment
- reaching and/or lifting

Other essential competencies identified for nursing care include:

- vision acuity to allow detecting physical changes such as cyanosis; ability to discriminate small print
- hearing that allows responding to physical and verbal cues
- a sense of touch that allows for assessment and palpation
- manual dexterity that allows for skill performance
- communicate effectively and efficiently in English in both oral and written forms

- cognitive ability to exercise good judgment
- attention to detail and ability to complete tasks within required time limits

Adaptations most frequently reported as being used by nursing staff were hearing aids, adaptive phones, and calculators.

The ADN Program has accepted these competencies as expectation for success in the program. Applicants may be asked to complete a Functional Abilities Performance upon conditional acceptance into the program.

LVN to RN Transition Program

The ADN Nursing program offers a revised 12 month LVN to RN Transition Program. This program is an accelerated program that reduces the number of clinical hours while including the same didactic courses as the generic program. Transition learners can expect to use the Leo & Mabel Scott Health Science Center with its Simulation Center for many of the clinical learning experiences.

Course content will be blocked in 8 week segments with the bulk of clinical learning experiences provided as a concentrated practicum at the end of the program. Each group of students will start the program each July and complete the program at the end of June the following year. At the end of the program, learners should expect and plan to attend clinical learning experiences 5 days a week during the last 5 weeks.

Applications for the RN Transition Program will be accepted from February 1 through February 28. The program description, programmatic outcomes and admission process is the same as the generic program.

Degree Plan

Prerequisite Courses (*must be completed prior to application to the Transition Program*)		
BIOL 2401	HUMAN ANATOMY AND PHYSIOLOGY I	4 credit hours
BIOL 2402	HUMAN ANATOMY AND PHYSIOLOGY II	4 credit hours
MATH 1342	ELEMENTARY STATISTICAL METHODS	3 credit hours
BIOL 2420	MICROBIOLOGY	4 credit hours
PSYC 2314	LIFESPAN GROWTH & DEVELOPMENT	3 credit hours
ENGL 1301	COMPOSITION I	3 credit hours
CORE	LANG/PHIL/CULTURAL or ARTS ELECTIVE	3 credit hours

Apply to the Transition Program

Summer Session II		
RNSG 1229	INTEGRATED NURSING SKILLS II	2 credit hours
RNSG 1300	HEALTH ASSESSMENT ACROSS THE LIFESPAN	3 credit hours

	Fall Semester I	
RNSG 1327	TRANSITION TO PROFESSIONAL NURSING	3 credit hours
RNSG 1162	TRANSITION CLINICAL I	1 credit hours
	Fall Semester II	
RNSG 2404	INTEGRATED CARE OF THE PATIENT WITH COMMON HEALTH CARE NEEDS	4 credit hours
RNSG 2162	TRANSITION CLINICAL II	4 credit hours
	Spring Semester I	
RNSG 2414	INTEGRATED CARE OF THE PATIENT WITH COMPLEX HEALTH CARE NEEDS	4 credit hours
RNSG 2161	TRANSITION CLINICAL III	4 credit hours
	Spring Semester II	
RNSG 1163	CLINICAL - PSYCHIATRIC NURSING	1 credit hour
RNSG 2435	INTEGRATED PATIENT CARE MANAGEMENT	4 credit hours
	Summer Session I	
RNSG 2462	FINAL CLINICAL PRACTICUM	4 credit hours

All coursework must be completed with a "C" or better. Failure to successfully complete the Clinical Math Exams will result in a clinical failure and dismissal from the nursing program. Students must also complete a state mandated jurisprudence exam with a score of 75 in order to take the NCLEX-RN.

Admission Process

Transition students must follow the same admission process as new Associate Degree in Nursing students. Documentation of current licensure as a vocational/practical nurse is required.

About Transfer Credit

Admission by Transfer is considered on a space available basis. Applicants must meet all requirements of the nursing program in addition to those of North Central Texas College. All college credits from other institutions will be evaluated on an individual basis to determine their possible application to the nursing curriculum requirements. A

letter grade of "C" (75) or better is required for transfer for all previous nursing courses and academic support courses. Students who have not been academically successful in other nursing programs will not be considered for transfer. Previous nursing courses must be from an accredited program of nursing. A transfer will not be considered if the student has missed a full semester of enrollment in a nursing program. The student must submit:

- A letter stating the reason for transfer.
- Course descriptions and/or course syllabi for previous nursing courses.
- Resume of previous clinical experience to include documentation of skills provided by the faculty of the transferring school.
- Letter of recommendation from the Department Head of the school from which the applicant is transferring.

Students will be evaluated on an individual basis by the Division Chair to determine their level of entry.

Vocational Nursing Certificate

Certificate Requirements

Spring Admission

Summer Semester 10 weeks - Level II

VNSG 1509	NURSING IN HEALTH AND ILLNESS II	5 credit hours
VNSG 1331	PHARMACOLOGY	3 credit hours
VNSG 1363	CLINICAL II - SPRING ADMISSION	3 credit hours
Total Credit Hours:		11

Spring Admission

Spring Semester 16 weeks - Level I

VNSG 1420	ANATOMY AND PHYSIOLOGY FOR ALLIED HEALTH	4 credit hours
VNSG 1323	BASIC NURSING SKILLS	3 credit hours
VNSG 1400	NURSING IN HEALTH AND ILLNESS I	4 credit hours
VNSG 1227	ESSENTIALS OF MEDICATION ADMINISTRATION	2 credit hours
VNSG 1360	CLINICAL I	3 credit hours
Total Credit Hours:		16

VNSG1420 may be taken before admission to the program, but no later than the first semester after admission. BIOL2401 and BIOL2402 (Anatomy and Physiology I and II) may be substituted for VNSG1420. Both semesters of Anatomy and Physiology must be taken for credit to be given.

Fall Admission

Summer Semester 10 weeks - Level III

VNSG 2510	NURSING IN HEALTH AND ILLNESS III	5 credit hours
VNSG 1219	PROFESSIONAL DEVELOPMENT	2 credit hours
VNSG 2360	CLINICAL III - FALL ADMISSION*	3 credit hours

Total Credit Hours:		10

**VNSG2360 will constitute the capstone experience.*

Fall Admission

Fall Semester 16 weeks - Level I

VNSG 1420	ANATOMY AND PHYSIOLOGY FOR ALLIED HEALTH	4 credit hours
VNSG 1323	BASIC NURSING SKILLS	3 credit hours
VNSG 1400	NURSING IN HEALTH AND ILLNESS I	4 credit hours
VNSG 1227	ESSENTIALS OF MEDICATION ADMINISTRATION	2 credit hours
VNSG 1360	CLINICAL I	3 credit hours
Total Credit Hours:		16

VNSG1420 may be taken before admission to the program, but no later than the first semester after admission. BIOL2401 and BIOL2402 (Anatomy and Physiology I and II) may be substituted for VNSG1420. Both semesters of Anatomy and Physiology must be taken for credit to be given.

Fall Admission

Spring Semester 16 weeks - Level II

VNSG 1509	NURSING IN HEALTH AND ILLNESS II	5 credit hours
VNSG 1331	PHARMACOLOGY	3 credit hours
VNSG 1230	MATERNAL-NEONATAL NURSING	2 credit hours
VNSG 1234	PEDIATRICS	2 credit hours
VNSG 1463	CLINICAL II - FALL ADMISSION	4 credit hours
Total Credit Hours:		16

Spring Admission

Fall Semester 16 weeks - Level III

VNSG 1230	MATERNAL-NEONATAL NURSING	2 credit hours
VNSG 1234	PEDIATRICS	2 credit hours

VNSG 2510	NURSING IN HEALTH AND ILLNESS III	5 credit hours
VNSG 1219	PROFESSIONAL DEVELOPMENT	2 credit hours
VNSG 2460	CLINICAL III - SPRING ADMISSION*	4 credit hours
Total Credit Hours:		15

**VNSG2460 will constitute the capstone experience.*

Associate Degree Nursing

Degree Requirements

	Prerequisite Courses	
BIOL 2401	HUMAN ANATOMY AND PHYSIOLOGY I	4 credit hours
BIOL 2402	HUMAN ANATOMY AND PHYSIOLOGY II	4 credit hours
MATH 1342	ELEMENTARY STATISTICAL METHODS	3 credit hours
Total Credit Hours:		11
	First Semester	
BIOL 2420	MICROBIOLOGY-For Pre-Nursing or Health Science Majors	4 credit hours
RNSG 1219	INTEGRATED NURSING SKILLS I	2 credit hours
RNSG 1423	INTRODUCTION TO PROFESSIONAL NURSING FOR INTEGRATED PROGRAMS	4 credit hours
RNSG 1300	HEALTH ASSESSMENT ACROSS THE LIFESPAN	3 credit hours
RNSG 1261	CLINICAL NURSING I	2 credit hours
Total Credit Hours:		15
	Second Semester	
PSYC 2314	LIFESPAN GROWTH & DEVELOPMENT	3 credit hours
ENGL 1301	COMPOSITION I	3 credit hours
RNSG 2404	INTEGRATED CARE OF THE PATIENT WITH COMMON HEALTH CARE NEEDS	4 credit hours
RNSG 1462	CLINICAL NURSING II	4 credit hours
Total Credit Hours:		14
	Minimester	
RNSG 1163	CLINICAL - PSYCHIATRIC NURSING	1 credit hour
Total Credit Hours:		0-1

	Third Semester	
	LANGUAGE,PHILOSOPHY AND CULTURE, OR CREATIVE ARTS ELECTIVE	3 credit hours
RNSG 2414	INTEGRATED CARE OF THE PATIENT WITH COMPLEX HEALTH CARE NEEDS	4 credit hours
RNSG 2461	CLINICAL NURSING III	4 credit hours
Total Credit Hours:		11
	Fourth Semester	
RNSG 2435	INTEGRATED PATIENT CARE MANAGEMENT	4 credit hours
RNSG 2462	CLINICAL NURSING IV	4 credit hours
Total Credit Hours:		8

Total Credit Hours: 60

BIOL2420, PSYC2314, ENGL1301, and the Language/Philosophy/Culture or Creative Arts Elective courses may be taken prior to the semester indicated but no later than the semester in which they are listed. All coursework must be completed with a "C" or better.

The Chemistry course for the BSN Pathway must be either Introduction to Chemistry or General Chemistry.

Degree Audit Note: Since some courses may not transfer, have all transcripts sent to the Registrar's Office and request a Degree Audit.

Emergency Medical Services (EMS) Program

Available at the Corinth Campus.

Strider Floyd
Division Chair, Emergency Services
(940) 498-6254
sfloyd@nctc.edu

Emergency medical technicians (EMTs) and paramedics provide fast and efficient emergency medical care to the sick and injured both at the scene and during their subsequent transport to the hospital.

Courses are taught through lecture, case study skills, written assignments, skills demonstrations, and hands-on training. Clinical experiences and Internships are completed through area hospitals and EMS/fire departments. The paramedic certificate and degree requirement of Anatomy & Physiology (VNSG 1420) can be taught via classroom lecture or online.

Individuals interested in either the EMT-Basic or Paramedic programs must attend an Advisement Session in order to be considered for admission. Once potential EMT-Basic students have attended an Advisement Session, they will be required to complete the HESI test. The top 25 highest scores from the HESI test will be accepted into the Emergency Medical Technology Program. The top 20 highest scores from the HESI test will be accepted into the Paramedic program.

Potential students who wish to gain admission to the EMT-Basic or Paramedic Programs must complete the following:

- Attend an Advisement Session
- Take the HESI Test

Once accepted to the program of their choice, the student must complete the following:

- Submit Application for Admission to NCTC with official transcripts
- Criminal Background Check
- Immunizations
- Drug Screen
- Physical
- CPR Certification (Healthcare Provider only)

Criteria for enrolling into the EMS programs:

- Must have a social security number.
- Must be at 18 years old.
- Must be a high school graduate or have a GED.
- Must have medical insurance (can be purchased through agencies that work with NCTC.

The Emergency Medical Services Program is designed to give the student a well-rounded education for a professional career in emergency medicine. The Department of State Health Services has approved the program. There is one certificate and one-degree track offered to meet the student's desire for certification or licensure. Levels of EMS certification are:

1. Emergency Medical Technician
2. Emergency Medical Technician Paramedic

Courses are taught through lecture, case study skills, written assignments, skills demonstrations, and hands-on training. Clinical experiences and Internships are completed through area hospitals and EMS/fire departments.

Following successful completion of the program, the graduate will be able to:

- Describe the scope of paramedic practice within local, state and national parameters.
- Demonstrate the desirable qualities of an EMS provider that contribute to high professional and ethical standards.
- Recognize, assess and manage medical and traumatic emergencies while establishing priorities under the appropriate medical control. Procedures will include physical assessment, extrication, basic life support, airway control and ventilation, fluid resuscitation, drug therapy, emergency delivery, cardiac monitoring and electrical intervention, psychological support and other forms of basic and advanced life support.
- Coordinate scene management, patient care, and transportation with other agencies.
- Establish rapport with first responders, agencies, patient's family members, and staff of receiving hospitals.
- Concisely document through written and oral communications, events relative to the provision of emergency care.
- In the event of contingencies, exercise personal judgment that is sound and appropriate for the situation.

Admission Process

Qualifications

To be eligible to enroll in the EMS Program, the applicant must show proof of the following at the time of registration:

- Be at least 18 years of age to sit for certification.
- Be a high school graduate or have passed the GED test.
- Be physically able to handle patients and equipment normally used in EMS.

To Apply

Prospective students should obtain a program information packet from the EMS Program and follow the instructions in the packet for securing admission to the EMS Program or on the NCTC EMS website. The following will be submitted to the EMS Program:

1. Application for Admission to NCTC
2. Application to the EMS Program
3. High school transcripts
4. College transcripts
5. Current state or national EMS certifications and current medically related certificates of completion
6. Complete physical which includes a drug screen and immunizations
7. Complete background check
8. Carry a current American Heart Association (AHA) Health Care Provider CPR card.
9. Must have current medical insurance

Program Acceptance

At the EMT level, students are accepted on a first come, first serve basis. Due to the large volume of students for limited positions within the EMS Program, a priority acceptance ranking is based upon (1) current enrollment in the EMT program and (2) all other applicants.

Progression

To progress through the EMS Program, the student must maintain a "C" average or above. Any student who has an interruption in the normal progression of his/her EMS training may reapply for readmission to the EMS Program through the department program coordinator. Time limitations are determined by department policy and are available by request. Readmission application does not guarantee applicant will receive acceptance into the program.

Advanced Standing Courses and Transfer Credit

Nationally registered EMTs must petition the Department of State Health Services, EMS Division to transfer their certification to the State of Texas.

Paramedics Seeking an Associate Degree

Texas or nationally certified paramedics trained at a school other than North Central Texas College may apply for the Associate of Applied Science degree. Application procedures, entrance requirements, credit for certifications, and other requirements are available upon request.

Grading Policy

Grades in the EMS Program are determined by theory, writing assignments, skills performance, Internet assignments, written exams and clinical practice. At the completion of each EMSP course, the student must have a department average and Final Exam Grade of 75% or above to complete course work. Letter grades are assigned based on the following scale:

A = 90-100% **B =** 80-89% **C =** 75-79% **D =** 66-74% **F =** 0-65%

Cost Considerations for EMS Students

Summary of Costs

The total per-semester cost of enrolling in the EMS Program at North Central Texas College is the sum of: (1) tuition: (2) "combined student fees"; (3) textbooks; and (4) supplies and incidentals. Except for item 4, charges are figured just as they are for all other students. However, EMS students should be aware that due to the special nature of the program, expenses in categories 3-4 will probably be considerably higher than those paid by students in most other majors.

Textbooks

EMS textbooks are highly specialized and can be expensive, as much as $300 or more in the first semester of Paramedicine. Keep in mind that the EMS program is an integrated course of study, meaning you will buy most of your EMS books the first semester. Therefore, book costs will be considerably less in the later semesters.

Supplies and Incidentals

Once admitted to the EMS Program, students will need to buy classroom uniforms, clinical uniforms, patches, stethoscope, pen light and trauma shears. A good wristwatch with a second hand is essential. Also, the student will need normal school supplies, and other costs that will include such items as major medical insurance, physical examination (including immunizations), Hepatitis B vaccine, CPR training, Drug Testing, Graduation fees and National Registry Examination fee as well as, the Department of State Health Services State Examination fee. An additional fee for malpractice insurance and National Registry Site fee will be added to the tuition/fees bill. Additional costs may include meals while attending clinicals and Internship. Some of these expenses will not be incurred until the latter part of the program.

> **NOTE**: All tuition rates, fees and other elements of expense for attending North Central Texas College are subject to change by the NCTC Board of Regents.

Graduation

Students are granted an Associate of Applied Science degree or Certificate in Paramedicine after successful completion of the prescribed curriculum within the EMS Program.

Eligible students completing certification or degree coursework will receive a Certificate of Course Completion necessary to take the National Registry Examination. EMTs and EMT-Ps who successfully pass the National Registry exam will be required to apply to the state of Texas to be certified as an EMT or a certified/licensed Paramedic.

Certificate of Completion/AAS Degree

All course work to be applied toward certification or the Associate of Applied Science degree must be completed with a grade of "C" or above. Students should consult a department representative to file a certificate or degree plan.

Students must be a current certified EMT to begin the EMT-P Certificate Program.

Emergency Medical Technician-Basic

EMT-B

The Emergency Medical Technician (EMT) program at North Central Texas College Our teaches basic life support procedures. EMT is the entry-level certification for EMS. EMTs work alongside paramedics in the delivery of prehospital care.

Upon completion of the certificate students will be able to:

Successful completion of this program entitles the student to sit for the National Registry examination and apply for the certification through the Texas Department of State Health Services.

Certificate Requirements

Offered Fall, Spring & Summer III

EMSP 1501	Emergency Medical Technician	5 credit hours
EMSP 1160	Clinical - Emergency Medical Technician/ Technology	1 credit hours

Emergency Medical Services Certificate (Paramedic)

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The Paramedic program at North Central Texas College teaches basic and advanced life support. Certified paramedics are the primary care providers in advanced level ambulances and fire departments.

Upon completion of the certificate students will be able to:

- Describe the scope of paramedic practice within local, state and national parameters.
- Demonstrate the desirable qualities of an EMS provider that contribute to high professional and ethical standards.
- Recognize, assess and manage medical and traumatic emergencies while establishing priorities under the appropriate medical control. Procedures will include physical assessment, extrication, basic life support, airway control and ventilation, fluid resuscitation, drug therapy, emergency delivery, cardiac monitoring and electrical intervention, psychological support and other forms of basic and advanced life support.
- Coordinate scene management, patient care, and transportation with other agencies.
- Establish rapport with first responders, agencies, patient's family members, and staff of receiving hospitals.
- Concisely document through written and oral communications, events relative to the provision of emergency care.
- In the event of contingencies, exercise personal judgment that is sound and appropriate for the situation.

Courses are taught through lecture, case study skills, written assignments, skills demonstrations, and hands-on training. Clinical experiences and Internships are completed through area hospitals and EMS/fire departments. The certificate requirement of Anatomy & Physiology (VNSG 1420) can be taught via classroom lecture or online.

Individuals interested in either the EMT-Basic or Paramedic programs must attend an Advisement Session in order to be considered for admission. Once potential EMT-Basic students have attended an Advisement Session, they will be required to complete the HESI test. The top 25 highest scores from the HESI test will be accepted into the Emergency Medical Technology Program. The top 20 highest scores from the HESI test will be accepted into the Paramedic program.

Potential students who wish to gain admission to the EMT-Basic or Paramedic Programs must complete the following:

- Attend an Advisement Session
- Take the HESI Test

Once accepted to the program of their choice, the student must complete the following:

- Submit Application for Admission to NCTC with official transcripts
- Criminal Background Check
- Immunizations
- Drug Screen
- Physical
- CPR Certification (AHA Healthcare Provider only)

Criteria for enrolling into the EMS programs:

- Must have a social security number.
- Must be at 18 years old.
- Must be a high school graduate or have a GED.
- Must have medical insurance (can be purchased through agencies that work with NCTC.
- Must be currently certified as National Registered EMT or Texas Department of State Health Services (DSHS) EMT

The Paramedic Certificate program is designed to take 3 semesters (1 year) to complete and is comprised of the following suggested pathway or course of study. This degree can be completed either completely face-to-face or through a mix of face-to-face classes and online classes.

Certificate Requirements

First Semester		
EMSP 2261	CLINICAL I - EMERGENCY MEDICAL TECHNICIAN/ PARAMEDIC	2 credit hours
EMSP 1338	INTRODUCTION TO ADVANCED PRACTICE	3 credit hours
EMSP 2544	CARDIOLOGY	5 credit hours
EMSP 2306	EMERGENCY PHARMACOLOGY	3 credit hours
Total Credit Hours:		13
Second Semester		
EMSP 1355	TRAUMA MANAGEMENT	3 credit hours
EMSP 1356	PATIENT ASSESSMENT AND AIRWAY MANAGEMENT	3 credit hours
EMSP 2262	CLINICAL II - EMERGENCY	2 credit hours

Second Semester		
	MEDICAL TECHNICIAN/ PARAMEDIC	
EMSP 2237	EMERGENCY PROCEDURES	2 credit hours
EMSP 2434	MEDICAL EMERGENCIES	4 credit hours
Total Credit Hours:		14
Third Semester		
EMSP 2232	ASSESSMENT BASED MANAGEMENT	2 credit hours
EMSP 2364	*PRACTICUM - EMERGENCY MEDICAL TECHNOLOGY/ TECHNICIAN EMT/ PARAMEDIC	3 credit hours
EMSP 2305	EMS OPERATIONS	3 credit hours
VNSG 1420	ANATOMY & PHYSIOLOGY FOR ALLIED HEALTH	4 credit hours
Total Credit Hours:		12

* *EMSP 2363: Capstone Experience*

Total Credit Hours: 39

Emergency Medical Services AAS (Paramedic)

Associate of Applied Science Degree

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The Paramedic program at North Central Texas College teaches basic and advanced life support. Certified paramedics are the primary care providers in advanced level ambulances and fire departments. The Associate of Applied Science degree has the EMS courses but also includes Academic courses, so the student may pursue their Paramedic Licensure and Associate of Applied Science Degree in Paramedicine. Licensure through the Department of State Health and Human Services of Texas requires Licensed Paramedics to have a degree.

Upon completion of the certificate students will be able to:

- Describe the scope of paramedic practice within local, state and national parameters.
- Demonstrate the desirable qualities of an EMS provider that contribute to high professional and ethical standards.
- Recognize, assess and manage medical and traumatic emergencies while establishing priorities under the appropriate medical control. Procedures will include physical assessment, extrication, basic life support, airway control and ventilation, fluid resuscitation, drug therapy, emergency delivery, cardiac monitoring and electrical intervention, psychological support and other forms of basic and advanced life support.
- Coordinate scene management, patient care, and transportation with other agencies.
- Establish rapport with first responders, agencies, patient's family members, and staff of receiving hospitals.
- Concisely document through written and oral communications, events relative to the provision of emergency care.
- In the event of contingencies, exercise personal judgment that is sound and appropriate for the situation.

Courses are taught through lecture, case study skills, written assignments, skills demonstrations, and hands-on training. Clinical experiences and Internships are completed through area hospitals and EMS/fire departments. The paramedic certificate and degree requirement of Anatomy & Physiology (VNSG 1420) can be taught via classroom lecture or online. Other academic courses may be completed via classroom or online.

Individuals interested in either the EMT-Basic or Paramedic programs must attend an Advisement Session in order to be considered for admission. Once potential EMT-Basic students have attended an Advisement Session, they will be required to complete the HESI test. The top 25 highest scores from the HESI test will be accepted into the

Emergency Medical Technology Program. The top 20 highest scores from the HESI test will be accepted into the Paramedic program.

Potential students who wish to gain admission to the EMT-Basic or Paramedic Programs must complete the following:

- Attend an Advisement Session
- Take the HESI Test

Once accepted to the program of their choice, the student must complete the following:

- Submit Application for Admission to NCTC with official transcripts
- Criminal Background Check
- Immunizations
- Drug Screen
- Physical
- CPR Certification American Heart Association (AHA) Healthcare Provider only.

Criteria for enrolling into the EMS programs:

- Must have a social security number.
- Must be at 18 years old.
- Must be a high school graduate or have a GED.
- Must have medical insurance (can be purchased through agencies that work with NCTC.
- Must be currently certified as National Registered EMT or Texas Department of State Health Services (DSHS) EMT

The Paramedicine degree is designed to take 4 semesters to complete and is comprised of the following suggested pathway or course of study. This degree can be completed either completely face-to-face or through a mix of face-to-face classes and online classes.

Degree Requirements

	First Semester	
ENGL 1301	COMPOSITION I	3 credit hours
EMSP 1160	CLINICAL - EMERGENCY MEDICAL TECHNICIAN/ TECHNOLOGY	1 credit hour
EMSP 1501	EMERGENCY MEDICAL TECHNICIAN	5 credit hours
VNSG 1420	ANATOMY AND PHYSIOLOGY FOR ALLIED HEALTH	4 credit hours
Total Credit Hours:		13

	Second Semester	
PSYC 2314	LIFESPAN GROWTH & DEVELOPMENT	3 credit hours
EMSP 2261	CLINICAL I - EMERGENCY MEDICAL TECHNICIAN/ PARAMEDIC	2 credit hours
EMSP 1338	INTRODUCTION TO ADVANCED PRACTICE	3 credit hours
EMSP 2306	EMERGENCY PHARMACOLOGY	3 credit hours
EMSP 2544	CARDIOLOGY	5 credit hours
Total Credit Hours:		16
	Third Semester	
CORE	ANY LANGUAGE,PHILOSOPHY AND CULTURE, OR CREATIVE ARTS ELECTIVE	3 credit hours
EMSP 2262	CLINICAL II - EMERGENCY MEDICAL TECHNICIAN/ PARAMEDIC	2 credit hours
EMSP 2434	MEDICAL EMERGENCIES	4 credit hours
EMSP 1355	TRAUMA MANAGEMENT	3 credit hours
EMSP 2237	EMERGENCY PROCEDURES	2 credit hours
EMSP 1356	PATIENT ASSESSMENT AND AIRWAY MANAGEMENT	3 credit hours
Total Credit Hours:		17
	Fourth Semester	
MATH 1314	COLLEGE ALGEBRA	3 credit hours
SPCH 1315	PUBLIC SPEAKING	3 credit hours
EMSP 2363	PRACTICUM - EMERGENCY MEDICAL TECHNOLOGY/ TECHNICIAN EMT/ PARAMEDIC	3 credit hours
EMSP 2243	ASSESSMENT BASED MANAGEMENT	2 credit hours

EMSP 2305	EMS OPERATIONS	3 credit hours
Total Credit Hours:		14

* *EMSP 2563 Capstone Experience*

Total Credit Hours: 60

Fire Science Program

A minimum of Emergency Medical Technician - Basic (EMT-B) is a prerequisite for admission to the fire academy.

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Fire Science Certificate

Basic Firefighter Certificate

The Basic Fire Academy is designed to give the student a well-rounded education for a professional career in the fire service.

Following successful completion of the program, the graduate will be able to:

- Demonstrate the desirable qualities of a basic firefighter that contribute to high professional and ethical standards.
- Function effectively during high stress situations. Such situations may include physical exertion, austere environments, victim extrication, basic or advanced life support patient treatments, victim rescue, and fire suppression.
- Coordinate scene management during hazardous situations.
- Establish rapport with first responders, agencies, patients, victims, and the public.
- Concisely document through written and oral communications, events relative to the provision of emergency care, rescue and fire incidents.
- Courses are taught through lecture, written assignments, skills demonstrations, and hands-on training. Clinical experiences and Internships are completed through local fire departments.

Individuals interested in either the Basic Firefighter Certificate must attend an Advisement Session in order to be considered for admission. Once potential students have attended an Advisement Session, they will be required to complete the HESI test. The top 25 highest scores from the HESI test will be accepted into the program.

Potential students who wish to gain admission to the Basic Firefighter Programs must complete the following:

- Attend an Advisement Session
- Take the HESI Test

Once accepted to the program of their choice, the student must complete the following:

- Submit Application for Admission to NCTC with official transcripts
- Criminal Background Check
- Immunizations
- Drug Screen

- Physical
- Physical Agility Exam Waivers
- CPR Certification (American Heart Association - Healthcare Provider only)

Criteria for enrolling into the Fire program:

- Must have a social security number.
- Must be at 18 years old.
- Must be a high school graduate or have a GED.
- Must have medical insurance (can be purchased through agencies that work with NCTC.

Fire Science Degrees

The Associate of Applied Science (AAS) - Fire Science degree is designed for individuals employed in fire service who want to further enhance their career through expanded experience and/or education:

Following successful completion of the program, the graduate will be able to:

- Demonstrate the desirable qualities of a basic firefighter that contribute to high professional and ethical standards.
- Function effectively during high stress situations. Such situations may include physical exertion, austere environments, victim extrication, basic or advanced life support patient treatments, victim rescue, and fire suppression.
- Coordinate scene management during hazardous situations.
- Establish rapport with first responders, agencies, patients, victims, and the public.
- Concisely document through written and oral communications, events relative to the provision of emergency care, rescue and fire incidents.

The Associate of Applied Science (AAS) - Fire Service Administration degree prepares students for leadership positions within the fire service. Introductory and advanced courses emphasize:

- administration, management, and leadership of municipal fire services
- fire protection and prevention strategies
- fire investigation
- community and political dimensions of fire service administration

Courses are taught through lecture, written assignments, skills demonstrations, and hands-on training. Clinical experiences and Internships are completed through local fire departments.

Individuals interested in either the Basic Firefighter Certificate must attend an Advisement Session in order to be considered for admission. Once potential students have attended an Advisement Session, they will be required to complete the HESI test. The top 25 highest scores from the HESI test will be accepted into the program.

Potential students who wish to gain admission to the Basic Firefighter Programs must complete the following:

- Attend an Advisement Session
- Take the HESI Test

Once accepted to the program of their choice, the student must complete the following:

- Submit Application for Admission to NCTC with official transcripts
- Criminal Background Check
- Immunizations
- Drug Screen
- Physical
- Physical Agility Exam Waivers
- CPR Certification (Healthcare Provider only)

Criteria for enrolling into the Fire program:

- Must have a social security number.
- Must be at 18 years old.
- Must be a high school graduate or have a GED.
- Must have medical insurance (can be purchased through agencies that work with NCTC.

This degree can be completed either completely face-to-face or through a mix of face-to-face classes and online classes.

Fire Science Certificate

Basic Firefighter Certificate

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The Basic Fire Academy is designed to give the student a well-rounded education for a professional career in the fire service.

Following successful completion of the program, the graduate will be able to:

- Demonstrate the desirable qualities of a basic firefighter that contribute to high professional and ethical standards.
- Function effectively during high stress situations. Such situations may include physical exertion, austere environments, victim extrication, basic or advanced life support patient treatments, victim rescue, and fire suppression.
- Coordinate scene management during hazardous situations.
- Establish rapport with first responders, agencies, patients, victims, and the public.
- Concisely document through written and oral communications, events relative to the provision of emergency care, rescue and fire incidents.

Courses are taught through lecture, written assignments, skills demonstrations, and hands-on training. Clinical experiences and Internships are completed through local fire departments.

Individuals interested in either the Basic Firefighter Certificate must attend an Advisement Session in order to be considered for admission. Once potential students have attended an Advisement Session, they will be required to complete the HESI test. The top 25 highest scores from the HESI test will be accepted into the program.

Potential students who wish to gain admission to the Basic Firefighter Programs must complete the following:

- Attend an Advisement Session
- Take the HESI Test

Once accepted to the program of their choice, the student must complete the following:

- Submit Application for Admission to NCTC with official transcripts
- Criminal Background Check
- Immunizations
- Drug Screen
- Physical
- Physical Agility Exam Waivers
- CPR Certification (Healthcare Provider only)

Criteria for enrolling into the Fire program:

- Must have a social security number.
- Must be at 18 years old.
- Must be a high school graduate or have a GED.
- Must have medical insurance (can be purchased through agencies that work with NCTC.

The Basic Fire Academy program is provided in both day and night class settings. The Day Class is designed to take 1 semester to complete and the Night Class is designed to take 2 semesters. Both class options are comprised of the following suggested pathway or course of study.

Certificate Requirements

First Semester		
FIRS 1203	FIRE FIGHTER AGILITY AND FITNESS PREPARATION	2 credit hours
FIRS 1301	FIREFIGHTER CERTIFICATION I	3 credit hours
FIRS 1313	FIREFIGHTER CERTIFICATION III	3 credit hours
FIRS 1319	FIREFIGHTER CERTIFICATION IV	3 credit hours
FIRS 1323	FIREFIGHTER CERTIFICATION V	3 credit hours
FIRS 1329	FIREFIGHTER CERTIFICATION VI	3 credit hours
FIRT 2188	INTERNSHIP-FIRE PROTECTION AND SAFETY TECHNOLOGY/ TECHNICIAN	1 credit hours
Total Credit Hours		18
Second Semester		
EMSP 1160	CLINICAL - EMERGENCY MEDICAL TECHNICIAN/ TECHNOLOGY	1 credit hour
EMSP 1501	EMERGENCY MEDICAL TECHNICIAN	5 credit hours
Total Credit Hours		6

Total Credit Hours 24

Fire Science AAS

Associate of Applied Science Degree

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The Associate of Applied Science (A.A.S.) - Fire Science degree is designed for individuals employed in fire service who want to further enhance their career through expanded experience and/or education:

Following successful completion of the program, the graduate will be able to:

- Demonstrate the desirable qualities of a basic firefighter that contribute to high professional and ethical standards.
- Function effectively during high stress situations. Such situations may include physical exertion, austere environments, victim extrication, basic or advanced life support patient treatments, victim rescue, and fire suppression.
- Coordinate scene management during hazardous situations.
- Establish rapport with first responders, agencies, patients, victims, and the public.
- Concisely document through written and oral communications, events relative to the provision of emergency care, rescue and fire incidents.

Courses are taught through lecture, written assignments, skills demonstrations, and hands-on training. Clinical experiences and Internships are completed through local fire departments.

Individuals interested in either the Basic Firefighter Certificate must attend an Advisement Session in order to be considered for admission. Once potential students have attended an Advisement Session, they will be required to complete the HESI test. The top 25 highest scores from the HESI test will be accepted into the program.

Potential students who wish to gain admission to the Basic Firefighter Programs must complete the following:

- Attend an Advisement Session
- Take the HESI Test

Once accepted to the program of their choice, the student must complete the following:

- Submit Application for Admission to NCTC with official transcripts
- Criminal Background Check
- Immunizations
- Drug Screen
- Physical
- Physical Agility Exam Waivers
- CPR Certification (American Heart Association - Healthcare Provider only)

Criteria for enrolling into the Fire program:

- Must have a social security number.
- Must be at 18 years old.
- Must be a high school graduate or have a GED.
- Must have medical insurance (can be purchased through agencies that work with NCTC.

This degree can be completed either completely face-to-face or through a mix of face-to-face classes and online classes.

Degree Requirements

	First Semester	
FIRS 1203	FIRE FIGHTER AGILITY AND FITNESS PREPARATION	2 credit hours
FIRS 1301	FIREFIGHTER CERTIFICATION I	3 credit hours
FIRS 1313	FIREFIGHTER CERTIFICATION III	3 credit hours
FIRS 1319	FIREFIGHTER CERTIFICATION IV	3 credit hours
FIRS 1323	FIREFIGHTER CERTIFICATION V	3 credit hours
FIRS 1329	FIREFIGHTER CERTIFICATION VI	3 credit hours
FIRT 2188	INTERNSHIP-FIRE PROTECTION AND SAFETY TECHNOLOGY/ TECHNICIAN	1 credit hours
Total Credit Hours		18
	Second Semester	
CORE	ARTS ART, MUSIC, OR FILM APPRECIATION	3 credit hours
EMSP 1160	CLINICAL - EMERGENCY MEDICAL TECHNICIAN/ TECHNOLOGY	1 credit hour
EMSP 1501	EMERGENCY MEDICAL TECHNICIAN-BASIC	5 credit hours
FIRT 1319	FIREFIGHTER HEALTH & SAFETY	3 credit hours
Total Credit Hours		12

Third Semester		
ENGL 1301, ENGL 2311	COMPOSITION I OR TECHNICAL WRITING	3 credit hours
FIRT 1307	FIRE PREVENTION CODES & INSPECTIONS	3 credit hours
FIRT 1309	FIRE ADMINISTRATION I	3 credit hours
MATH 1314	COLLEGE ALGEBRA	3 credit hours
PSYC 2301	INTRO TO GENERAL PSYCHOLOGY	3 credit hours
Total Credit Hours		15
Fourth Semester		
FIRT 1329	BUILDING CODES & CONSTRUCTION	3 credit hours
FIRT 1333	FIRE CHEMISTRY I	3 credit hours
FIRT 1338	FIRE PROTECTION SYSTEMS	3 credit hours
GOVT 2305	FEDERAL GOVERNMENT	3 credit hours
OR		
GOVT 2306	TEXAS GOVERNMENT	3 credit hours
FIRT 2309	FIREFIGHTING STRATEGIES & TACTICS I	3 credit hours
Total Credit Hours:		15

Total Credit Hours 60

Last updated: 04/02/2019

Fire Administration AAS

Associate of Applied Science Degree

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The Associate of Applied Science (A.A.S.) - Fire Administration degree prepares students for leadership positions within the fire service. Introductory and advanced courses emphasize:

- administration, management, and leadership of municipal fire services
- fire protection and prevention strategies
- fire investigation
- community and political dimensions of fire service administration

Following successful completion of the program, the graduate will be able to:

- Demonstrate critical, professional, and personal skills such as independent thinking, communication skills (oral, written and listening), ability to work effectively within groups, and a commitment to continuous learning
- Demonstrate strong problem solving and creative thinking skills
- Lead and manage organizational change with a demonstrated understanding of its impact on budgets and human resources
- Interpret the scope of the authority and responsibility of all levels of administration and interact appropriately within the organization and external community

Courses are taught through lecture, written assignments, skills demonstrations, and hands-on training. Clinical experiences and Internships are completed through local fire departments.

This degree can be completed a mix of face-to-face classes and online classes.

First Semester		
FIRS 1203	FIRE FIGHTER AGILITY AND FITNESS PREPARATION	2
FIRS 1301	FIREFIGHTER CERTIFICATION I	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
FIRT 2188	INTERNSHIP-FIRE PROTECTION AND SAFETY TECHNOLOGY/ TECHNICIAN	1
Total Credit Hours		18
	Second Semester	
CORE	CREATIVE ARTS ELECTIVE	3
ACNT 1303	INTRODUCTION TO ACCOUNTING I	3
BMGT 1327	PRINCIPLES OF MANAGEMENT	3
FIRT 1309	FIRE ADMINISTRATION I	3
Total Credit Hours		12
	Third Semester	
ENGL 1301, ENGL 2311	COMPOSITION I OR TECHNICAL WRITING	3
FIRT 1319	FIREFIGHTER HEALTH & SAFETY	3
MATH 1314	COLLEGE ALGEBRA	3
SOCI 1301	INTRO TO GENERAL SOCIOLOGY	3
FIRT 2309	FIREFIGHTING STRATEGIES & TACTICS I	3
Total Credit Hours		15
	Fourth Semester	
SPCH 1311, SPCH 1315	INTRODUCTION TO SPEECH COMMUNICATION OR PUBLIC SPEAKING	3
FIRT XX3X	FIRT ELECTIVE	3
FIRT XX3X	FIRT ELECTIVE	3
GOVT 2305, GOVT 2306	FEDERAL GOVERNMENT OR TEXAS GOVERNMENT	3
FIRT 1349	FIRE ADMINISTRATION II (Capstone)	3
Total Credit Hours		15

Total Credit Hours: 60

Radiological Technology Program

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The Radiological Technology Program is a two-year, 60 credit hour curriculum leading to the Associate of Applied Science Degree that prepares students to assume the role of a radiological technologist, sometimes called rad techs or x-ray techs. Radiological technologists use x-ray equipment to create images of the internal body to diagnose injury and disease. Their services are performed at the request and under the supervision of a physician.

Programmatic Outcomes

Program Level Outcomes taken Directly from TracDat

- Gainful Employment (If Applicable)
- (Updated report information taken directly from our public report)
- Modality of Program
- Face-to-face on the Gainesville campus
- Suggested Pathway or Course of Study

The Radiological Technology Program will accept students every fall semester. The clinical training begins during the second half of the first semester and the hours will be set by the clinical institution to which the student is assigned. This may include days, evenings, nights and/or weekend shifts. The student will attend clinical 16 hours a week for five weeks at the end of the first semester. The clinical experience remains 16 hours a week during the entire spring semester and increases to 24 hours a week during the summer and during the last year (fall and spring) of the curriculum.

Students are encouraged to take all the academic support courses prior to entering the program. The program is rigorous, and completing the support courses enables the student to complete the program successfully while maintaining personal responsibilities such as work and family commitments.

The Radiological Technology student will employ cognitive, psychomotor, and affective skills in acquisition of their degree. They will be expected to perform as radiographic technologists who must lift and move patients as well as push, pull, lift, and carry heavy equipment. Additionally, students will be required to stoop, bend, and stand for long periods of time and will be required to move quickly in emergency situations. Interpersonal skills are an integral part of the profession and require that the student be able to function appropriately in highly stressful situations.

A physical examination and proof of immunization must be submitted prior to beginning the program. Students must be certified in cardiopulmonary resuscitation (CPR) at the Health Care Provider level as designated by the American Heart Association. A copy of a current CPR card must be submitted to the student's instructor prior to attending clinical.

Students are required to undergo a criminal background check prior to enrolling in the program and to a drug screen prior to beginning clinical experiences. The criminal background check is conducted once the student has been deemed eligible to enter the program but prior to admission. Therefore, if a student does not pass the criminal background check, the student will not be admitted to the program and will not have incurred the expenses associated with enrollment. The drug screen will be conducted after the student has been accepted to the program. Results of this screen will be reviewed and verification to determine that a student is eligible to attend clinical rotations. The student is responsible for all charges incurred for these screenings and will pay this fee upon registration for the program. Students are responsible for their own transportation arrangements to campus and to their assigned health care facilities for clinical experiences.

Acceptance into the Radiological Technology Program is accomplished by way of a competitive selection process based on an pre-admission assessment exam and a points system composed of:

- grade point average of academic support courses in the curriculum
- number of academic support courses completed
- grade in Anatomy and Physiology I
- grade in Anatomy and Physiology II

All students applying for fall admission are invited to take a pre-admission exam which will determine their admission to the program.

Students will only be admitted to the program during the fall semester of each year.

Admission Requirements

1. Apply and gain admission to North Central Texas College. Applicant must have earned either a high school diploma or a General Education Development (GED) certificate in addition to complying with the Texas Success Initiative requirements.
2. Attend a Radiological Technology advisory session. Please contact the Radiology Department for a schedule of these information sessions.
3. Complete the four prerequisite courses. These courses include:
    a. BIOL 2401 Anatomy and Physiology I
    b. BIOL 2402 Anatomy and Physiology II
    c. MATH 1314 College Algebra or MATH 1342 Elementary Statistical Methods
    d. ENGL 1301 Composition I

Admission Points will be awarded as follows:

Points	For GPA in academic support courses in the curriculum:
3	4.0
2	3.5
1	3.0

It is strongly advised that students complete as many co-requisite courses as possible before applying for admission into the Radiological Technology program.

These courses include:

- PSYC 2301
- Humanities/Arts elective

Early completion of all academic support courses enhances progression in the radiology program. The academic support courses can be taken at any time prior to admission into the program but must be completed in the semester in which they are listed in the curriculum. Course work completed with a "C" or better prior to admission will result in:

Admission Points

Points	For completion of:
3	23 hours
2	17 hours
1	8 hours

Admission Points are awarded for performance in the two biology prerequisite courses.

For BIOL2401 Anatomy and Physiology I and BIOL2401 Anatomy and Physiology II, admission points are awarded as follows for each course:

Points	For a grade of:
4	A
3	B
2	C

Complete and submit to the Radiological Technology Program Office at the Gainesville Campus a Declaration of Intent to Enroll form - a formal statement of your intention to enroll in the upcoming fall class scheduled to begin at NCTC. A degree audit and copies of transcripts of all courses must be provided at the time the Declaration of Intent is completed.

> It must be completed and submitted between May 1 -June 1

These declaration forms ***DO NOT*** "carry over". If for any reason you are not admitted to the Radiological Technology Program after submitting your first declaration form, you must submit a new form in order to be considered again for admission.

All applications who have submitted a Declaration of Intent form will be notified of the scheduled dates to take the pre-admission assessment exam given in late June and/or early July.

Selection Process

Applicants are selected for acceptance according to the following ranking process: Total admission points are added to the cumulative admission assessment exam score. The new total is then used to rank applicants from highest to lowest.

Candidates with the highest combined pre-admission exam scores and priority points will be considered for admission to the Radiological Technology Program. Candidates with the next highest scores will be listed as alternates. If any of those who have been admitted are not able to begin the program for that particular semester, the next highest scoring alternate will be admitted. Anyone wishing to re-apply the following year must go through this admission procedure again in order to be considered for the upcoming semester (including alternates who did not get in). The pre-admission exam may only be taken twice. Those students accepted for admission to the Radiological Technology Program will be registered in the first semester courses by the program staff.

Radiological Technology AAS

Associate of Applied Science Degree

Gainesville Campus

Degree Requirements

	Prerequisites	
BIOL 2401	HUMAN ANATOMY AND PHYSIOLOGY I	4 credit hours
BIOL 2402	HUMAN ANATOMY AND PHYSIOLOGY II	4 credit hours
ENGL 1301	COMPOSITION I	3 credit hours
MATH 1314	COLLEGE ALGEBRA	3 credit hours
OR		
MATH 1342	ELEMENTARY STATISTICAL METHODS	3 credit hours
Total Credit Hours:		14
	First Semester	
RADR 1201	INTRODUCTION TO RADIOGRAPHY	2 credit hours
RADR 1411	BASIC RADIOGRAPHIC PROCEDURES	4 credit hours
RADR 1303	PATIENT CARE	3 credit hours
Total Credit Hours:		9
	Second Semester	
RADR 1313	PRINCIPLES OF RADIOGRAPHIC IMAGING I	3 credit hours
RADR 2401	INTERMEDIATE RADIOGRAPHY PROCEDURES	4 credit hours
RADR 2209	RADIOGRAPHIC IMAGING EQUIPMENT	2 credit hours
RADR 1166	PRACTICUM I	1 credit hours
Total Credit Hours:		10
	Third Semester	
RADR 2313	RADIATION BIOLOGY AND PROTECTION	3 credit hours
RADR 1267	PRACTICUM II	2 credit hours
Total Credit Hours:		5

Fourth Semester		
PSYC 2301	GENERAL PSYCHOLOGY	3 credit hours
RADR 2217	RADIOGRAPHIC PATHOLOGY	2 credit hours
RADR 2205	PRINCIPLES OF IMAGING II	2 credit hours
RADR 2466	PRACTICUM III	4 credit hours
Total Credit Hours:		11
Fifth Semester		
ARTS 1301	ART APPRECIATION	3 credit hours
OR		
MUSI 1306	MUSIC APPRECIATION	3 credit hours
RADR 2333	ADVANCED MEDICAL IMAGING	3 credit hours
RADR 2335	RADIOLOGIC TECH SEMINAR	3 credit hours
RADR 2267	PRACTICUM IV	2 credit hours
Total Credit Hours:		11

Total Credit Hours: 60

Surgical Technology Program

Gainesville Campus

The Surgical Technology program is a one-year certificate program that prepares the student to assume the responsibilities of a Surgical Technologist. Surgical Technologists participate in all aspects of preparing and monitoring instruments and procedures in the sterile operating room environment. The courses are taught in the classroom, the Surgical Technology lab, and at clinical sites throughout the NCTC service area.

The program is nationally accredited by the:

Commission on Accreditation of Allied Health Education Programs (CAAHEP)
25400 US Highway 19 N
Clearwater, FL 33763
Phone (727) 210-2350
Fax (727) 210-2354

The oversight of which is by the:

Accreditation Review Counsel on Education in Surgical Technology and Surgical Assisting (ARC/STSA)
6 W. Dry Creek Circle, Suite #110
Littleton, CO 80120
Phone (303) 694-9262
Fax (303) 741-3655
info@arcstsa.org

Surgical Technologists may obtain professional certification from the National Board of Surgical Technology and Surgical Assisting (NBSTSA) by graduating from a CAAHEP-accredited program and passing a national certification examination. They may then use the designation Certified Surgical Technologist, or CST.

The NCTC Surgical Technology program runs August to August and can only accept 24 students a year. There are no prerequisites. As a certificate program, passing the college entrance exam (TSI) is not required.

There are only 2 Surgical Technology courses that may be taken in advance of the complete curriculum. Medical Terminology (HITT1205) is offered year-round and only online. The other course that may be taken in advance is Anatomy and Physiology. There are two types and the Surgical Technology Program will accept either one. Anatomy and Physiology for Allied Health (VNSG 1420) is a one semester course and is not transferable for college credit as a science. It only counts toward some certificate programs and regular college entrance tests are not required to take it. The other, A&P (BIOL 2401 and 2402) requires the student to take the TSI Assessment, or be exempt from placement testing, before registration. Whichever A&P course one chooses, it must be completed by the end of the first semester of Surgical Technology classes with a passing grade of at least a "C" or the student will not be allowed to continue in the program.

Criminal background checks and drug screens will be conducted on all students and may disqualify individuals from the program. Titer evidence of immunity to Hepatitis B and communicable diseases according to CDC guidelines is required. American Heart Basic Life Support (BLS) CPR certification is required. A physical exam by private physician is required. Documentation of personal health insurance is required. Attendance at class and clinicals is required. NCTC Allied Health programs have a non-tobacco policy.

Program Costs

Cost of the Surgical Technology program is figured the same as degree seeking students. However, the Surgical Technology student can expect to pay additional costs for being in a Health Science Program, such as uniform costs, laboratory fees, physical, immunizations, health insurance, background checks, drug screening and CPR training. Textbooks for the course are purchased in the first semester of study for the entire program, and they are estimated at $375. Estimated costs for the program is between $5,500 to $6,500.

Admission Process

1. Register for and attend a Surgical Technology Program information session. These are held in the spring at various times on an NCTC Campus. The schedule is on the NCTC website surgicaltech.nctc.edu and registration can be done via e-mail or phone.
2. At the information session, apply to the Surgical Technology program and receive permission to take the admission test. Pay for the test at the NCTC Business Office and take the receipt to the test site on the test date.
3. Complete the admission process into North Central Texas College. The applicant must have earned either a high school diploma or a GED (General Equivalency Diploma). If one has attended college before, official transcripts from each college attended are required. If one has not attended college before, high school transcripts or GED scores are required. Other requirements may apply to international students.
4. Contact the Financial Aid Department and fill out a FAFSA form if needed.
5. Sit for the admission test on the designated date.
6. Admission is offered in rank order of the admission exam composite scores. The program attempts to start with 24 students, but no alternates are admitted after the course begins.
7. The student must be at least 18 years old the first day of class.

The overall program goal is to prepare competent entry-level surgical technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains. The curriculum uses the three areas of learning acquisition arranged in a hierarchy of simple to complex

Programmatic Outcomes

Upon successful completion of this course, the student will be able to:

- Identify the physical, interpersonal, and ethical aspects of the perioperative environment
- Discuss basic concepts of surgical pharmacology and anesthesia
- Identify basic concepts of technological sciences
- Demonstrate patient care concepts

Modality of Program

The Surgical Technology classes are face to face.

> ***NOTICE***: The Surgical Technology Program reserves the right to change the curriculum and program requirements as deemed necessary for maintenance of high quality education.

Surgical Technology Certificate

Certificate Requirements

	First Semester	
VNSG 1420	ANATOMY AND PHYSIOLOGY FOR ALLIED HEALTH	4 credit hours
SRGT 1505	INTRODUCTION TO SURGICAL TECHNOLOGY	5 credit hours
SRGT 1509	FUNDAMENTALS OF PERIOPERATIVE CONCEPTS AND TECHNIQUES	5 credit hours
SRGT 1261	CLINICAL - SURGICAL/ OPERATING ROOM TECHNICIAN (INTRODUCTORY)	2 credit hours
HITT 1205	MEDICAL TERMINOLOGY	2 credit hours
Total Credit Hours:		18
	Second Semester	
SRGT 1441	SURGICAL PROCEDURES I	4 credit hours
SRGT 1442	SURGICAL PROCEDURES II	4 credit hours
SRGT 1661	CLINICAL - SURGICAL/ OPERATING ROOM TECHNICIAN (INTERMEDIATE)	6 credit hours
Total Credit Hours:		14
	Third Semester	
SRGT 1662	CLINICAL - SURGICAL/ OPERATING ROOM TECHNICIAN (ADVANCED)	6 credit hours
Total Credit Hours:		6

Total Credit Hours: 38

**SRGT1662 Will constitute the capstone experience.*

Surgical Technology AAS

Associate of Applied Science Degree

Graduation Requirements

A minimum of 60 semester hours is required for graduation with an Associate of Applied Science Degree.

Students who have completed the NCTC Certificate in Surgical Technology may, with completion of the additional 26 required academic hours, apply to NCTC to be awarded an AAS in Surgical Technology. Academic courses may be taken before, during or after the certificate portion of the program. Degree seeking students must pass all sections of the Texas Success Initiative (TSI).

Degree Requirements

	First Semester	
BIOL 2401	HUMAN ANATOMY AND PHYSIOLOGY I	4 credit hours
ENGL 1301	COMPOSITION I	3 credit hours
BIOL 1322	NUTRITION & DIET THERAPY I	3 credit hours
CORE	ANY LANGUAGE,PHILOSOPHY AND CULTURE, OR CREATIVE ARTS ELECTIVE	3 credit hours
Total Credit Hours:		13
	Second Semester	
BIOL 2402	HUMAN ANATOMY AND PHYSIOLOGY II	4 credit hours
ENGL 1302	COMPOSITION II	3 credit hours
MATH 1342	ELEMENTARY STATISTICAL METHODS	3 credit hours
PSYC 2314	LIFESPAN GROWTH & DEVELOPMENT	3 credit hours
Total Credit Hours:		13
	Third Semester	
HITT 1205	MEDICAL TERMINOLOGY	2 credit hours
SRGT 1261	CLINICAL - SURGICAL/ OPERATING ROOM TECHNICIAN (INTRODUCTORY)	2 credit hours

SRGT 1505	INTRODUCTION TO SURGICAL TECHNOLOGY	5 credit hours
SRGT 1509	FUNDAMENTALS OF PERIOPERATIVE CONCEPTS AND TECHNIQUES	5 credit hours
Total Credit Hours:		14
	Fourth Semester	
SRGT 1441	SURGICAL PROCEDURES I	4 credit hours
SRGT 1442	SURGICAL PROCEDURES II	4 credit hours
SRGT 1661	CLINICAL - SURGICAL/ OPERATING ROOM TECHNICIAN (INTERMEDIATE)	6 credit hours
Total Credit Hours:		14
	Fifth Semester	
SRGT 1662	CLINICAL - SURGICAL/ OPERATING ROOM TECHNICIAN (ADVANCED)	6 credit hours
Total Credit Hours:		6

Total Credit Hours: 60

Transfer Pathways

North Central Texas College strives to provide students the courses of study that match their educational goals. To accomplish this, academic pathways are provided to shape a student's educational experience and provide the best combination of classes (both core options and electives) that align with a student's intended major at a four-year university. Students seeking more detail are encouraged to visit the Counseling and Advising office at any NCTC campus, or to email counseling@nctc.edu, in order to review the pathways options as well as potential transfer opportunities. This pathway aligns with the recommended Fields of Study from the Texas Higher Education Coordinating Board.

Associate of Arts Suggested Pathways

- Agribusiness Majors
- Accounting/Business/Economics
- Animal Science (Non Pre-Vet)
- Anthropology
- Computer Science
- Construction Management/Technology
- Criminal Justice
- Drama/Theater Arts
- English
- Government
- Health Science
- History
- Humanities
- Kinesiology
- Math
- Music
- Philosophy
- Pre-Med/Pre-Dental/Pre-Pharmacy
- Psychology
- Sociology
- Visual Arts

Associate of Science Suggested Pathways

- Biology
- Chemistry
- Engineering/Physics
- Pre-Veterinarian

Associate of Arts in Teaching Suggested Pathways

- Interdisciplinary Studies/EC-6 & 4-8
- Biology/7-12, Teacher Certification
- Chemistry/7-12, Teacher Certification
- English/7-12, Teacher Certification
- History/7-12, Teacher Certification
- Kinesiology/7-12, Teacher Certification
- Math/7-12, Teacher Certification
- Visual Arts/7-12, Teacher Certification

Associate of Applied Science Suggested Pathways

- ntxccc.org/pathways

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR

ACCOUNTING/BUSINESS/ECONOMICS MAJORS

The following is a recommended sequence of courses for students intending on majoring in an ***Accounting/Business/ Economics field*** *at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at NCTC.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC/PSYC 1300	Learning Frameworks	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	MATH 1314-College Alg., MATH 1324-Bus. Analysis, or MATH 2412-Pre-Calc.*	3
SOCIAL/BEHAV Core	ECON 2301-Macroeconomics	3
		15
SECOND SEMESTER		
ENGL 1302 or 2311	Composition II or Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOG 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
Elective	MATH 1325-Business Calculus or MATH 2413-Calculus I*	3
Elective	ECON 2302-Microeconomics*	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
2nd LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOG 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
LANG/PHIL/CULTURE Core	PHIL 2306-Intro. to Ethics or other Lang/Phil/Culture core	3
SPCH 1321	Business and Professional Speech or other Speech core	3
Elective	ACCT 2301-Principles of Accounting I*	3
		16
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
ARTS Core	ARTS 1301-Art Appreciation or other Creative Arts core	3
Elective	BCIS 1305-Business Computer Applications*	3
Elective	ACCT 2302-Principles of Accounting II*	3
Elective	MATH 1342-Elementary Statistics*	3
		15
	Total Credit Hours	**62***

**Consult with your intended transfer university AND an advisor to determine which NCTC courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA or AS degree are transferable.*

****MATH 1314 is a prerequisite to MATH 2412. Credit for some Math prerequisites may be earned through meeting required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam. Please see an advisor at NCTC for details.**

TRANSFER RESOURCES

NCTC COUNSELING AND ADVISING QUESTIONS: counseling@nctc.edu

COLLEGE FOR ALL TEXANS: www.collegeforalltexans.com

TEXAS COMMON COURSE NUMBERING SYSTEM (TCCNS): www.tccns.org

NORTH TEXAS COMMUNITY COLLEGE CONSORTIUM TRANSFER COLLABORATIVE:
http://ntxccc.org/content/transfer

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE
SUGGESTED PATHWAY FOR
AGRIBUSINESS MAJORS

The following is a recommended sequence of courses for students intending on majoring in an ***Agribusiness field*** *at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Science degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The amount of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
EDUC 1300	Learning Frameworks	3
ENGL 1301	Composition I	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	Math1314-College Algebra or MATH 1324-Math for Business Analysis*	3
SOCIAL/BEHAV Core	ECON 2301-Macroeconomics*	3
		15
SECOND SEMESTER		
ENGL 1302 or 2311	Composition II or Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
ARTS Core	Art, Music, Film, or Theater Appreciation	3
Elective	ECON 2302-Microeconomics or AGRI 2317-Ag. Economics*	3
Elective	MATH 1325-Business Calculus*	3
		15
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
1st LAB SCIENCE Core	BIOL 1413-Zoology, BIOL 1408-Bio. for Non-Science majors, or other Science core	4
Elective	ACCT 2301-Principles of Accounting I*	3
Elective	BCIS 1305-Business and Computer Applications*	3
		16
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
2rd LAB SCIENCE	BIOL 1411-Zoology, BIOL 2406-Environmental Biology, or other Science core	4
Elective	ACCT 2302-Principles of Accounting II*	3
Elective	BUSG, AGRI, or other course required for major*	3-4
		16-17
	Total Credit Hours	**62-63***

**Consult with your intended transfer university AND an advisor to determine which NCTC courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA or AS degree are transferable.*

****MATH 1314 is a prerequisite to CHEM 1411, and MATH 1314 along with either MATH 1316 or 2412 are prerequisites to MATH 2413 and PHYS 1401 or 2425. Until you have completed these prerequisites you will be under a General Studies major (AA or AS degree). Some Math prerequisites may be satisfied by earning required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam. Please see an advisor at NCTC for details.**

TRANSFER RESOURCES

NCTC COUNSELING AND ADVISING QUESTIONS: counseling@nctc.edu

COLLEGE FOR ALL TEXANS: www.collegeforalltexans.com

TEXAS COMMON COURSE NUMBERING SYSTEM (TCCNS): www.tccns.org

NORTH TEXAS COMMUNITY COLLEGE CONSORTIUM TRANSFER COLLABORATIVE:
www.ntxcc.org/content/transfer

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR

ANIMAL SCIENCE (NON PRE-VET) MAJORS

*The following is a recommended sequence of courses for students intending on majoring in an **Animal Science field (non Pre-Vet)** at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at NCTC.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
EDUC 1300	Learning Frameworks	3
ENGL 1301	Composition I	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	Math1314-College Algebra or higher level Algebra-based Math core	3-4
1st LAB SCIENCE Core	BIOL 1406-Biology for Science Majors I or BIOL 1413-Zoology	4
		16-17
SECOND SEMESTER		
ENGL 2311	Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
Elective	AGRI2317-Intro. to Agricultural Economics	3
2rd LAB SCIENCE	CHEM 1411-General Chemistry I**	4
Elective	AGRI1419-Animal Science*	4
		17
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
SOCIAL/BEHAV Core	ECON 2301-Macroecon., ECON 2302-Microecon., or other Social Science core	3
Elective	AGRI1407-Agronomy*	4
Elective	BIOL 1407-Biology for Science Majors II or BIOL 1411-Botany*	4
		16
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
ARTS Core	MUSI 1306 or other Creative Arts core	3
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
Elective	Additional Math, Science, or Agriculture course*	3-4
		12-13
	Total Credit Hours	**61-63***

**Consult with your intended transfer university AND an advisor to determine which NCTC courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA or AS degree are transferable.*

****MATH 1314 is a prerequisite to CHEM 1411. Some Math prerequisites may be satisfied by earning required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam.**
Please see an advisor at NCTC for details.

TRANSFER RESOURCES

NCTC COUNSELING AND ADVISING QUESTIONS: counseling@nctc.edu
COLLEGE FOR ALL TEXANS: www.collegeforalltexans.com
TEXAS COMMON COURSE NUMBERING SYSTEM (TCCNS): www.tccns.org
NORTH TEXAS COMMUNITY COLLEGE CONSORTIUM TRANSFER COLLABORATIVE:
http://ntxccc.org/content/transfer

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR ***ANTHROPOLOGY MAJORS***

The following is a recommended sequence of courses for students intending on majoring in an ***Anthropology field*** *at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
HIST 1301	U.S. History I (*up to 1865*)	3
EDUC/PSYC 1300	Learning Frameworks	3
MATH Core	MATH 1342-Elementary Statistics*	3
SOCIAL/BEHAV Core	ANTH 2346-General Anthropology	3
		15
SECOND SEMESTER		
ENGL 1302 or 2311	Composition II or Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
LANG/PHIL/CULTURE Core	HUMA 1301 or other Lang/Phil/Culture core	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOG 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
ARTS Core	ARTS 1301-Art Appreciation or other Creative Arts core	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
2nd LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOG 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
Elective	HIST 2321-World Civilizations I*	3
Elective	SOCI 1301-Intro. to Sociology or Foreign Language I*	3-4
		16-17
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
Elective	ANTH 2351-Cultural Anthropology*	3
Elective	HIST 2322-World Civilizations II*	3
Elective	SOCI 2319-Minority Studies*	3
Elective	PSYC 2301-Intro. to Psychology or Foreign Language II*	3-4
		15-16
	Total Credit Hours	**62-64***

**Consult with your intended transfer university AND an advisor at NCTC to determine which courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA degree are transferable. Some universities may require 12-14 hours of a Foreign Language for Bachelor of Arts majors, or proven language proficiency through credits earned by CLEP testing.*

TRANSFER RESOURCES

NCTC COUNSELING AND ADVISING QUESTIONS: counseling@nctc.edu

COLLEGE FOR ALL TEXANS: www.collegeforalltexans.com

TEXAS COMMON COURSE NUMBERING SYSTEM (TCCNS): www.tccns.org

NORTH TEXAS COMMUNITY COLLEGE CONSORTIUM TRANSFER COLLABORATIVE:
http://ntxccc.org/content/transfer

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NORTH CENTRAL TEXAS COLLEGE

NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE
SUGGESTED PATHWAY FOR
COMPUTER SCIENCE MAJORS

The following is a recommended sequence of courses for students intending on majoring in a ***Computer Science field*** *at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC 1300	Learning Frameworks	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	Math2414-Calculus II**	4
Elective	COSC 1436-Programming Fundamentals I*	4
		17
SECOND SEMESTER		
ENGL 2311	Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
ARTS Core	MUSI 1306-Music Appreciation or other Creative Arts core	3
Elective	MATH 2318-Linear Algebra*	4
Elective	COSC 1437-Programming Fundamentals II*	4
		17
THIRD SEMESTER		
GOVT 2305	American National Government	3
SOCIAL/BEHAV Core	ECON 2301-Macroeconomics or other Social Science core	3
LANG/PHIL/CULTURE Core	PHIL 2306-Intro. to Ethics or other Lang/Phil/Culture core	3
Elective	COSC 2436-Programming Fundamentals II*	4
1st LAB SCIENCE Core	PHYS 2425-University Physics I**	4
		17
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Professional Speech	3
2nd LAB SCIENCE	PHYS 2426-University Physics II*	4
Elective	COSC 2425-Comp. Org., MATH 2320-Diff. Equations, MATH 2415-Calculus III, or Science core*	3-4
		13-14
	Total Credit Hours	**64-65***

**Consult with your intended transfer university AND an advisor to determine which NCTC courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA or AS degree are transferable.*

****MATH 1314 along with either MATH 1316 or 2412 are prerequisites to MATH 2413 and PHYS 2425, and MATH 2413 is a prerequisite to MATH 2414. Until you have completed these prerequisites you will be under a General Studies major (AA or AS degree). Some Math prerequisites may be satisfied by earning required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam. Please see an advisor at NCTC for details.**

TRANSFER RESOURCES

NCTC COUNSELING AND ADVISING QUESTIONS: counseling@nctc.edu

COLLEGE FOR ALL TEXANS: www.collegeforalltexans.com

TEXAS COMMON COURSE NUMBERING SYSTEM (TCCNS): www.tccns.org

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR

CONSTRUCTION MANAGEMENT/TECHNOLOGY MAJORS

The following is a recommended sequence of courses for students intending on majoring in a ***Construction Management/ Technology field*** *at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC 1300	Learning Frameworks	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	MATH 1316-Trigonometry or MATH 2412-Pre-Calculus**	3-4
Elective	ACCT2301-Principles of Accounting I*	3
		15-16
SECOND SEMESTER		
ENGL 2311	Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
ARTS Core	MUSI 1306 or other Creative Arts core	3
Elective	MATH 2413-Calculus I*	4
1st LAB SCIENCE Core	CHEM 1411-General Chem. I**	4
		17
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1315 or 1321	Public Speaking or Business and Professional Speech	3
SOCIAL/BEHAV Core	ECON2302-Microeconomics*	3
Elective	MATH 2414-Calculus II*	4
2nd LAB SCIENCE Core	PHYS 1401-College Physics I or PHYS 2425-Engineering Physics I**	4
		17
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
LANG/PHIL/CULTURE Core	PHIL 2306-Intro. to Ethics or other Lang/Phil/Culture core	3
Elective	MATH2415-Calc. III, MATH1342-Elem. Stats., CHEM 1412-General Chem. II, ECON2301-Macroeconomics, or ACCT2302-Principles of Accounting II*	3-4
Elective	PHYS1402-College Physics II or PHYS 2426-Engineering Physics II*	4
		13-14
	Total Credit Hours	**62-64***

**Consult with your intended transfer university AND an advisor to determine which NCTC courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA or AS degree are transferable.*

****MATH 1314 is a prerequisite to CHEM 1411, and MATH 1314 along with either MATH 1316 or 2412 are prerequisites to MATH 2413 and PHYS 1401 or 2425. Until you have completed these prerequisites you will be under a General Studies major (AA or AS degree). Some Math prerequisites may be satisfied by earning required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam. Please see an advisor at NCTC for details.**

TRANSFER RESOURCES

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR ***CRIMINAL JUSTICE MAJORS***

The following is a recommended sequence of courses for students intending on majoring in a ***Criminal Justice field*** *at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at NCTC.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC/PSYC 1300	Learning Frameworks	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	MATH 1314-College Alg., MATH 1332-Contemp. Math, or MATH 1342-Elem. Stats.**	3
SOCIAL/BEHAV Core	SOCI 1301-Intro. to Sociology	3
		15
SECOND SEMESTER		
ENGL 1302 or 2311	Composition II	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOG 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
Elective	CRIJ 1301-Intro. to Criminal Justice*	3
Elective	CRIJ 1306-Court Systems and Practices*	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
2nd LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOG 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
LANG/PHIL/CULTURE Core	PHIL 2306-Intro. to Ethics or other Lang/Phil/Culture core	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
Elective	CRIJ 1310-Fundamentals of Criminal Law*	3
		16
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
ARTS Core	ARTS 1301-Art Appreciation or other Creative Arts core	3
Elective	CRIJ 2313-Correctional Systems and Practices*	3
Elective	CRIJ 2328-Police Systems and Practices*	3
Elective	PSYC 2301-General Psychology*	3
		15
	Total Credit Hours	**62***

**Consult with your intended transfer university AND an advisor to determine which NCTC courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA or AS degree are transferable.*

**** Some Math prerequisites may be satisfied by earning required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam. Please see an advisor at NCTC for details.**

TRANSFER RESOURCES

NCTC COUNSELING AND ADVISING QUESTIONS: counseling@nctc.edu

COLLEGE FOR ALL TEXANS: www.collegeforalltexans.com

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE
SUGGESTED PATHWAY FOR
DRAMA/THEATER ARTS MAJORS

*The following is a recommended sequence of courses for students intending on majoring in a **Drama/Theater Arts field** at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC 1300	Learning Frameworks	3
GOVT 2305	American National Government	3
ARTS Core	DRAM 1310-Intro. to Theater	3
SPCH 1315	Public Speaking or other Speech core	3
		15
SECOND SEMESTER		
ENGL 1302 or 2311	Composition II or Technical Writing	3
GOVT 2306	Texas Government	3
MATH Core	MATH 1332-Contemporary Math or other Math core*	3
SOCIAL/BEHAV Core	SPCH 1318-Interpersonal Communication or other Social Science core*	3
Elective	DRAM 1351-Acting I*	3
Elective	DRAM 1330-Stagecraft I*	3
		18
THIRD SEMESTER		
HIST 1301	U.S. History I (up to 1865)	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOG 1401 or 1402, or HORT 1401 (options for non-Science majors)	4
LANG/PHIL/CULTURE Core	Philosophy, Humanities, English Literature, or other LPC core*	3
Elective	DRAM 1352-Acting II*	3
Elective	Foreign Language or other transferable Drama courses*	3-4
		16-17
FOURTH SEMESTER		
HIST 1302 or 2301	U.S. History II (1865 to present) or Texas History	3
2nd LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOG 1401 or 1402, or HORT 1401 (options for non-Science majors)	4
Elective	DRAM 2366-Intro. to Cinema*	3-4
Elective	Foreign Language or other transferable Drama courses*	3-4
		13-15
	Total Credit Hours	**62-65***

**Consult with your intended transfer university AND an advisor at NCTC to determine which courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA degree are transferable. Some universities may require 12-14 hours of a Foreign Language for Bachelor of Arts majors, or proven language proficiency through credits earned by CLEP testing.*

TRANSFER RESOURCES

NCTC COUNSELING AND ADVISING QUESTIONS: counseling@nctc.edu

COLLEGE FOR ALL TEXANS: www.collegeforalltexans.com

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR ***ENGLISH MAJORS***

The following is a recommended sequence of courses for students intending on majoring in an ***English field*** *at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
HIST 1301	U.S. History I (*up to 1865*)	3
EDUC 1300	Learning Frameworks	3
MATH Core	MATH 1332-Contemporary Math or other Math core	3
SOCIAL/BEHAV Core	SPCH 1318-Interpersonal Comm. or other Social Science core	3
		15
SECOND SEMESTER		
ENGL 1302	Composition II	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
ARTS Core	DRAM 1310-Intro. to Theater or other Creative Arts core	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
2nd LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
Elective	ENGL 2332-World Lit. I*	3
Elective	ENGL 2322-British Lit. I*	3
Elective	ENGL 2327-American Lit. I or Foreign Language I*	3-4
		16-17
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
Elective	ENGL 2333-World Lit. II *	3
Elective	ENGL 2323-British Lit. II*	3
Elective	ENGL 2328-American Lit. II or Foreign Language II*	3-4
		15-16
	Total Credit Hours	**62-64***

**Consult with your intended transfer university AND an advisor at NCTC to determine which courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA degree are transferable. Some universities may require 12-14 hours of a Foreign Language for Bachelor of Arts majors, or proven language proficiency through credits earned by CLEP testing.*

TRANSFER RESOURCES

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COLLEGE FOR ALL TEXANS: www.collegeforalltexans.com
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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR ***GOVERNMENT MAJORS***

The following is a recommended sequence of courses for students intending on majoring in a ***Government field*** *at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
HIST 1301	U.S. History I (*up to 1865*)	3
EDUC 1300	Learning Frameworks	3
MATH Core	MATH 1342-Elementary Statistics	3
SOCIAL/BEHAV Core	SOCI 1301-Intro. to Sociology or other Social Science core	3
		15
SECOND SEMESTER		
ENGL 1302 or 2311	Composition II or Technical Writing	3
HIST 1302	U.S. History II (*1865 to present*)	3
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
ARTS Core	DRAM 1310-Intro. to Theater or other Creative Arts core	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
2nd LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
Elective	HIST 2321-World Civilizations I*	3
Elective	PHIL 1301-Intro. to Philosophy or Foreign Language I*	3-4
		16-17
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
Elective	HIST 2322-World Civilizations II*	3
Elective	HIST 2301-Texas History*	3
Elective	ENGL 2327-American Literature I*	3
Elective	PHIL 2306-Intro. to Ethics or Foreign Language II*	3-4
		15-16
	Total Credit Hours	**62-64***

**Consult with your intended transfer university AND an advisor at NCTC to determine which courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA degree are transferable. Some universities may require 12-14 hours of a Foreign Language for Bachelor of Arts majors, or proven language proficiency through credits earned by CLEP testing.*

TRANSFER RESOURCES

NCTC COUNSELING AND ADVISING QUESTIONS: counseling@nctc.edu

COLLEGE FOR ALL TEXANS: www.collegeforalltexans.com

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR ***HEALTH SCIENCE MAJORS***

The following is a recommended sequence of courses for students intending on majoring in a ***Health Science field*** *at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC 1300	Learning Frameworks	3
ARTS Core	ARTS 1301-Art Appreciation or other Creative Arts core	3
MATH Core	MATH 1342-Elementary Statistics	3
Elective	BIOL 1322-Nutrition*	3
		15
SECOND SEMESTER		
ENGL 1302	Composition II	3
1st LAB SCIENCE Core	BIOL 2401-Anatatomy and Physiology I	4
SOCIAL/BEHAV Core	PSYC 2314-Lifespan Growth and Development	3
SPCH 1311, 1315 or 1321	Intro. to Comm., Public Speaking, or Business and Professional Speech	3
		13
THIRD SEMESTER		
GOVT 2305	American National Government	3
2nd LAB SCIENCE Core	BIOL 2402-Anatatomy and Physiology II	4
HIST 1301 or 2301	U.S. History I (*up to 1865*) or Texas History	3
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
Elective	PSYC 2301-General Psychology*	3
		16
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
HIST 1302	U.S. History II (*1865 to present*)	3
Elective	BIOL 2420-Microbiology*	4
Elective	CHEM 1406-Intro. to Chemistry or CHEM 1411-General Chemistry I**	4
Elective	HITT 1205-Med. Term., SOCI 1301-Intro. to Sociology, or other Math core*	2-3
		16-17
	Total Credit Hours	60-61*

**Consult with your intended transfer university AND an advisor to determine which NCTC courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA or AS degree are transferable.*

****MATH 1314 is a prerequisite to CHEM 1411. Credit for some Math prerequisites may be earned through meeting required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam. Please see an advisor at NCTC for details.**

TRANSFER RESOURCES

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR

HISTORY MAJORS

*The following is a recommended sequence of courses for students intending on majoring in a **History field** at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
HIST 1301	U.S. History I (*up to 1865*)	3
EDUC 1300	Learning Frameworks	3
MATH Core	MATH 1342-Elementary Statistics or MATH 1332-Contemporary Math	3
SOCIAL/BEHAV Core	SOCI 1301-Intro. to Sociology or other Social Science core	3
		15
SECOND SEMESTER		
ENGL 1302 or 2311	Composition II or Technical Writing	3
HIST 1302	U.S. History II (*1865 to present*)	3
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
ARTS Core	ARTS 1301-Art Appreciation or other Creative Arts core	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
2nd LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
Elective	HIST 2321-World Civilizations I*	3
Elective	PHIL 1301-Intro. to Philosophy or Foreign Language I*	3-4
		16-17
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
Elective	HIST 2322-World Civilizations II*	3
Elective	HIST 2301-Texas History*	3
Elective	ENGL 2327-American Literature I*	3
Elective	PHIL 2306-Intro. to Ethics or Foreign Language II*	3-4
		15-16
	Total Credit Hours	**62-64***

**Consult with your intended transfer university AND an advisor at NCTC to determine which courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA degree are transferable. Some universities may require 12-14 hours of a Foreign Language for Bachelor of Arts majors, or proven language proficiency through credits earned by CLEP testing.*

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NORTH CENTRAL TEXAS COLLEGE

NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR ***HUMANITIES MAJORS***

The following is a recommended sequence of courses for students intending on majoring in a ***Humanities field*** *at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
HIST 1301	U.S. History I (*up to 1865*)	3
EDUC 1300	Learning Frameworks	3
MATH Core	MATH 1342-Elementary Statistics or MATH 1332-Contemporary Math	3
SOCIAL/BEHAV Core	SOCI 1301-Intro. to Sociology or other Social Science core	3
		15
SECOND SEMESTER		
ENGL 1302 or 2311	Composition II or Technical Writing	3
HIST 1302	U.S. History II (*1865 to present*)	3
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
ARTS Core	ARTS 1301-Art Appreciation or other Creative Arts core	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
2nd LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
Elective	HIST 2321-World Civilizations I*	3
Elective	PHIL 1301-Intro. to Philosophy or Foreign Language I*	3-4
		16-17
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
Elective	ANTH 2351-Cultural Anthropology*	3
Elective	HIST 2322-World Civilizations II*	3
Elective	ENGL 2332-World Literature I*	3
Elective	DRAM 1310-Intro. to Theater or Foreign Language II*	3-4
		15-16
	Total Credit Hours	**62-64***

**Consult with your intended transfer university AND an advisor at NCTC to determine which courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA degree are transferable. Some universities may require 12-14 hours of a Foreign Language for Bachelor of Arts majors, or proven language proficiency through credits earned by CLEP testing.*

TRANSFER RESOURCES

NCTC COUNSELING AND ADVISING QUESTIONS: counseling@nctc.edu

COLLEGE FOR ALL TEXANS: www.collegeforalltexans.com

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR

KINESIOLOGY MAJORS

*The following is a recommended sequence of courses for students intending on majoring in a **Kinesiology field** at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

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FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
HIST 1301	U.S. History I (*up to 1865*)	3
EDUC 1300	Learning Frameworks	3
MATH Core	MATH 1342-Elementary Statistics	3
Elective	BIOL 1322-Nutrition*	3
		15
SECOND SEMESTER		
ENGL 1302 or 2311	Composition II or Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
1st LAB SCIENCE Core	BIOL 2401-Anatatomy and Physiology I*	4
SOCIAL/BEHAV Core	PSYC 2314-Lifespan Growth and Dev.	3
Elective	PHED 1301-Intro. to Physical Fitness/Sport*	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
2nd LAB SCIENCE Core	BIOL 2402-Anatatomy and Physiology II*	4
LANG/PHIL/CULTURE Core	ANTH 2346-General Anthropology or other Lang/Phil/Culture core	3
Elective	PHED 1308-Sports Officiating I or two PHED activity courses*	2-3
		15-16
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
ARTS Core	ARTS 1301-Art Appreciation or other Creative Arts core	3
Elective	PHED 1321-Coaching/Sports/Athletics I*	3
Elective	PHED 1338-Concepts of Fitness*	3
Elective	PHED 1309-Sports Officiating II or two PHED activity courses*	2-3
		14-15
	Total Credit Hours	**60-62***

**Consult with your intended transfer university AND an advisor at NCTC to determine which courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA degree are transferable. Some universities may require 12-14 hours of a Foreign Language for Bachelor of Arts majors, or proven language proficiency through credits earned by CLEP testing.*

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR

MATH MAJORS

*The following is a recommended sequence of courses for students intending on majoring in a **Math field** at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

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FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC 1300	Learning Frameworks	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	MATH2413-Calculus I**	4
Elective	COSC 1436-Programming Fundamentals I*	4
		17
SECOND SEMESTER		
ENGL 2311	Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
ARTS Core	MUSI 1306-Music Appreciation or other Creative Arts core	3
2nd MATH	MATH2414-Calculus II	4
1st LAB SCIENCE Core	PHYS 2425-Univ. Physics I**, CHEM1411-Gen. Chem. I**, BIOL 1406-Bio. for Science Majors I, GEOL1401-Earth Sciences I, or ASTR1403-Stars and Galaxies*	4
		17
THIRD SEMESTER		
GOVT 2305	American National Government	3
SOCIAL/BEHAV Core	ECON 2301-Macroeconomics or other Social Science core	3
Elective	MATH 2415-Calculus III*	4
2nd LAB SCIENCE	PHYS 2426-Univ. Physics II, CHEM1412-Gen. Chem. II, BIOL1407-Bio. for Science Majors II, GEOL1402-Earth Sciences II, or ASTR1404-Solar System*	4
		14
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
LANG/PHIL/CULTURE Core	PHIL 2306-Intro. to Ethics or other Lang/Phil/Culture core	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Professional Speech	3
Elective	MATH 2320-Differential Equations or MATH 2318-Linear Algebra*	3
		12
	Total Credit Hours	**60***

**Consult with your intended transfer university AND an advisor to determine which NCTC courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA or AS degree are transferable.*

****MATH 1314 is a prerequisite to CHEM 1411, and MATH 1314 along with either MATH 1316 or 2412 are prerequisites to MATH 2413 and PHYS 2425. Until you have completed these prerequisites you will be under a General Studies major (AA or AS degree). Some Math prerequisites may be satisfied by earning required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam. Please see an advisor at NCTC for details.**

TRANSFER RESOURCES

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR ***MUSIC MAJORS***

The following is a recommended sequence of courses for students intending on majoring in a ***Music field*** *at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC 1300	Learning Frameworks	3
GOVT 2305	American National Government	3
ARTS Core	MUSI 1306-Music Appreciation*	3
Elective	Foreign Language or other transferable Music course*	2-4
		14-16
SECOND SEMESTER		
ENGL 1302 or 2311	Composition II or Technical Writing	3
GOVT 2306	Texas Government	3
MATH Core	MATH 1332-Contemporary Math or other Math core*	3
SOCIAL/BEHAV Core	Intro. to Sociology, General Psychology, or Anthropology	3
Elective	Foreign Language or other transferable Music course*	2-4
		14-16
THIRD SEMESTER		
HIST 1301	U.S. History I (up to 1865)	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOG 1401 or 1402, or HORT 1401 (options for non-Science majors)	4
LANG/PHIL/CULTURE Core	Philosophy, Humanities, or English Literature*	3
Elective	MUSI 1311 and 1116-Music Theory and Sight Singing*	4
Elective	Foreign Language or other transferable Music course*	2-3
		16-17
FOURTH SEMESTER		
HIST 1302 or 2301	U.S. History II (1865 to present) or Texas History	3
2nd LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOG 1401 or 1402, or HORT 1401 (options for non-Science majors)	4
SPCH 1315	Public Speaking or other Speech core	3
Elective	MUSI 1312 and 1117-Music Theory II and Sight Singing II*	4
Elective	Foreign Language or other transferable Music course*	2-3
		16-17
	Total Credit Hours	**60-66***

**Consult with your intended transfer university AND an advisor at NCTC to determine which courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA degree are transferable. Some universities may require 12-14 hours of a Foreign Language for Bachelor of Arts majors, or proven language proficiency through credits earned by CLEP testing.*

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR ***PHILOSOPHY MAJORS***

The following is a recommended sequence of courses for students intending on majoring in a ***Philosophy field*** *at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

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FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
HIST 1301	U.S. History I (*up to 1865*)	3
EDUC 1300	Learning Frameworks	3
MATH Core	MATH 1342-Elementary Statistics or MATH 1332-Contemporary Math	3
SOCIAL/BEHAV Core	PSYC 2301-Intro. to Psychology or other Social Science core	3
		15
SECOND SEMESTER		
ENGL 1302 or 2311	Composition II or Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
LANG/PHIL/CULTURE Core	PHIL 1301-Intro. to Philosophy	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
ARTS Core	ARTS 1301-Art Appreciation or other Creative Arts core	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
2nd LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
Elective	PHIL 2306-Intro. to Ethics*	3
Elective	HUMA 1301-Intro. to Humanities or Foreign Language I*	3-4
		16-17
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
Elective	PHIL 2303-Intro. to Logic*	3
Elective	ANTH 2351-Cultural Anthropology*	3
Elective	ENGL 2332-World Literature I*	3
Elective	ARTS 1303-Art History I or Foreign Language II*	3-4
		15-16
	Total Credit Hours	**62-64***

**Consult with your intended transfer university AND an advisor at NCTC to determine which courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA degree are transferable. Some universities may require 12-14 hours of a Foreign Language for Bachelor of Arts majors, or proven language proficiency through credits earned by CLEP testing.*

TRANSFER RESOURCES

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR

PRE-MED/PRE-DENTAL/PRE-PHARMACY MAJORS

*The following is a recommended sequence of courses for students intending on majoring in a **Pre-Med/Pre-Dental/Pre-Pharmacy field** at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

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FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC 1300	Learning Frameworks	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	MATH 2413-Calculus I**	4
1st LAB SCIENCE Core	BIOL1406-Biology for Science Majors I or CHEM 1411-General Chem. I**	4
		17
SECOND SEMESTER		
ENGL 2311	Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
ARTS Core	MUSI 1306 or other Creative Arts core	3
SOCIAL/BEHAV Core	ANTH 2346-General Anthropology or other Social Science core	3
2nd LAB SCIENCE Core	BIOL1407-Biology for Science Majors II or CHEM 1412-General Chem. II*	4
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Professional Speech	3
3rd LAB SCIENCE	PHYS 1401-College Phys. I or PHYS 2425-Engineering Phys. I**	4
LANG/PHIL/CULTURE Core	PHIL 2306-Intro. to Ethics or other Lang/Phil/Culture core	3
Elective	CHEM 2423-Organic Chemistry I or BIOL 2401-Anat. and Phys. I*	4
		17
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
4th LAB SCIENCE	PHYS 1402-College Phys. I or PHYS 2426-Engineering Phys. II*	3
Elective	MATH 1342-Elementary Statistics*	3
Elective	CHEM 2425-Organic Chemistry II or BIOL 2402-Anat. and Phys. II*	4
		13
	Total Credit Hours	**63***

**Consult with your intended transfer university AND an advisor to determine which NCTC courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA or AS degree are transferable.*

****MATH 1314 is a prerequisite to CHEM 1411, and MATH 1314 along with either MATH 1316 or 2412 are prerequisites to MATH 2413 and PHYS 1401 or 2425. Until you have completed these prerequisites you will be under a General Studies major (AA or AS degree). Some Math prerequisites may be satisfied by earning required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam. Please see an advisor at NCTC for details.**

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR ***PSYCHOLOGY MAJORS***

The following is a recommended sequence of courses for students intending on majoring in a ***Psychology field*** *at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

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FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
HIST 1301	U.S. History I (*up to 1865*)	3
EDUC 1300	Learning Frameworks	3
MATH Core	MATH 1342-Elementary Statistics	3
SOCIAL/BEHAV Core	PSYC 2301-Intro. to Psychology	3
		15
SECOND SEMESTER		
ENGL 1302 or 2311	Composition II or Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
LANG/PHIL/CULTURE Core	PHIL 2306-Intro. to Ethics or other Lang/Phil/Culture core	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
ARTS Core	ARTS 1301-Art Appreciation or other Creative Arts core	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
2nd LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
Elective	PSYC 2314-Lifepsan Growth and Dev.*	3
Elective	SOCI 1301-Intro. to Sociology or Foreign Language I*	3-4
		16-17
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
Elective	PSYC 2319-Social Psychology*	3
Elective	PSYC 2320-Abnormal Psychology*	3
Elective	PSYC 2330-Biological Psychology*	3
Elective	SOCI 1306-Social Problems or Foreign Language II*	3-4
		15-16
	Total Credit Hours	**62-64***

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SUGGESTED PATHWAY FOR ***SOCIOLOGY MAJORS***

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FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
HIST 1301	U.S. History I (*up to 1865*)	3
EDUC 1300	Learning Frameworks	3
MATH Core	MATH 1342-Elementary Statistics	3
SOCIAL/BEHAV Core	SOCI 1301-Intro. to Sociology	3
		15
SECOND SEMESTER		
ENGL 1302 or 2311	Composition II or Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
ARTS Core	ARTS 1301-Art Appreciation or other Creative Arts core	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
2nd LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
Elective	SOCI 1306-Contemporary Social Problems*	3
Elective	PSYC 2301-Intro. to Psychology or Foreign Language I*	3-4
		16-17
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
Elective	SOCI 2301-Marriage and Family*	3
Elective	SOCI 2319-Minority Studies*	3
Elective	PHIL 2306-Intro. to Ethics*	3
Elective	ANTH 2351-Cultural Anthropology or Foreign Language II*	3-4
		15-16
	Total Credit Hours	**62-64***

**Consult with your intended transfer university AND an advisor at NCTC to determine which courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA degree are transferable. Some universities may require 12-14 hours of a Foreign Language for Bachelor of Arts majors, or proven language proficiency through credits earned by CLEP testing.*

TRANSFER RESOURCES

NCTC COUNSELING AND ADVISING QUESTIONS*:* counseling@nctc.edu

COLLEGE FOR ALL TEXANS: www.collegeforalltexans.com

TEXAS COMMON COURSE NUMBERING SYSTEM (TCCNS): www.tccns.org

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NCTC ASSOCIATE OF ARTS (AA) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR

VISUAL ARTS MAJORS

*The following is a recommended sequence of courses for students intending on majoring in a **Visual Arts field** at a Texas public university. The Associate of Arts (AA) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
HIST 1301	U.S. History I (*up to 1865*)	3
EDUC 1300	Learning Frameworks	3
MATH Core	MATH 1332-Contemporary Math	3
SOCIAL/BEHAV Core	SOCI 1301-Intro. to Sociology or other Social Science core	3
		15
SECOND SEMESTER		
ENGL 1302 or 2311	Composition II or Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
LANG/PHIL/CULTURE Core	PHIL 1301-Intro. to Philosophy or other Lang/Phil/Culture core	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOG 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
ARTS Core	ARTS 1301-Art Appreciation	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
2nd LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOG 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
Elective	ARTS 1316-Drawing I*	3
Elective	ARTS 1303-Art History I*	3
Elective	ARTS 1311-Design I or Foreign Language I*	3-4
		16-17
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
Elective	ARTS 1317-Drawing II*	3
Elective	ARTS 1304-Art History II*	3
Elective	ARTS 1312-Design II or Foreign Language II*	3-4
		15-16
	Total Credit Hours	**62-65***

**Consult with your intended transfer university AND an advisor at NCTC to determine which courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA degree are transferable. Some universities may require 12-14 hours of a Foreign Language for Bachelor of Arts majors, or proven language proficiency through credits earned by CLEP testing.*

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NCTC ASSOCIATE OF SCIENCE (AS) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR ***BIOLOGY MAJORS***

*The following is a recommended sequence of courses for students intending on majoring in a **Biology field** at a Texas public university. The Associate of Science (AS) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Science degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC 1300	Learning Frameworks	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	MATH 2412-Pre-Calculus	3
1st LAB SCIENCE Core	BIOL 1406-Biology for Science Majors I or BIOL 1411-Botany*	4
		16
SECOND SEMESTER		
ENGL 2311	Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
ARTS Core	MUSI 1306 or other Creative Arts core	3
2nd MATH	MATH 2413-Calculus I*	4
2nd LAB SCIENCE Core	BIOL 1407-Biology for Science Majors II or BIOL 1413-Zoology*	4
		17
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
SOCIAL/BEHAV Core	ANTH 2346-General Anthropology or other Social Science core	3
3rd LAB SCIENCE	CHEM 1411-General Chemistry I**	4
Elective	PHYS 1401-College Physics I or PHYS 2425-University Physics I**	4
		17
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
4th LAB SCIENCE	CHEM 1412-General Chemistry II	4
Elective	PHYS 1402-College Physics II or PHYS 2426-University Physics II*	4
		14
	Total Credit Hours	**64***

**Consult with your intended transfer university AND an advisor to determine which NCTC courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA or AS degree are transferable.*

****MATH 1314 is a prerequisite to CHEM 1411, and MATH 1314 along with either MATH 1316 or 2412 are prerequisites to MATH 2413 and PHYS 1401 or 2425. Until you have completed these prerequisites you will be under a General Studies major (AA or AS degree). Some Math prerequisites may be satisfied by earning required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam. Please see an advisor at NCTC for details.**

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NCTC ASSOCIATE OF SCIENCE (AS) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR ***CHEMISTRY MAJORS***

The following is a recommended sequence of courses for students intending on majoring in a ***Chemistry field*** *at a Texas public university. The Associate of Science (AS) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Science degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC 1300	Learning Frameworks	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	MATH2413-Calculus I**	3
1st LAB SCIENCE Core	CHEM 1411-General Chemistry I**	4
		16
SECOND SEMESTER		
ENGL 2311	Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
ARTS Core	MUSI 1306 or other Creative Arts core	3
2nd MATH	MATH 2414-Calculus II*	4
2nd LAB SCIENCE Core	CHEM 1412-General Chemistry II	4
		17
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
SOCIAL/BEHAV Core	ANTH 2346-General Anthropology or other Social Science core	3
3rd LAB SCIENCE	CHEM 2423-Organic Chemistry I	4
Elective	PHYS 1401-College Physics I or PHYS 2425-University Physics I**	4
		17
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
4th LAB SCIENCE	CHEM 2425-Organic Chemistry II	4
Elective	PHYS 1402-College Physics II or PHYS 2426-University Physics II*	4
		14
Total Credit Hours		**64***

**Consult with your intended transfer university AND an advisor to determine which NCTC courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA or AS degree are transferable.*

****MATH 1314 is a prerequisite to CHEM 1411, and MATH 1314 along with either MATH 1316 or 2412 are prerequisites to MATH 2413 and PHYS 1401 or 2425. Until you have completed these prerequisites you will be under a General Studies major (AA or AS degree). Some Math prerequisites may be satisfied by earning required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam. Please see an advisor at NCTC for details.**

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NCTC ASSOCIATE OF SCIENCE (AS) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR

ENGINEERING/PHYSICS MAJORS

*The following is a recommended sequence of courses for students intending on majoring in an **Engineering/Physics field** at a Texas public university. The Associate of Science (AS) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Science degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC 1300	Learning Frameworks	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	MATH2413-Calculus I**	4
1st LAB SCIENCE Core	CHEM 1411-General Chem. I**	4
		17
SECOND SEMESTER		
ENGL 2311	Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
ARTS Core	MUSI 1306 or other Creative Arts core	3
2nd MATH	MATH2414-Calculus II	4
2nd LAB SCIENCE Core	CHEM 1412-General Chem. II*	4
		17
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Professional Speech	3
SOCIAL/BEHAV Core	ANTH 2346-General Anthropology or other Social Science core	3
Elective	MATH2415-Calculus III*	4
3rd LAB SCIENCE	PHYS 2425-University Physics I or PHYS1401–College Physics I**	4
		17
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
LANG/PHIL/CULTURE Core	PHIL 2306-Intro. to Ethics or other Lang/Phil/Culture core	3
Elective	MATH 2318-Linear Alg., MATH 2420-Diff. Equations, or COSC 1436-Program. Fund.*	4
4th LAB SCIENCE	PHYS 2426-Engineering Physics II or PHYS1402-College Physics II	4
		14
	Total Credit Hours	**65***

**Consult with your intended transfer university AND an advisor to determine which NCTC courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA or AS degree are transferable.*

****MATH 1314 is a prerequisite to CHEM 1411, and MATH 1314 along with either MATH 1316 or 2412 are prerequisites to MATH 2413 and PHYS 1401 or 2425. Until you have completed these prerequisites you will be under a General Studies major (AA or AS degree). Some Math prerequisites may be satisfied by earning required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam. Please see an advisor at NCTC for details.**

TRANSFER RESOURCES

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NCTC ASSOCIATE OF SCIENCE (AS) GENERAL STUDIES DEGREE

SUGGESTED PATHWAY FOR
PRE-VETERINARIAN MAJORS

*The following is a recommended sequence of courses for students intending on majoring in a **Pre-Veterinarian field** at a Texas public university. The Associate of Science (AS) General Studies degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Science degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
EDUC 1300	Learning Frameworks	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	MATH 1316-Trigonometry or MATH2412-Pre-Calculus**	3-4
1st LAB SCIENCE Core	CHEM1411-Chemistry I**	4
2st LAB SCIENCE Core	BIOL 1406-Biology for Science Majors I or BIOL 1411-Botany*	4
		17-18
SECOND SEMESTER		
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
ARTS Core	MUSI 1306 or other Creative Arts core	3
2nd MATH	MATH 2413-Calculus I	3-4
3rd LAB SCIENCE	CHEM 1412-General Chem. II*	4
4th LAB SCIENCE	BIOL 1407-Biology for Science Majors II or BIOL 1413-Zoology*	4
		17-18
THIRD SEMESTER		
ENGL 1301	Composition I	3
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
SOCIAL/BEHAV Core	SOCI 1301 or other Social Science core	3
Elective	PHYS 1401-General Physics I** or CHEM 2423-Organic Chemistry I*	4
		17
FOURTH SEMESTER		
ENGL 2311	Technical Writing	3
GOVT 2306	Texas Government	3
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
Elective	PHYS 1402-General Physics II or CHEM 2425-Organic Chemistry II*	4
		13
	Total Credit Hours	**64-66***

**Consult with your intended transfer university AND an advisor to determine which NCTC courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AA or AS degree are transferable.*

****MATH 1314 is a prerequisite to MATH 1316, MATH 2412, and CHEM 1411, and MATH 1314 along with either MATH 1316 or 2412 are prerequisites to MATH 2413 and PHYS 1401 or 2425. Until you have completed these prerequisites you will be under a General Studies major (AA or AS degree). Some Math prerequisites may be satisfied by earning required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam. Please see an advisor at NCTC for details.**

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NCTC ASSOCIATE OF ARTS IN TEACHING (AAT) DEGREE

SUGGESTED PATHWAY FOR

BIOLOGY/ 7-12, TEACHER CERTIFICATION MAJORS

*The following is a recommended sequence of courses for students intending on majoring in **Biology/ 7-12, Teacher Certification** at a Texas public university. The Associate of Arts in Teaching (AAT) degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts in Teaching degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC 1300	Learning Frameworks	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	MATH 1316-Trigonometry or MATH 2412-Pre-Calculus**	3
1st LAB SCIENCE Core	BIOL 1406-Bio. for Science Majors I	4
		16
SECOND SEMESTER		
ENGL 2311	Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
MATH Elective	MATH 2413-Calculus I*	4
2nd LAB SCIENCE Core	BIOL 1407-Bio. for Science Majors II	4
Elective	EDUC 1301-Intro. to the Teaching Profession*	3
		17
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
SOCIAL/BEHAV Core	SOCI 1301-Intro. to Sociology or other Social Science core*	3
3rd LAB SCIENCE Elec.	CHEM 1411-General Chemistry I**	4
Elective	EDUC 2301-Intro. to Special Populations*	3
		16
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
ARTS Core	MUSI 1306-Music Appreciation or other Creative Arts core	3
4th LAB SCIENCE Elec.	CHEM 1412-General Chemistry II*	4
		13
	Total Credit Hours	**62***

**Consult with your intended transfer university AND an advisor at NCTC to determine which courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AAT degree are transferable.*

****MATH 1314 is a prerequisite to MATH 1316, MATH 2412, and CHEM 1411. Some Math prerequisites may be satisfied by earning required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam.**
Please see an advisor at NCTC for details.

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NCTC ASSOCIATE OF ARTS IN TEACHING (AAT) DEGREE

SUGGESTED PATHWAY FOR

CHEMISTRY/ 7-12, TEACHER CERTIFICATION MAJORS

*The following is a recommended sequence of courses for students intending on majoring in **Chemistry/ 7-12, Teacher Certification** at a Texas public university. The Associate of Arts in Teaching (AAT) degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts in Teaching degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC 1300	Learning Frameworks	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	MATH 1316-Trigonometry or MATH 2412-Pre-Calculus**	3
1st LAB SCIENCE Core	CHEM 1411-General Chemistry I**	4
		16
SECOND SEMESTER		
ENGL 2311	Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
MATH Elective	MATH 2413-Calculus I*	4
2nd LAB SCIENCE Core	CHEM 1412-General Chemistry II*	4
Elective	EDUC 1301-Intro. to the Teaching Profession*	3
		17
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
SOCIAL/BEHAV Core	SOCI 1301-Intro. to Sociology or other Social Science core*	3
3rd LAB SCIENCE Elec.	CHEM 2423-Organic Chemistry I or PHYS 1401-College Physics I*	4
Elective	EDUC 2301-Intro. to Special Populations*	3
		16
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
ARTS Core	MUSI 1306-Music Appreciation or other Creative Arts core	3
4th LAB SCIENCE Elec.	CHEM 2425-Organic Chemistry II or PHYS 1402-College Physics II*	4
		13
	Total Credit Hours	**62***

**Consult with your intended transfer university AND an advisor at NCTC to determine which courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AAT degree are transferable.*

****MATH 1314 is a prerequisite to MATH 1316, MATH 2412, and CHEM 1411. Some Math prerequisites may be satisfied by earning required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam.**
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NCTC ASSOCIATE OF ARTS IN TEACHING (AAT) DEGREE

SUGGESTED PATHWAY FOR

ENGLISH/ 7-12, TEACHER CERTIFICATION MAJORS

*The following is a recommended sequence of courses for students intending on majoring in **English/ 7-12, Teacher Certification** at a Texas public university. The Associate of Arts in Teaching (AAT) degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts in Teaching degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC 1300	Learning Frameworks	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	MATH 1332-Contemporary Math*	3
SOCIAL/BEHAV Core	SPCH 1318-Interpersonal Comm. or other Social Science core*	3
		15
SECOND SEMESTER		
ENGL 1302	Composition II	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
ARTS Core	DRAM 1310-Intro. to Theater or other Creative Arts core	3
Elective	EDUC 1301-Intro. to the Teaching Profession*	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
2nd LAB SCIENCE	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
Elective	ENGL 2327-American Lit. I or Foreign Language I*	3-4
Elective	ENGL 2322-British Lit. I*	3
Elective	EDUC 2301-Intro. to Special Populations*	3
		15-16
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
SPCH 1311, 1315 or 1321	Intro. to Comm., Public Speaking, or Business and Professional Speech*	3
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
Elective	ENGL 2328-American Lit. II or Foreign Language II*	3-4
Elective	ENGL 2323-British Lit. II*	3
		15-16
	Total Credit Hours	**61-63***

**Consult with your intended transfer university AND an advisor at NCTC to determine which courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AAT degree are transferable. Some universities may require 12-14 hours of a Foreign Language for Bachelor of Arts majors, or proven language proficiency through credits earned by CLEP testing.*

TRANSFER RESOURCES

NCTC COUNSELING AND ADVISING QUESTIONS: counseling@nctc.edu

COLLEGE FOR ALL TEXANS: www.collegeforalltexans.com

TEXAS COMMON COURSE NUMBERING SYSTEM (TCCNS): www.tccns.org

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NCTC ASSOCIATE OF ARTS IN TEACHING (AAT) DEGREE

SUGGESTED PATHWAY FOR

HISTORY/ 7-12, TEACHER CERTIFICATION MAJORS

*The following is a recommended sequence of courses for students intending on majoring in **History/ 7-12, Teacher Certification** at a Texas public university. The Associate of Arts in Teaching (AAT) degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts in Teaching degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

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FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
HIST 1301	U.S. History I (*up to 1865*)	3
EDUC/PSYC 1300	Learning Frameworks	3
MATH Core	MATH 1342-Elementary Stats. or MATH 1332-Contemporary Math	3
SOCIAL/BEHAV Core	SOCI 1301-Intro. to Sociology	3
		15
SECOND SEMESTER		
2nd ENGL Core	ENGL 1302-Composition II or ENGL 2311-Technical Writing	3
HIST 1302	U.S. History II (*1865 to present*)	3
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
ARTS Core	ARTS 1301-Art Appreciation or other Creative Arts core	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
2nd LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
Elective	HIST 2321-World Civilizations I or Foreign Language I*	3-4
Elective	EDUC 1301-Intro. to the Teaching Profession*	3
		16-17
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
Elective	HIST 2322-World Civilizations II*	3
Elective	HIST 2301-Texas History or Foreign Language II*	3-4
Elective	EDUC 2301-Intro. to Special Populations*	3
Elective	ENGL 2327-American Literature I*	3
		15-16
	Total Credit Hours	**62-64***

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NCTC ASSOCIATE OF ARTS IN TEACHING (AAT) DEGREE

SUGGESTED PATHWAY FOR

INTERDISCIPLINARY STUDIES/ EC-6 & 4-8 MAJORS

The following is a recommended sequence of courses for students intending on majoring in ***Interdisciplinary Studies/Early Childhood (EC-6 & 4-8)*** *at a Texas public university. The Associate of Arts in Teaching (AAT) degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts in Teaching degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

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FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC 1300	Learning Frameworks	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	MATH 1314-College Algebra	3
SOCIAL/BEHAV Core	SOCI 1301-Intro. to Sociology or other Social Science core*	3
		15
SECOND SEMESTER		
ENGL 1302 or 2311	Composition II or Technical Writing*	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History*	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, PHYS 1415, GEOL 1401 or 1402*	4
Elective	MATH 1350-Mathematics for Teachers I**	3
Elective	EDUC 1301-Intro. to the Teaching Profession*	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
2nd LAB SCIENCE Core	BIOL 1408 or 2406, PHYS 1415, GEOL 1401 or 1402*	4
LANG/PHIL/CULTURE Core	ENGL 2327-American Lit. I, ENGL 2332-World Lit. I, or other LPC core	3
Elective	MATH 1351-Mathematics for Teachers II*	3
Elective	EDUC 2301-Intro. to Special Populations*	3
		16
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
ARTS Core	ARTS 1301-Art Appreciation or other Creative Arts core*	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech*	3
3rd LAB SCIENCE Elec.	BIOL 1408 or 2406, PHYS 1415, GEOL 1401 or 1402*	4
		13
	Total Credit Hours	**60***

**Consult with your intended transfer university AND an advisor at NCTC to determine which courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AAT degree are transferable.*

*****MATH 1314-College Algebra is a prerequisite to MATH 1350-Mathematics for Teachers I.***

TRANSFER RESOURCES

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NCTC ASSOCIATE OF ARTS IN TEACHING (AAT) DEGREE

SUGGESTED PATHWAY FOR

KINESIOLOGY/ 7-12, TEACHER CERTIFICATION MAJORS

*The following is a recommended sequence of courses for students intending on majoring in **Kinesiology/ 7-12, Teacher Certification** at a Texas public university. The Associate of Arts in Teaching (AAT) degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts in Teaching degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

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FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC 1300	Learning Frameworks	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	MATH 1342-Elementary Statistics	3
Elective	BIOL 1322-Nutrition*	3
		15
SECOND SEMESTER		
2nd ENGL Core	ENGL 1302-Composition II or ENGL 2311-Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
1st LAB SCIENCE Core	BIOL 2401-Anatatomy and Physiology I*	4
SOCIAL/BEHAV Core	PSYC 2314-Lifespan Growth and Dev.*	3
Elective	PHED 1301-Intro. to Physical Fitness/Sport*	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
2nd LAB SCIENCE Core	BIOL 2402-Anatatomy and Physiology II*	4
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
Elective	PHED 1338-Concepts of Fitness*	3
Elective	EDUC 1301-Intro. to the Teaching Profession*	3
		16
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
ARTS Core	ARTS 1301-Art Appreciation or other Creative Arts core	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech*	3
Elective	EDUC 2301-Intro. to Special Populations*	3
Elective	PHED 1321-Theories of Coaching I*	3
		15
	Total Credit Hours	**61-63***

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NCTC ASSOCIATE OF ARTS IN TEACHING (AAT) DEGREE

SUGGESTED PATHWAY FOR

MATH/ 7-12, TEACHER CERTIFICATION MAJORS

*The following is a recommended sequence of courses for students intending on majoring in **Math/ 7-12, Teacher Certification** at a Texas public university. The Associate of Arts in Teaching (AAT) degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts in Teaching degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

Students placing at college preparatory levels will have additional courses to complete before taking eligible college-level courses in this sequence, and some courses may have pre-requisites; please check the course descriptions in the NCTC catalog. The number of courses taken each semester can also be adjusted as several core classes are offered during Summer and Mini-mesters; this sequence only takes into account Fall and Spring semesters. ***Depending on how many credit hours you have already attempted, all courses on this pathway may not be eligible for Financial Aid through NCTC.***

FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
EDUC 1300	Learning Frameworks	3
HIST 1301	U.S. History I (*up to 1865*)	3
MATH Core	MATH 2413-Calculus I**	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
		16
SECOND SEMESTER		
ENGL 2311	Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
1st MATH Elective	MATH 2414-Calculus II*	4
2nd LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
Elective	EDUC 1301-Intro. to the Teaching Profession*	3
		17
THIRD SEMESTER		
GOVT 2305	American National Government	3
SPCH 1315 or 1321	Public Speaking or Business and Professional Speech	3
SOCIAL/BEHAV Core	SOCI 1301-Intro. to Sociology or other Social Science core	3
Elective	MATH 2415-Calculus III*	4
Elective	EDUC 2301-Intro. to Special Populations*	3
		16
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
LANG/PHIL/CULTURE Core	HUMA 1301-Intro. to Humanities or other Lang/Phil/Culture core	3
ARTS Core	MUSI 1306-Music Appreciation or other Creative Arts core	3
Elective	MATH 2318-Linear Alg., MATH 2320-Diff. Equat., or other Lab Science core*	3-4
		12-13
	Total Credit Hours	**61-62***

**Consult with your intended transfer university AND an advisor at NCTC to determine which courses would satisfy both elective and core requirements for your major, and also how many credit hours beyond the 60 hours required for an AAT degree are transferable.*

****MATH 1314 along with either MATH 1316 or 2412 are prerequisites to MATH 2413. Until you have completed these prerequisites you will be under a General Studies major (AA or AS degree). Some Math prerequisites may be satisfied by earning required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam. Please see an advisor at NCTC for details.**

TRANSFER RESOURCES

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NCTC ASSOCIATE OF ARTS IN TEACHING (AAT) DEGREE

SUGGESTED PATHWAY FOR

VISUAL ARTS/ 7-12, TEACHER CERTIFICATION MAJORS

*The following is a recommended sequence of courses for students intending on majoring in **Visual Arts/ 7-12, Teacher Certification** at a Texas public university. The Associate of Arts in Teaching (AAT) degree is designed to transfer into a bachelor's degree at a four-year public university in the state of Texas. The transfer university is the final authority on determining if all the courses within the NCTC Associate of Arts in Teaching degree are transferable and applicable for an intended major, so students should consult with an advisor at the university level regarding all coursework to be completed at North Central Texas College.*

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FIRST SEMESTER		**CREDIT HOURS**
ENGL 1301	Composition I	3
HIST 1301	U.S. History I (*up to 1865*)	3
EDUC 1300	Learning Frameworks	3
MATH Core	MATH 1332-Contemporary Math	3
SOCIAL/BEHAV Core	SOCI 1301-Intro. to Sociology	3
		15
SECOND SEMESTER		
ENGL 1302 or 2311	Composition II or Technical Writing	3
HIST 1302 or 2301	U.S. History II (*1865 to present*) or Texas History	3
1st LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
ARTS Core	ARTS 1301-Art Appreciation	3
Elective	EDUC 1301-Intro. to the Teaching Profession*	3
		16
THIRD SEMESTER		
GOVT 2305	American National Government	3
2nd LAB SCIENCE Core	BIOL 1408 or 2406, CHEM 1406 or PHYS 1415, ASTR 1403 or 1404, GEOL 1401 or 1402, or HORT 1401 (*options for non-Science majors*)	4
Elective	ARTS 1316-Drawing I*	3
Elective	ARTS 1303-Art History I*	3
Elective	EDUC 2301-Intro. to Special Populations*	3
		16
FOURTH SEMESTER		
GOVT 2306	Texas Government	3
SPCH 1311, 1315 or 1321	Intro. to Communication, Public Speaking, or Business and Prof. Speech	3
LANG/PHIL/CULTURE Core	PHIL 1301-Intro. to Philosophy or other Lang/Phil/Culture core	3
Elective	ARTS 1317-Drawing II*	3
Elective	ARTS 1304-Art History II*	3
		15
	Total Credit Hours	**61-63***

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North Central Texas College Course Catalog

PSYC 2320 - ABNORMAL PSYCHOLOGY

This course provides an introduction to the psychological, biological, and socio-cultural factors involved in the development, diagnosis, and treatment of psychological disorders. It includes a review of the historical understanding of abnormal behavior and the development of modern diagnostic systems. It includes discussion of psychological research and practice as it relates to mental health and psychological functioning, as well as legal and ethical issues. PSYC 2320 is included in the Psychology Field of Study.

Upon successful completion, students will be able to:

- Discuss the historical antecedents to modern understandings of abnormal behavior.
- Identify and describe the major classes and characteristics of psychological disorders as presented in the Diagnostic and Statistical Manual (DSM).
- Describe the factors and theoretical perspectives related to the development and maintenance of different types of abnormal behavior.
- List the primary treatments for psychological disorders and discuss their effectiveness.
- Discuss the current research and methodological issues in the study of abnormal behavior.
- Discuss the legal and ethical issues associated with the treatment of and research related to abnormal behavior.
- Develop an understanding of how social and cultural factors impact the expression of psychological disorders.
- Examine the impact of biological factors on the development of psychological disorders.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- PSYC 2301 - GENERAL PSYCHOLOGY

Restrictions:

- Must meet TSI College Readiness Standard for Reading

OSHT 1313 - ACCIDENT PREVENTION, INSPECTION & INVESTIGATION

Provides a basis for understanding the nature of occupational hazard recognition, accident prevention, loss reduction, inspection techniques, and accident investigation analysis.

Upon successful completion, students will be able to:

- Describe the components of an effective accident investigation
- Analyze factors which contributed to accidents
- Recommend appropriate changes to prevent further accidents
- Explain the components of an effective safety inspection
- Make appropriate recommendations to correct hazards identified by the inspection

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

ACNT 2302 - ACCOUNTING CAPSTONE

Allows students to apply broad knowledge of the accounting profession through discipline specific projects involving the integration of individuals and teams performing activities to simulate workplace situations.

Upon successful completion, students will be able to:

- Complete the accounting cycle for service and merchandising businesses.
- Demonstrate computer skills related to accounting applications in business.
- Prepare financial reports;
- Communicate report findings in written and/or oral form.
- Solve complex accounting issues.
- Participate in research and discussion on accounting issues, trends, and/or situations.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Restrictions:

- Instructor approval required.

ACNT 2332 - ACCOUNTING INFORMATION SYSTEMS

A study of accounting information systems and related subsystems, including data collection, security, retrieval, manipulation, filtering and sorting of data.

Upon successful completion, students will be able to:

- Describe the purposes of an accounting information system.
- Apply concepts and terms that provide the foundation of accounting information systems.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ACCT 2302 - PRINCIPLES OF MANAGERIAL ACCOUNTING

This course is an introduction to the fundamental concepts of managerial accounting appropriate for all organizations. Students will study information from the entity's accounting system relevant to decisions made by internal managers, as distinguished from information relevant to users who are external to the company. The emphasis is on the identification and assignment of product costs, operational budgeting and planning, cost control, and management decision making. Topics include product costing methodologies, cost behavior, operational and capital budgeting, and performance evaluation.

Upon successful completion, students will be able to:

- Identify the role and scope of financial and managerial accounting and the use of accounting information in the decision making process of managers
- Define operational and capital budgeting, and explain its role in planning, control, and decision making
- Prepare an operating budget, identify its major components, and explain the interrelationships among its various components
- Explain methods of performance evaluation
- Use appropriate financial information to make operational decisions
- Demonstrate use of accounting data in the areas of product costing, cost behavior, cost control, and operational and capital budgeting for management decisions

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- ACCT 2301 - PRINCIPLES OF FINANCIAL ACCOUNTING

ACNT 1303 - INTRODUCTION TO ACCOUNTING I

A study of analyzing, classifying, and recording business transactions in a manual and computerized environment. Emphasis on understanding the complete accounting cycle and preparing financial statements, bank reconciliations and payroll.

Upon successful completion, students will be able to:

- Define accounting terminology
- Analyze and record business transactions in a manual and computerized environment
- Complete the accounting cycle
- Prepare financial statements
- Apply accounting concepts related to cash and payroll
- Prepare bank reconciliations
- Correct accounting errors

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ACNT 1311 - INTRODUCTION TO COMPUTERIZED ACCOUNTING

Introduction to utilizing the computer in maintaining accounting records with primary emphasis on a general ledger package.

Upon successful completion, students will be able to:

- Utilize an application software to perform accounting tasks
- Maintain records
- Prepare reports
- Analyze reports for a business entity
- Complete a comprehensive project
- Explain the components of general ledger software

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HART 2334 - ADVANCED AIR CONDITIONING CONTROLS

Theory and application of electrical control devices, electromechanical controls, and/or pneumatic controls.

Upon successful completion, students will be able to:

- Install and troubleshoot complex electrical control devices; control circuits
- Apply A/C control concepts
- Analyze the effects of smart energy networks and how they interface with HVAC control systems

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

BARB 2431 - ADVANCED BARBER STYLING I

Advanced skills in all areas of haircutting, hairstyling and skincare. Introduction to haircoloring techniques.

Upon successful completion, students will be able to:

- Perform advanced haircutting and hairstyling techniques
- Evaluate different skin types and skin disorders
- Demonstrate haircolor techniques
- Practice safety and sanitation

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 64.0

Restrictions:

- Texas Cosmetology Operator License

BARB 2441 - ADVANCED BARBER STYLING II

Continuation of Advanced Barber Styling I with further refinement of all skills and theory for licensure.

Upon successful completion, students will be able to:

- Perform advanced styling operations
- Apply massage manipulations to the neck, head, and face
- Explain the use of chemicals in hair coloring
- Perform chemical services
- Practice safety and sanitation

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 112.0

Restrictions:

- Texas Cosmetology Operator License

HALT 2331 - ADVANCED LANDSCAPE DESIGN

In-depth coverage of advanced practices in landscape planning for commercial and residential landscapes. Topics include advanced design analysis, architectural elements, space articulation, and land engineering concepts.

Upon successful completion, students will be able to:

- Design landscape plans including construction and planting details and specifications
- Produce a graphic drawing of a landscape

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ITSC 2325 - ADVANCED LINUX

Provides instruction in advance open-source Linux operating system. Develops directory services for clients, support users remotely, and install and configure network services.

Upon successful completion, students will be able to:

- Install, administer, and manage advanced network environment using a Linux system
- Demonstrate advanced skills and proficiency with Linux utilities and configurations
- Deploy secure networks
- Integrate Linux networks with existing networks

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSC 1316 - LINUX INSTALLATION AND CONFIGURATION

AGAH 2313 - PRINCIPLES OF FEEDS & FEEDING

Study of the role and application of feed nutrients and additives. Topics include comparative aspects of digestion, absorption, and metabolism of nutrients. Emphasis on identification of nutrient requirements and formulation of dietary feeding regimens.

Upon successful completion, students will be able to:

- Outline the roles and functions of feed nutrients and non-nutritive feed additives
- Describe and compare digestion, absorption, and metabolism
- Compute dietary feeding regimens
- Identify nutritional problems as related to digestive systems

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

AGCR 1371 - SUSTAINABLE AGRICULTURE

Introduction to history, principles, and practices of sustainable agriculture as applied to local and global agriculture. A comparison and evaluation of sustainability of conventional agricultural practices will be made from the environmental, economic, and social perspectives ("planet, profit, and people"). Case studies and other tools will be used to relate principles of sustainable agriculture to basic farming practices.

Upon successful completion, students will be able to:

- Describe and demonstrate various techniques and management practices used to optimize agriculture from an environmental, social, and financial perspective
- Identify environmental, social and financial factors which are important in both sustainable and conventional
- Express and discuss the importance of sustainable agriculture as it compares to conventional agriculture
- Utilize computer programs and agriculture related programs associated with this course and various aspects of the agriculture related industry
- Demonstrate the implementation of planning, establishing, and maintaining agricultural operations under sustainable practices

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0
Lab hours: 16.0

AGEQ 1315 - HORSE EVALUATION I

Instruction in evaluation and selection of horses based on breed and performance criteria. Topics include basic anatomy and its relation to function, breed type, and

characteristics, and standard performance classes. Emphasis will be given to breed standards and rules of judging performance horses.

Upon successful completion, students will be able to:

- Relate conformation to equine functions
- Prioritize and utilize criteria as related to evaluation and selection
- Employ appropriate terminology used in discussing evaluation and selection processes

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0
Lab hours: 16.0

AGEQ 1319 - WESTERN HORSEMANSHIP I

Instruction in basic horsemanship skills including handling, saddling, bridling, mounting, riding, grooming, safety, and basic health care. Emphasis will be given to proper riding techniques, use of aids and cues, and proper leg, seat, and hand position. NCTC School horse and appropriate tack will be provided for use.

Upon successful completion, students will be able to:

- Recognize and employ basic handling and riding safety practices
- Identify and care for equipment and tack
- Demonstrate proper leg, seat, and hand positions as they relate to riding techniques

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0
Lab hours: 16.0

AGEQ 1322 - FUNDAMENTALS OF RIDING INSTRUCTION

Methodologies of riding instruction. Includes safety, horsemanship, teaching techniques, group control, and professionalism.

Upon successful completion, students will be able to:

- Develop teaching techniques in riding instruction
- Implement safe practices
- Evaluate risk management factors
- Demonstrate effective communication skills

Grade Basis: L
Credit hours: 3.0

Lecture hours: 48.0

Restrictions:

- Course requires approval of instructor.

AGEQ 1350 - EQUINE REPRODUCTION

Reproductive anatomy, physiological functions, and common management practices related to equine reproductive facilities.

Upon successful completion, students will be able to:

- Identify equine reproductive organs and functions
- Relate endocrinology to the reproductive process
- Implement managerial practices designed to improve reproductive efficiency

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0
Lab hours: 16.0

AGEQ 1370 - LOCAL NEEDS - PRINCIPLES OF RANCH HORSE RIDING I

Instruction in the basic principles of Ranch Horse riding. To include, but not limited to handling, saddling, bridling, mounting, riding, grooming, safety, basic health care, basic rope handling, basic cow handling and tactics for competing in Ranch Horse events.

Upon successful completion, students will be able to:

- Recognize and employ basic handling and riding safety practices
- Identify and care for equipment and tack
- Demonstrate proper leg, seat, and hand positions as they relate to basic principles of Ranch Horse riding
- Identify core areas of focus for training the versatile ranch horse
- Generalize rules and procedures related to Ranch Horse competitions

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 48.0

Restrictions:

- Must have instructor approved personally owned horse to be in this course.

AGEQ 1371 - LOCAL NEEDS - PRINCIPLES OF RANCH HORSE RIDING II

Introduction to the advanced principles of Ranch Horse riding. To include, but not limited to handling, saddling, bridling, mounting, riding, grooming, safety, health care, advanced rope handling, advanced cow handling and tactics for competing in Ranch Horse events.

Upon successful completion, students will be able to:

- Assess and rate individual horses based upon their performance and abilities as a versatile ranch horse
- Interpret horse reaction to various headgear/bit selections and further use this information in selecting the best headgear & bit for each individual horse
- Propose and implement a conditioning and training schedule for their own horse
- Demonstrate proper and safe rope handling from horseback
- Exhibit proper use of the mechanical cow for training purposes
- Employ tactics facilitated in the course during the working of live cattle

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 48.0

Restrictions:

- Must have instructor approved personally owned horse to be in this course.

AGEQ 1411 - EQUINE SCIENCE I

An introduction to the horse industry. Includes history, organization and operation of equine enterprises, selection, breeds, breeding, reproduction, health, nutrition, management, and marketing.

Upon successful completion, students will be able to:

- Explain the historical significance of the horse to society
- Identify horse breeds
- Identify basic anatomy and physiological functions
- Outline managerial practices relevant to the horse industry

Grade Basis: L
Credit hours: 4.0
Lecture hours: 64.0

AGEQ 2310 - EQUINE BUSINESS MANAGEMENT

Management of the equine business. Includes record keeping, insurance and liability, show management, equine promotion and sales, and employer relationships.

Upon successful completion, students will be able to:

- Initiate equine business records
- Explain insurance and liability needs
- Outline and demonstrate the proper procedures for show management
- Summarize equine marketing
- Identify the socioeconomic factors involved in the equine industry

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0
Lab hours: 16.0

AGEQ 2311 - EQUINE SCIENCE II

Study of advanced concepts in horse production. Emphasis on management practices utilized in the horse industry.

Upon successful completion, students will be able to:

- Identify and assess needs in the production & management of horses
- Employ critical thinking skills in management decisions
- Implement management practices

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0
Lab hours: 16.0

Prerequisites:

- AGEQ 1411 - EQUINE SCIENCE I

AGEQ 2315 - HORSE EVALUATION II

Study of the advanced concepts in evaluation and selection of horses.

Upon successful completion, students will be able to:

- Evaluate conformation as it applies to equine functions
- Evaluate western and English performance classes
- Organize, apply, and defend criteria as related to the evaluation and selection of horses

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- AGEQ 1315 - HORSE EVALUATION I

Restrictions:

- Requires Instructor/Coach approval

AGEQ 2339 - WESTERN HORSEMANSHIP II

Instruction in advanced horsemanship skills including cues, lead changes, head-set, side-pass, and pivots. NCTC School horse and appropriate tack will be provided for use.

Upon successful completion, students will be able to:

- Demonstrate a balanced seat and posture in all natural gaits
- Maintain correct leads
- Develop and utilize proper cues

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0
Lab hours: 16.0

Prerequisites:

- AGEQ 1319 - WESTERN HORSEMANSHIP I

AGEQ 2371 - LOCAL NEEDS - ADVANCED RANCH HORSE RIDING

An advanced course in the principles and fundamentals of finishing and riding the versatile ranch horse; instruction will focus on the use of the horse to assist in the management of cattle as commonly utilized for both ranch work and cowhorse competitions. Topics will include reading cattle, roping, handling cattle on the end of the rope, sorting and control of an individual cow. Course will also include techniques for tuning and elevating the performance of finished horses in the area of cow work.

Upon successful completion, students will be able to:

- Demonstrate industry recognized training methods for finishing horses in the area of cow work
- Exhibit the ability to rope live cattle and properly handle cattle in a manner which is safe for both horse and rider

- Summarize the fundamentals to be employed when reading cattle for handling purposes
- Show the ability to handle and manipulate the movement of an individual cow
- Identify and appraise the characteristics of individual horses and their abilities when performing cow work
- Demonstrate progressive ability in completing a competitive cow horse pattern

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 48.0

Restrictions:

- Must have instructor approved personal horse to be in this course. NCTC School Horse is not provided.

AGEQ 2372 - LOCAL NEEDS - ADVANCED REINING

Advanced principles in training, working and showing reining horses will be taught. Topics include rules, judging, conditioning, and advanced showmanship. Students will also learn methods for keeping their horses healthy and in competitive condition during the rigors of traveling to and from shows. Showing in at least two competitions is required. Student must provide their own horse for training and or competition.

Upon successful completion, students will be able to:

- Demonstrate the ability to judge and properly score a reining horse in competition
- Explain and outline a proper conditioning routine for a horse that will be shown in advanced levels of reining competition
- Demonstrate advancement in riding skill by scoring higher in all required maneuvers performed in reining
- Explain areas of concern during hauling to competitions as well as strategies for addressing these concerns as it relates to horse health and competitive condition

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Restrictions:

- Must have instructor approved personal horse to be in this course. NCTC School Horse is not provided.

AGEQ 2373 - INTRODUCTION TO EQUINE VETERINARY TECHNOLOGY

Basic concepts of equine veterinary care will be taught. The course will be a survey of equine veterinary medicine from the physical exam to medical terminology, preventive medicine and pharmacology as well as basic principles of alternative therapies, diagnostic imagery, medical records and client communication.

Upon successful completion, students will be able to:

- Calculate correct drug dosage for frequently used equine pharmaceuticals
- Design a vaccination protocol for different types of equine operations
- Identify anatomic parts of the equine patient in medical terminology
- Interpret clinical pathology results
- Explain proper restraint methods of an equine patient for various veterinary procedures

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- AGEQ 1411 - EQUINE SCIENCE I
- AGEQ 2311 - EQUINE SCIENCE II

AGEQ 2374 - BASICS OF DRESSAGE

The fundamental principles of dressage will be addressed. Basic riding exercises and dressage movements will be introduced emphasizing horse and rider fitness, and the development of the equine athlete through the classical and sequential training scale of rhythm, relaxation, connection, impulsion, straightness, and finally collection. Western Dressage principles will also be discussed and use of a western, hunt seat, or traditional dressage saddle will be acceptable. NCTC School horse and appropriate tack will be provided for use. Use of personal horse and tack is accepted per instructor approval. Classic dressage saddles are not provided, but western and hunt seat saddles are available and acceptable for use in this class.

Upon successful completion, students will be able to:

- Demonstrate progressive ability to ride a horse forward with rhythm, relaxation, and connection, with the goal of achieving impulsion, straightness and finally collection through a variety of basic dressage movements. (USDF Pyramid of Training adapted from the German training scale)
- Understand and demonstrate elements of a balanced riding position and the coordination and timing of the aids. Circle of the Aids

- Exhibit ability to successfully complete an appropriate level Classical or Western Dressage test

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

AGEQ 2386 - INTERNSHIP - EQUINE SCIENCE

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. Each student will be placed in the horse industry under the supervision of a prominent person who specializes in the student's main areas of interest. The student's industry training will be supervised by the instructor as well as their immediate supervisor on the job. Internship is typically completed 8 weeks, full time hours, during the summer, or part time hours during the fall or spring semester. This course serves as the external or capstone experience.

Upon successful completion, students will be able to:

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry

Grade Basis: L
Credit hours: 3.0

Restrictions:

- Departmental approval required for registration in this course.

AGEQ 2401 - EQUINE BEHAVIOR & TRAINING II

A study of advanced concepts in equine behavioral patterns that is relevant to specific performance training strategies.

Upon successful completion, students will be able to:

- Identify appropriate equine training methods for specific results
- Identify equine behavioral patterns
- Implement appropriate equine training procedures for desired results

Grade Basis: L

Credit hours: 4.0
Lecture hours: 64.0

AGME 1307 - AGRICULTURE EQUIPMENT & TOOLS

Introduction to hand tool and shop equipment skills and safety.

Upon successful completion, students will be able to:

- Identify hand tools and shop equipment
- Demonstrate their applications, maintenance, and safe operational procedures

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

AGME 1315 - FARM & RANCH SHOP SKILLS

Study and application of shop skills used in agricultural processes including arc welding, oxyacetylene cutting and welding, drawing and planning projects, tool maintenance, metal working, woodworking, plumbing, and concrete.

Upon successful completion, students will be able to:

- Demonstrate oxyacetylene cutting procedures
- Demonstrate arc welding
- Identify shop tools
- Utilize shop plans
- Describe construction processes

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0
Lab hours: 16.0

AGMG 2301 - LIVESTOCK BUSINESS MANAGEMENT

Instruction in contracts, leases, laws and regulations, estate planning, and applications of personnel and management principles.

Upon successful completion, students will be able to:

- Discuss contract terms related to livestock and real estate
- Explain laws and regulations pertaining to the livestock industry
- Illustrate the importance of estate planning
- Compare the personnel and management techniques employed in the livestock industry

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

AGRI 1131 - THE AGRICULTURE INDUSTRY

Overview of agriculture and the American agricultural system, including an examination of career opportunities and requirements.

Upon successful completion, students will be able to:

- Explain the history and importance of agriculture.
- Identify the various industries of agriculture.
- Assess careers in agriculture and related educational requirements.
- Apply verbal and written communication skills in agricultural contexts.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 32.0

AGRI 1309 - COMPUTERS IN AGRICULTURE

Survey of the use of computers in agricultural applications. Lab fees apply

Upon successful completion, students will be able to:

- Demonstrate a basic understanding and use of word processing, spreadsheet, presentation, and communication software in agriculture
- Identify common uses of computers in agriculture
- Demonstrate appropriate use of the internet for agricultural purposes

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

AGRI 1325 - MARKETING OF AGRICULTURE PRODUCTS

Essential marketing functions in the movement of agricultural commodities and products from producer to consumer.

Upon successful completion, students will be able to:

- Explain the essential marketing functions of buying, selling, transporting, storing, financing, standardizing, pricing, and risk bearing
- Apply economic principles to the marketing of agricultural products
- Identify alternatives in marketing of agricultural commodities/products

- Examine the structure of agricultural markets

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

AGRI 1407 - AGRONOMY

Principles and practices in the development, production, and management of field crops including plant breeding, plant diseases, soils, insect control, and weed control. Laboratory activities will reinforce the fundamental principles and practices in the development, production, and management of field crops including growth and development, climate, plant requirements, pest management, and production methods. Lab fees apply

Upon successful completion, students will be able to:

- Summarize the role of climate and geography in present and past crop production
- Explain the growth and development of crops
- Analyze the impact of climate on crops
- Assess the interactions of soils, water, and fertility on crop production
- Contrast methods of pest management in crop production
- Differentiate production methods based on geography and crop selection
- Apply scientific reasoning to investigate questions and utilize scientific and agronomic tools to collect and analyze data and demonstrate methods
- Use critical thinking and scientific problem-solving to make informed decisions
- Communicate effectively the results of scientific investigations
- Summarize the role of climate and geography in present and past crop production

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

AGRI 1419 - INTRODUCTORY ANIMAL SCIENCE

Scientific animal production and the importance of livestock and meat industries. Selection, reproduction, nutrition, management, and marketing of livestock. Laboratory activities will reinforce scientific animal production and the importance of livestock and meat industries. Selection, reproduction, nutrition, management, and marketing of livestock. Lab fees apply

Upon successful completion, students will be able to:

- Explain the role of animal agriculture in providing benefits for mankind
- Identify common livestock breeds and classes
- Define terminology specific to animal science disciplines

- Demonstrate understanding of fundamental animal science principles including selection, reproduction, nutrition, and health
- Apply animal science principles by solving common problems
- Identify animal issues of interest to society, and related responsibilities
- Apply scientific reasoning to investigate questions and utilize animal science tools to collect and analyze data and demonstrate methods
- Use critical thinking and scientific problem-solving to make informed decisions
- Communicate effectively the results of scientific investigations

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

AGRI 2303 - AGRICULTURAL CONSTRUCTION I

Selection, use, and maintenance of hand and power tools; arc and oxy-acetylene welding; and construction materials and principles.

Upon successful completion, students will be able to:

- Demonstrate proper safety procedures in an agricultural construction laboratory
- Determine the proper usage of common hand and power tools
- Demonstrate principles of project layout (e.g. measurements, squaring, leveling)
- Demonstrate proper use of metal cutting and welding equipment
- Apply basic wiring and plumbing techniques
- Illustrate the principles of surveying and concrete layout

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

AGRI 2317 - INTRODUCTION TO AGRICULTURAL ECONOMICS

Fundamental economic principles and their application in the agricultural industry.

Upon successful completion, students will be able to:

- Describe fundamental macro- and micro-economic principles
- Apply economic principles to agricultural production, marketing, and consumption
- Describe the different agricultural economics fields (e.g. food industry, demand theory, supply theory, competitive environments)

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

AGRI 2321 - LIVESTOCK EVALUATION I

Evaluation and grading of market cattle, swine, sheep, and goats and their carcasses and wholesale cuts. Emphasis will be placed on value determination. Selection and evaluation of breeding cattle, sheep, swine, and goats with emphasis on economically important traits.

Upon successful completion, students will be able to:

- Accurately evaluate and grade meat animals (cattle, swine, sheep, and goats), their carcasses, and wholesale cuts according to USDA and industry standards
- Determine market value for meat animals, carcasses, and whole cuts
- Evaluate and select breeding animals based upon their economic potential in common production scenarios
- Apply knowledge of both subjective and objective techniques, tools, and information in order to make evaluation, grading, and selection decisions in practical production scenarios

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

AGRI 2330 - WILDLIFE CONSERVATION & MANAGEMENT

Principles and practices used in the production and improvement of wildlife resources. Aesthetic, ecological, and recreational uses of public and private lands.

Upon successful completion, students will be able to:

- Explain basic ecological principles of population dynamics, habitat, succession, and ecosystems
- Describe how these ecological principles can be applied to manage wildlife populations and habitats
- Contrast wildlife management strategies for different purposes (i.e. recreation, conservation, and preservation)
- Use critical thinking and scientific problem-solving to make informed decisions about wildlife and natural resources management strategies
- Discuss the impact of current trends and societal issues on wildlife and increased demands on natural resources

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

AGMG 2316 - AGRICULTURAL FINANCE

Examination of the acquisition and use of capital in agriculture. Topics include fundamental record-keeping principles, financial statements, cash flow, and other instruments of financial analysis.

Upon successful completion, students will be able to:

- Describe the acquisition and use of capital
- Demonstrate record keeping principles
- Analyze financial statements

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

AGAH 1343 - ANIMAL HEALTH

An overview of anatomy and physiology as it relates to animal health. Topics include disease symptoms, basic immunology, diagnosis, prevention, and control of infectious and non-infectious diseases of animals.

Upon successful completion, students will be able to:

- Summarize the importance of livestock diseases and animal health
- Diagnose symptoms and identify causes of various animal diseases
- Implement preventative and treatment methods for various animal diseases

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

AGAH 1347 - ANIMAL REPRODUCTION

Study of organs, functions, endocrinology, and common management practices related to reproduction.

Upon successful completion, students will be able to:

- Identify reproductive organs and functions
- Relate endocrinology to the reproductive process
- Implement managerial practices designed to improve reproductive efficiency.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

ANTH 2346 - GENERAL ANTHROPOLOGY

The study of human beings, their antecedents and related primates, and their cultural behaviors and institutions. Introduces the major sub-fields: physical and cultural anthropology, archaeology, linguistics, their applications, and ethics in the discipline. Meets NCTC Core Curriculum Requirements

Upon successful completion, students will be able to:

- Describe the key concepts and methods of anthropology
- Compare and contrast the sub-fields of anthropology, including but not limited to physical anthropology, cultural anthropology, and archaeology
- Demonstrate an understanding of anthropological approaches to human diversity

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading

ANTH 2351 - CULTURAL ANTHROPOLOGY

The study of human cultures. Topics may include social organization, institutions, diversity, interactions between human groups, and ethics in the discipline. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Describe key concepts and methods of cultural anthropology.
- Explain the concept of culture, cultural diversity, and cultural change.
- Demonstrate how anthropological concepts apply to addressing human and global challenges.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading

ARTC 1302 - DIGITAL IMAGING I (PHOTOSHOP)

Digital Imaging using raster image editing and/or image creation software: scanning, resolution, file formats, output devices, color systems, and image-acquisitions.

Upon successful completion, students will be able to:

- Identify terminology, advantages and limitations of image editing software
- Distinguish bit-mapped resolutions for image acquisitions and output devices
- Use digital editing and painting tools
- Use basic half-tone theory in production of images, manipulate, create, and edit digital images for print and for web
- Specify appropriate file formats

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ARTC 1325 - INTRODUCTION TO COMPUTER GRAPHICS

A survey of design concepts, terminology, processes, and procedures. Topics include computer graphics hardware, digital images, digital publishing, vector-based graphics, and interactive multimedia.

Upon successful completion, students will be able to:

- Define computer terminology
- Identify peripherals
- Demonstrate page layout, multimedia, and peripherals software use

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ARTS 1301 - ART APPRECIATION

A general introduction to the visual arts designed to create an appreciation of the vocabulary, media, techniques, and purposes of the creative process. Students will critically interpret and evaluate works of art within formal, cultural, and historical contexts. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Apply art terminology as it specifically relates to works of art.
- Demonstrate knowledge of art elements and principles of design.
- Differentiate between the processes and materials used in the production of various works of art.
- Critically interpret and evaluate works of art.
- Demonstrate an understanding of the impact of arts on culture.

Grade Basis: L
Credit hours: 3.0

Lecture hours: 48.0

ARTS 1303 - ART HISTORY I: Prehistoric to 14th Century

A chronological analysis of the historical and cultural contexts of the visual arts from prehistoric times to the 14th century.

Upon successful completion, students will be able to:

- Identify and describe works of art based on their chronology and style, using standard categories and terminology.
- Investigate major artistic developments and significant works of art from prehistoric times to the 14th century.
- Analyze the relationship of art to history by placing works of art within cultural, historical, and chronological contexts.
- Critically interpret and evaluate works of art.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

ARTS 1304 - ART HISTORY II: 14th Century to Present

A chronological analysis of the historical and cultural contexts of the visual arts from the 14th century to the present day.

Upon successful completion, students will be able to:

- Identify and describe works of art based on their chronology and style, using standard categories and terminology.
- Investigate major artistic developments and significant works of art from the 14th century to the present day.
- Analyze the relationship of art to history by placing works of art within cultural, historical, and chronological contexts.
- Critically interpret and evaluate works of art.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

ARTS 1311 - DESIGN I: 2-Dimensional

An introduction to the fundamental terminology, concepts, theory, and application of two-dimensional design.

Upon successful completion, students will be able to:

- Identify and apply the elements of art and principles of two-dimensional design
- Employ discipline specific vocabulary in the evaluation of two-dimensional design problems.
- Demonstrate creative skill in aesthetic problem solving within assigned parameters
- Demonstrate an appropriate level of professional practice, including safety, craft and presentation.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

ARTS 1312 - DESIGN II: 3-Dimensional

An introduction to the fundamental terminology, concepts, theory, and application of three-dimensional design.

Upon successful completion, students will be able to:

- Identify and apply the elements of art and principles of three-dimensional design.
- Employ discipline specific vocabulary in the evaluation of three-dimensional design problems.
- Demonstrate creative skill in aesthetic problem solving within assigned parameters.
- Demonstrate an appropriate level of professional practice, including safety, craft and presentation.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

ARTS 1316 - DRAWING I

A foundation studio course exploring drawing with emphasis on descriptive, expressive, and conceptual approaches. Students will learn to see and interpret a variety of subjects while using diverse materials and techniques. Course work will facilitate a dialogue in which students will engage in critical analysis and begin to develop their understanding of drawing as a discipline.

Upon successful completion, students will be able to:

- Describe visual subjects through the use of accurate and sensitive observation
- Generate drawings that demonstrate descriptive, expressive, and conceptual approaches.
- Utilize varied materials and techniques with informed aesthetic and conceptual strategies.
- Demonstrate an appropriate level of professional practice, including safety, craft and presentation.
- Analyze and critique drawings verbally and/or in writing.

- Relate drawing to design, art history and contemporary artistic production.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

ARTS 1317 - DRAWING II

A studio course exploring drawing with continued emphasis on descriptive, expressive, and conceptual approaches. Students will further develop the ability to see and interpret a variety of subjects while using diverse materials and techniques. Course work will facilitate a dialogue in which students will employ critical analysis to broaden their understanding of drawing as a discipline.

Upon successful completion, students will be able to:

- Describe visual subjects through the use of accurate and sensitive observation.
- Generate drawings that demonstrate descriptive, expressive, and conceptual approaches with an increased focus on individual expression.
- Utilize varied materials and techniques, including color media, with informed aesthetic and conceptual strategies.
- Demonstrate an appropriate level of professional practice, including safety, craft and presentation.
- Analyze and critique drawings verbally and/or in writing
- Relate their drawings to historical and contemporary developments in the field.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

ASTR 1403 - STARS AND GALAXIES

Study of stars, galaxies, and the universe outside our solar system.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

ASTR 1404 - SOLAR SYSTEM

Study of the sun and its solar system, including its origin.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

CHEF 1301 - BASIC FOOD PREPARATION

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. Lab fees apply

Upon successful completion, students will be able to:

- Demonstrate skills in knife tool and equipment handling
- Operate equipment safely and correctly
- Demonstrate proficiency in dry and moist heat cooking methods
- Produce a variety of food products applying principles of food handling and preparation
- Implement professional standards in food production

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 48.0

HPRS 1204 - BASIC HEALTH PROFESSIONS SKILLS

A study of the concepts that serve as the foundation for health profession courses, including client care and safety issues, basic client monitoring, and health documentation methods.

Grade Basis: L
Credit hours: 2.0

HPRS 2210 - BASIC HEALTH PROFESSIONS SKILLS II

Builds on previously acquired knowledge and skills relevant to the professional development of the student. Lecture and simulated laboratory experiences prepare the student to perform patient care utilizing critical thinking and advanced clinical skills.

Grade Basis: L
Credit hours: 2.0

MCHN 1338 - BASIC MACHINE SHOP I

A course that introduces the student to machining fundamentals. The student will use basic machine tools including the lathe, milling machine, drill press, power saw, and bench grinder. Machine terminology, theory, math, part layout, and bench work using common measuring tools is included. Emphasis is placed on shop safety, housekeeping, and preventative maintenance.

Upon successful completion, students will be able to:

- Demonstrate set-up and use of the lathe, milling machine, drill press, power saw, and bench grinder applying good housekeeping, and proper safety
- Use precision instruments to perform bench work including part layout, drilling, reaming, taping, press fitting, location of hole centers and surfaces
- Set up power saws for cutoff operation
- Demonstrate tooling maintenance, and hazardous material handling
- Perform preventative maintenance
- Interpret blueprints

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 64.0

MCHN 1341 - BASIC MACHINE SHOP II

A continuation of Basic Machine Shop I.

Upon successful completion, students will be able to:

- Identify machine parts and their functions
- Select layout tools and techniques
- Define machine shop terminology
- Perform basic machine setups
- Calculate common shop formulas
- Perform semi-precision layout
- Demonstrate basic machine operations
- Apply proper measuring tools
- Demonstrate industry standard safety practices

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 64.0

BCIS 1305 - BUSINESS COMPUTER APPLICATIONS

Introduces and develops foundational skills in applying essential and emerging business productivity information technology tools. The focus of this course is on business productivity software applications, including word processing, spreadsheets, databases, presentation graphics, data analytics, and business-oriented utilization of the internet. BCIS 1305 is included in the Business Field of Study.

Upon successful completion, students will be able to:

- Describe the fundamentals of information technology concepts – hardware, software, security, and privacy.
- Demonstrate proper file management techniques to manipulate electronic files and folders in local, network, and online environments.
- Create business documents with word processing software using spelling and grammar check, format and layout, tables, citations, graphics, and mail merge.
- Create business documents and analyze data with spreadsheet software using (1) tables, sorting, filtering, charts and graphics, pivot tables, macros; (2) statistical, financial, logical and look-up functions and formulas; and (3) add-ins.
- Create business multimedia presentations with presentation software using templates, lists, groups, themes, colors, clip art, pictures, tables, transitions, animation, video, charts, and views.
- Create databases and manage data with database software using tables, fields, relationships, indexes, keys, views, queries, forms, reports, and import/export functions.
- Integrate business software applications.
- Use web-based technologies to conduct ethical business research.
- Use “goal seeking” and “what-if analysis” to solve problems and make adjustments/ recommendations in a business environment.

Grade Basis: AL
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

AGAH 1353 - BEEF CATTLE PRODUCTION

An overview of the beef cattle industry. Topics include the organization and operation of beef cattle enterprises, selection breeding, reproduction, health, nutrition, management, and marketing.

Upon successful completion, students will be able to:

- Summarize the importance of the beef cattle industry and its role in food production
- Identify beef cattle breeds, classes, and products
- Implement managerial practices designed to increase the efficiency of beef cattle production

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

BIOL 1322 - NUTRITION & DIET THERAPY I

This course introduces general nutritional concepts in health and disease and includes practical applications of that knowledge. Special emphasis is given to nutrients and

nutritional processes including functions, food sources, digestion, absorption, and metabolism. Food safety, availability, and nutritional information including food labels, advertising, and nationally established guidelines are addressed.

Upon successful completion, students will be able to:

- Apply nutritional knowledge to analyze personal dietary intakes, to plan nutritious meals using nationally established criteria to meet recommended goals, and to evaluate food labels and the validity of nutritional claims.
- Trace the pathways and processes that occur in the body to handle nutrients and alcohol through consumption, digestion, absorption, transport, metabolism, storage and waste excretion.
- Discuss functions, sources, deficiencies, and toxicities of macro- and micronutrients, including carbohydrates, lipids, proteins, water, vitamins, and minerals.
- Apply the concept of energy balance and its influences at the physical, emotional, societal, and cellular level to evaluate advantages and disadvantages of various methods used to correct energy imbalances.
- Utilize concepts of aerobic and anaerobic energy systems, and knowledge about macronutrients, vitamins, minerals, ergogenic, and supplements and relate them to fitness and health.
- Describe health and disease issues related to nutrition throughout the life cycle, including food safety, corrective dietary modifications, and the influence of specific nutrients on diseases.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

BIOL 1406 - BIOLOGY FOR SCIENCE MAJORS I

Fundamental principles of living organisms will be studied, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of cytology, reproduction, genetics, and scientific reasoning are included. This laboratory-based course accompanies Biology 1306, Biology for Science Majors I. Laboratory activities will reinforce the fundamental principles of living organisms, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Study and examination of the concepts of cytology, reproduction, genetics, and scientific reasoning are included.

Upon successful completion, students will be able to:

- Describe the characteristics of life.
- Explain the methods of inquiry used by scientists.
- Identify the basic requirements of life and the properties of the major molecules needed for life.
- Compare and contrast the structures, reproduction, and characteristics of viruses, prokaryotic cells, and eukaryotic cells.

- Describe the structure of cell membranes and the movement of molecules across a membrane.
- Identify the substrates, products, and important chemical pathways in metabolism.
- Identify the principles of inheritance and solve classical genetic problems.
- Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins
- Describe the unity and diversity of life and the evidence for evolution through natural selection.
- Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
- Use critical thinking and scientific problem solving to make informed decisions in the laboratory.
- Communicate effectively the results of scientific investigations.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 48.0

BIOL 1407 - BIOLOGY FOR SCIENCE MAJORS II

The diversity and classification of life will be studied, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals. Lab required. This laboratory-based course accompanies Biology 1307, Biology for Science Majors II. Laboratory activities will reinforce study of the diversity and classification of life, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals.

Upon successful completion, students will be able to:

- Describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
- Describe phylogenetic relationships and classification schemes.
- Identify the major phyla of life with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
- Describe basic animal physiology and homeostasis as maintained by organ systems.
- Compare different sexual and asexual life cycles noting their adaptive advantages.
- Illustrate the relationship between major geologic change, extinctions, and evolutionary trends
- Apply scientific reasoning to investigate questions, and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
- Use critical thinking and scientific problem solving to make informed decisions in the laboratory
- Communicate effectively the results of scientific investigations.

- Demonstrate knowledge of modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
- Distinguish between phylogenetic relationships and classification schemes

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 48.0

BIOL 1408 - BIOLOGY FOR NON-SCIENCE MAJORS I

Provides a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction. This laboratory-based course accompanies BIOL 1308, Biology for Non-Science Majors I. Laboratory activities will reinforce a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction.

Upon successful completion, students will be able to:

- Distinguish between prokaryotic, eukaryotic, plant and animal cells, and identify major cell structures.
- Identify stages of the cell cycle, mitosis (plant and animal), and meiosis.
- Interpret results from cell physiology experiments involving movement across membranes, enzymes, photosynthesis, and cellular respiration.
- Apply genetic principles to predict the outcome of genetic crosses and statistically analyze results.
- Describe karyotyping, pedigrees, and biotechnology and provide an example of the uses of each
- Identify parts of a DNA molecule, and describe replication, transcription, and translation.
- Analyze evidence for evolution and natural selection.
- Apply scientific reasoning to investigate questions, and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
- Use critical thinking and scientific problem solving to make informed decisions in the laboratory.
- Communicate effectively the results of scientific investigations.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

BIOL 1411 - GENERAL BOTANY

Fundamental biological concepts relevant to plant physiology, life cycle, growth and development, structure and function, and cellular and molecular metabolism. The

role of plants in the environment, evolution, and phylogeny of major plant groups, algae, and fungi. This course is intended for science majors. This laboratory-based course accompanies Biology 1311, General Botany. Laboratory activities will reinforce fundamental biological concepts relevant to plant physiology, life cycle, growth and development, structure and function, and cellular and molecular metabolism. The role of plants in the environment, evolution, and phylogeny of major plant groups, algae, and fungi.

Upon successful completion, students will be able to:

- Compare and contrast the structures, reproduction, and characteristics of plants, algae, and fungi.
- Describe the characteristics of life and the basic properties of substances needed for life.
- Identify the principles of inheritance and solve classical genetic problems.
- Describe phylogenetic relationships and classification schemes.
- Identify the major phyla of life with an emphasis on plants, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
- Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins
- Identify the substrates, products, and important chemical pathways in photosynthesis and respiration.
- Describe the unity and diversity of plants and the evidence for evolution through natural selection
- Compare different sexual and asexual life cycles noting their adaptive advantages.
- Describe the reasoning processes applied to scientific investigations and thinking.
- Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
- Use critical thinking and scientific problem solving to make informed decisions in the laboratory.
- Communicate effectively the results of scientific investigations.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

BIOL 1413 - GENERAL ZOOLOGY

Fundamental biological concepts relevant to animals, including systemics, evolution, structure, and function, cellular and molecular metabolism, reproduction, development, diversity, phylogeny, and ecology. This course is intended for science majors. This laboratory-based course accompanies Biology 1313, General Zoology. Laboratory activities will reinforce fundamental biological concepts relevant to animals, including systematics, evolution, structure and function, cellular and molecular metabolism, reproduction, development, diversity, phylogeny, and ecology.

Upon successful completion, students will be able to:

- Compare and contrast the structures, reproduction, and characteristics of animals.
- Describe the characteristics of life and the basic properties of substances needed for life.
- Identify the principles of inheritance and solve classical genetic problems.
- Describe phylogenetic relationships and classification schemes.
- Identify the major phyla of life with an emphasis on animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological 52 significance.
- Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
- Identify the substrates, products, and important chemical pathways in respiration.
- Describe the unity and diversity of animals and the evidence for evolution through natural selection.
- Describe the reasoning processes applied to scientific investigations and thinking.
- Describe basic animal physiology and homeostasis as maintained by organ systems.
- Describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
- Describe the structure of cell membranes and the movement of molecules across a membrane.
- Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
- Use critical thinking and scientific problem solving to make informed decisions in the laboratory.
- Communicate effectively the results of scientific investigations.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

BIOL 2401 - HUMAN ANATOMY AND PHYSIOLOGY I

Anatomy and Physiology I is the first part of a two-course sequence. It is a study of the structure and function of the human body including cells, tissues and organs of the following systems: integumentary, skeletal, muscular, nervous and special senses. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. The lab provides a hands-on learning experience for exploration of human system components and basic physiology. Systems to be studied include integumentary, skeletal, muscular, nervous, and special senses.

Upon successful completion, students will be able to:

- Use anatomical terminology to identify and describe locations of major organs of each system covered.
- Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.
- Describe the interdependency and interactions of the systems.
- Explain contributions of organs and systems to the maintenance of homeostasis.
- Identify causes and effects of homeostatic imbalances.
- Describe modern technology and tools used to study anatomy and physiology.
- Apply appropriate safety and ethical standards.
- Locate and identify anatomical structures.
- Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general lab ware, physiology data acquisition systems, and virtual simulations.
- Work collaboratively to perform experiments.
- Demonstrate the steps involved in the scientific method.
- Communicate results of scientific investigations, analyze data and formulate conclusions.
- Use critical thinking and scientific problem-solving skills, including, but not limited to, inferring, integrating, synthesizing, and summarizing, to make decisions, recommendations and predictions.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

BIOL 2402 - HUMAN ANATOMY AND PHYSIOLOGY II

Anatomy and Physiology II is the second part of a two-course sequence. It is a study of the structure and function of the human body including the following systems: endocrine, cardiovascular, immune, lymphatic, respiratory, digestive including nutrition, urinary including fluid and electrolyte balance, and reproductive including human development and genetics. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. The lab provides a hands-on learning experience for exploration of human system components and basic physiology. Systems to be studied include endocrine, cardiovascular, immune, lymphatic, respiratory, digestive including nutrition, urinary including fluid and electrolyte balance, and reproductive including human development and genetics.

Upon successful completion, students will be able to:

- Use anatomical terminology to identify and describe locations of major organs of each system covered.
- Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.
- Describe the interdependency and interactions of the systems.
- Explain contributions of organs and systems to the maintenance of homeostasis
- Identify causes and effects of homeostatic imbalances.

- Describe modern technology and tools used to study anatomy and physiology.
- Apply appropriate safety and ethical standards.
- Locate and identify anatomical structures.
- Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general lab ware, physiology data acquisition systems, and virtual simulations.
- Work collaboratively to perform experiments.
- Demonstrate the steps involved in the scientific method.
- Communicate results of scientific investigations, analyze data and formulate conclusions.
- Use critical thinking and scientific problem-solving skills, including, but not limited to, inferring, integrating, synthesizing, and summarizing, to make decisions, recommendations, and predictions.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

BIOL 2406 - ENVIRONMENTAL BIOLOGY

Principles of environmental systems and ecology, including biogeochemical cycles, energy transformations, abiotic interactions, symbiotic relationships, natural resources and their management, lifestyle analysis, evolutionary trends, hazards and ricks, and approaches to ecological research. This laboratory-based course accompanies Biology 2306, Environmental Biology. Laboratory activities will reinforce principles of environmental systems and ecology, including biogeochemical cycles, energy transformations, abiotic interactions, symbiotic relationships, natural resources and their management, lifestyle analysis, evolutionary trends, hazards and risks, and approaches to ecological research.

Upon successful completion, students will be able to:

- Explain the structure and impact of biogeochemical cycles.
- Describe energy transformations across trophic levels.
- Illustrate abiotic/biotic interactions and symbiotic relationships
- Identify various types of natural resources, human impact on these resources, and common resource management practices.
- Quantify and analyze the impact of lifestyle on the environment.
- Depict evolutionary trends and adaptations to environmental changes.
- Describe environmental hazards and risks and the social and economic ramifications
- Describe ecological and statistical techniques and approaches used in the study of environmental biology.
- Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
- Use critical thinking and scientific problem solving to make informed decisions in the laboratory.

- Communicate effectively the results of scientific investigations.
- Explain the structure and impact of biogeochemical cycles.
- Describe energy transformations across trophic levels.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

BIOL 2420 - MICROBIOLOGY - For Pre-Nursing or Health Science Majors

This course covers basic microbiology and immunology and is primarily directed at pre-nursing, pre-allied health, and non-science majors. It provides an introduction to historical concepts of the nature of microorganisms, microbial diversity, the importance of microorganisms and acellular agents in the biosphere, and their roles in human and animal diseases. Major topics include bacterial structure as well as growth, physiology, genetics, and biochemistry of microorganisms. Emphasis is on medical microbiology, infectious diseases, and public health. This course covers basics of culture and identification of bacteria and microbial ecology. This course is primarily directed at pre-nursing and other pre-allied health majors and covers basics of microbiology. Emphasis is on medical microbiology, infectious diseases, and public health.

Upon successful completion, students will be able to:

- Describe distinctive characteristics and diverse growth requirements of prokaryotic organisms compared to eukaryotic organisms.
- Provide examples of the impact of microorganisms on agriculture, environment, ecosystem, energy, and human health, including biofilms.
- Distinguish between mechanisms of physical and chemical agents to control microbial populations.
- Explain the unique characteristics of bacterial metabolism and bacterial genetics.
- Describe evidence for the evolution of cells, organelles, and major metabolic pathways from early prokaryotes and how phylogenetic trees reflect evolutionary relationships.
- Compare characteristics and replication of acellular infectious agents (viruses and prions) with characteristics and reproduction of cellular infectious agents (prokaryotes and eukaryotes).
- Describe functions of host defenses and the immune system in combating infectious diseases and explain how immunizations protect against specific diseases.
- Explain transmission and virulence mechanisms of cellular and acellular infectious agents.
- Use and comply with laboratory safety rules, procedures, and universal precautions.
- Demonstrate proficient use of a compound light microscope.

- Describe and prepare widely used stains and wet mounts, and discuss their significance in identification of microorganisms.
- Perform basic microbiology procedures using aseptic techniques for transfer, isolation and observation of commonly encountered, clinically significant bacteria.
- Use different types of bacterial culture media to grow, isolate, and identify microorganisms.
- Perform basic bacterial identification procedures using biochemical tests.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 48.0

BMGT 1327 - PRINCIPLES OF MANAGEMENT

Concepts, terminology, principles, theories, and issues in the field of management.

Upon successful completion, students will be able to:

- Explain various theories, processes, and functions of management
- Apply theories to a business environment
- Identify leadership roles in organizations
- Describe elements of the communication process

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

BMGT 2309 - LEADERSHIP

Leadership and its relationship to management. Prepares the student with leadership and communication skills needed to motivate and identify leadership styles.

Upon successful completion, students will be able to:

- Determine individual leadership styles
- Distinguish differences between leadership and management
- Explain the effects of leadership style in various organizational environments
- Apply principles of leadership

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

BUSG 1301 - INTRODUCTION TO BUSINESS

Fundamental business principles including structure, functions, resources, and operational processes.

Upon successful completion, students will be able to:

- Identify business functions of accounting, management, marketing, and economics
- Describe the relationships of social responsibility, ethics, and law
- Describe the scope of global business enterprise

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

BUSG 1304 - FINANCIAL LITERACY

A study of the financial principles when managing financial affairs. Includes topics such as budgeting, retirement, property ownership, savings, and investment planning.

Upon successful completion, students will be able to:

- Identify the concepts associated with the time value of money
- Identify the differences among various savings and investment programs and classes of securities
- Identify the options for insurance
- Describe retirement and estate planning techniques
- Explain owning versus renting real property
- Describe consumer protection legislation

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

BUSG 2305 - BUSINESS LAW & CONTRACTS

Principles of law which form the legal framework for business activity including applicable statutes, contracts, and agency.

Upon successful completion, students will be able to:

- Define fundamental legal terminology regarding contracts, torts, property, and wills.
- Differentiate between business ethics and legal issues.
- Explain required elements of torts, requirements of contracts, and various consumer laws as applied to business and individuals.

Grade Basis: L
Credit hours: 3.0

Lecture hours: 48.0

BUSG 2380 - COOPERATIVE EDUCATION - BUSINESS & COMMERCE, GENERAL

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.

Upon successful completion, students will be able to:

- As outlined in the learning plan, apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry
- Will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 16.0

CHEM 1406 - INTRODUCTORY CHEMISTRY

Survey course introducing chemistry. Topics may include inorganic, organic, biochemistry, food/physiological chemistry, and environmental/consumer chemistry. Designed for allied health students and for students who are not science majors. Lab fees apply

Upon successful completion, students will be able to:

- Express an appreciation for the subject of chemistry by being able to discuss how it relates to everyday life.
- Understand the basic concepts of matter
- Use appropriate mathematics to solve associated chemistry problems
- Use the periodic table to explain atomic structure
- Explain chemical bonding, molecular structure, an d inorganic nomenclature
- Understand, write, and balance chemical equations
- Understand the relationship between solids, liquids and gases and solve associated problems
- Understand the principles of solutions and solve associated problems
- Understand and apply the principles of equilibrium thermodynamics, and chemical kinetics
- Understand and apply the principles of acids and bases

- Understand and apply the fundamental concepts of organic chemistry in relation to reactions, structure and nomenclature
- Understand and explain the biochemical principles of carbohydrates, lipids, proteins, enzymes, nucleic acids and bioenergetics

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 48.0

CHEM 1411 - GENERAL CHEMISTRY I

Fundamental principles of chemistry for majors in the sciences, health sciences, and engineering; topics include measurements, fundamental properties of matter, states of matter, chemical reactions, chemical stoichiometry, periodicity of elemental properties, atomic structure, chemical bonding, molecular structure, solutions, properties of gases, and an introduction to thermodynamics and descriptive chemistry. Introduction of the scientific method, experimental design, data collection and analysis, and preparation of laboratory reports. Lab fees apply

Upon successful completion, students will be able to:

- Define the fundamental properties of matter.
- Classify matter, compounds, and chemical reactions
- Determine the basic nuclear and electronic structure of atoms.
- Identify trends in chemical and physical properties of the elements using the Periodic Table.
- Describe the bonding in and the shape of simple molecules and ions.
- Solve stoichiometric problems.
- Write chemical formulas.
- Write and balance equations.
- Use the rules of nomenclature to name chemical compounds.
- Define the types and characteristics of chemical reactions.
- Use the gas laws and basics of the Kinetic Molecular Theory to solve gas problems.
- Determine the role of energy in physical changes and chemical reactions.
- Use basic apparatus and apply experimental methodologies used in the chemistry laboratory
- Demonstrate safe and proper handling of laboratory equipment and chemicals.
- Conduct basic laboratory experiments with proper laboratory techniques.
- Make careful and accurate experimental observations.
- Relate physical observations and measurements to theoretical principles.
- Interpret laboratory results and experimental data, and reach logical conclusions.
- Record experimental work completely and accurately in laboratory notebooks and communicate experimental results clearly in written reports.
- Design fundamental experiments involving principles of chemistry.

- Identify appropriate sources of information for conducting laboratory experiments involving principles of chemistry.

Grade Basis: AL
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 48.0

Prerequisites:

- MATH 1314 - COLLEGE ALGEBRA

CHEM 1412 - GENERAL CHEMISTRY II

Chemical equilibrium; phase diagrams and spectrometry; acid-base concepts; thermodynamics; kinetics; electrochemistry; nuclear chemistry; an introduction to organic chemistry and descriptive inorganic chemistry. Introduction of the scientific method, experimental design, chemical instrumentation, data collection and analysis, and preparation of laboratory reports. Lab fees apply

Upon successful completion, students will be able to:

- State the characteristics of liquids and solids, including phase diagrams and spectrometry
- Articulate the importance of intermolecular interactions and predict trends in physical properties.
- Identify the characteristics of acids, bases, and salts, and solve problems based on their quantitative relationships.
- Identify and balance oxidation-reduction equations, and solve redox titration problems.
- Determine the rate of a reaction and its dependence on concentration, time, and temperature.
- Apply the principles of equilibrium to aqueous systems using LeChatelier’s Principle to predict the effects of concentration, pressure, and temperature changes on equilibrium mixtures.
- Analyze and perform calculations with the thermodynamic functions, enthalpy, entropy, and free energy
- Discuss the construction and operation of galvanic and electrolytic electrochemical cells, and determine standard and non#standard cell potentials
- Define nuclear decay processes.
- Describe basic principles of organic chemistry and descriptive inorganic chemistry
- Use basic apparatus and apply experimental methodologies used in the chemistry laboratory.
- Demonstrate safe and proper handling of laboratory equipment and chemicals.
- Conduct basic laboratory experiments with proper laboratory techniques.
- Make careful and accurate experimental observations.
- Relate physical observations and measurements to theoretical principles.
- Interpret laboratory results and experimental data, and reach logical conclusions.

- Record experimental work completely and accurately in laboratory notebooks and communicate experimental results clearly in written reports.
- Design fundamental experiments involving principles of chemistry and chemical instrumentation.
- Identify appropriate sources of information for conducting laboratory experiments involving principles of chemistry.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 48.0

Prerequisites:

- CHEM 1411 - GENERAL CHEMISTRY I

CHEM 2423 - ORGANIC CHEMISTRY I

Fundamental principles of organic chemistry will be studied, including the structure, bonding, properties, and reactivity of organic molecules; and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules. This course is intended for students in science or pre-professional programs. Laboratory activities will reinforce fundamental principles of organic chemistry, including the structure, bonding, properties, and reactivity of organic molecules, and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules. Methods for the purification and identification of organic compounds will be examined. Lab fees apply

Upon successful completion, students will be able to:

- Classify organic compounds by structure, molecular orbitals, hybridization, resonance, tautomerism, polarity, chirality, conformation, and functionality.
- Identify organic molecules using appropriate organic nomenclature.
- Describe the principle reactions for syntheses of molecules, ions, and radicals
- Describe organic reactions in terms of radical and ionic mechanisms.
- Describe the use of spectroscopic data to determine the structure of organic molecules
- Formulate appropriate reaction conditions for the synthesis of simple organic molecules.
- Perform chemical experiments, analysis procedures, and waste disposal in a safe and responsible manner.
- Utilize scientific tools such as glassware and analytical instruments to collect and analyze data.

- Identify and utilize appropriate separation techniques such as distillation, extraction, and chromatography to purify organic compounds.
- Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports.
- Demonstrate a basic understanding of stereochemistry.
- Classify organic compounds by structure, molecular orbitals, hybridization, resonance, tautomerism, polarity, chirality, conformation, and functionality in laboratory reports.
- Identify organic molecules using appropriate organic nomenclature in laboratory reports.
- Perform organic syntheses of molecules.
- Describe organic reactions in terms of radical and ionic mechanisms in laboratory reports.
- Use spectroscopic data to determine the structure of organic molecules.
- Formulate appropriate reaction conditions for the synthesis of simple organic molecules.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 48.0

Prerequisites:

- CHEM 1412 - GENERAL CHEMISTRY II

CHEM 2425 - ORGANIC CHEMISTRY II

Advanced principles of organic chemistry will be studied, including the structure, properties, and reactivity of aliphatic and aromatic organic molecules; and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules. This course is intended for students in science or pre-professional programs. Laboratory activities reinforce advanced principles of organic chemistry, including the structure, properties, and reactivity of aliphatic and aromatic organic molecules, and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules. Lab fees apply

Upon successful completion, students will be able to:

- Correlate molecular structure with physical and chemical properties of aliphatic and aromatic organic molecules.
- Predict the mechanism and outcome of aliphatic and aromatic substitution and elimination reactions, given the conditions and starting materials.

- Predict the chirality of reaction products based on enantiomeric and diastereomeric relationships.
- Describe reaction mechanisms in terms of energetics, reaction kinetics, and thermodynamics.
- Use spectroscopic techniques to characterize organic molecules and subgroups.
- Perform chemical experiments, analysis procedures, and waste disposal in a safe and responsible manner.
- Utilize scientific tools such as glassware and analytical instruments to collect and analyze data.
- Identify and utilize appropriate separation techniques such as distillation, extraction, and chromatography to purify organic compounds.
- Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports.
- Correlate molecular structure with physical and chemical properties of aliphatic and aromatic organic molecules.
- Predict the mechanism and outcome of aliphatic and aromatic substitution and elimination reactions, given the conditions and starting materials.
- Predict the chirality of reaction products based on enantiomeric and diastereomeric relationships.
- Describe reaction mechanisms in terms of energetics, reaction kinetics, and thermodynamics.
- Use spectroscopic techniques to characterize organic molecules and subgroups.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 48.0

Prerequisites:

- CHEM 2423 - ORGANIC CHEMISTRY I

CJCR 1304 - PROBATION & PAROLE

A survey of the structure, organization, and operation of probation and parole services. Emphasis on applicable state statutes and administrative guidelines.

Upon successful completion, students will be able to:

- Describe the professional qualifications for employment as a probation or parole practitioner
- Demonstrate skills in management and treatment practices
- Create and develop community relations strategies

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

CJSA 1317 - JUVENILE JUSTICE SYSTEM

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.

Upon successful completion, students will be able to:

- Describe the juvenile law and the role of juvenile courts
- Explain the roles of police and correctional agencies concerning delinquency
- Review and contrast the theories of delinquent conduct

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

CJSA 1325 - CRIMINOLOGY

Current theories and empirical research pertaining to crime and criminal behavior and its causes, methods of prevention, systems of punishment, and rehabilitation.

Upon successful completion, students will be able to:

- Identify and explain the various theories of causation of criminal behavior
- Identify and appraise the avenue of prevention
- Outline the various research methods/methodology used in criminological research
- Identify the categories and sources of criminological data utilized in interpreting crime trends

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

CJSA 1342 - CRIMINAL INVESTIGATION

Investigative theory; collection and preservation of evidence, sources of information, interview and interrogation, uses of forensic sciences, case and trial preparation.

Upon successful completion, students will be able to:

- Define the goals and objectives of criminal investigation
- Demonstrate ability to conduct proper crime scene investigations
- Illustrate the use of forensic science for various statutory offenses
- Organize the criminal case including field notes, reports, crime scene activities, and mandatory documentation of statutory warning

Grade Basis: L
Credit hours: 3.0

Lecture hours: 48.0

CJSA 1348 - ETHICS IN CRIMINAL JUSTICE

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.

Upon successful completion, students will be able to:

- Explain the foundation of ethics
- Compare and contrast theories of ethics with personal and professional practices
- Interpret and apply ethical considerations in policing, the courts, and corrections

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

CJSA 1351 - USE OF FORCE

Study of the use of force including introduction to and statutory authority for the use of force, deadly force, and related legal issues. Fulfills the Texas Commission on Law Enforcement Use of Force Intermediate Certificate requirement. This course was designed to be repeated multiple times to improve student proficiency.

Upon successful completion, students will be able to:

- Identify the status pertaining to use of force
- Explain the use of force continuum
- Describe key elements of major court cases involving use of force issues

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

CJSA 2331 - CHILD ABUSE - PREVENTION & INVESTIGATION

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.

Upon successful completion, students will be able to:

- Identify forms of abuse and neglect
- Compare and contrast characteristics of typical abusers
- Outline investigative strategies

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

CJSA 2334 - CONTEMPORARY ISSUES IN CRIMINAL JUSTICE

A series of lectures and class participation exercises presenting selected topics currently confronting criminal justice personnel and the public they serve.

Upon successful completion, students will be able to:

- Explore an assigned contemporary topic in criminal justice
- List specific problems within the topic and suggest solutions

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

CJSA 2388 - INTERNSHIP

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.

Upon successful completion, students will be able to:

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry

Grade Basis: L
Credit hours: 3.0

CJSA 2302 - POLICE MANAGEMENT, SUPERVISION, AND RELATED TOPICS

Techniques and theories regarding dealing with people, their performance, and problems. Topics include basic supervision, leadership, time management, first-line supervision, and management by objectives.

Upon successful completion, students will be able to:

- Describe the various leadership/management theories, skillls, and styles.

- Apply human relations aspectsof leadership role.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

MDCA 1060 - CLINICAL MEDICAL ASSISTANT

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. Emphasis on patient assessment, examination, and treatment as directed by physician. Includes vital signs, collection and documentation of patient information, asepsis, office clinical procedures, and other treatments as appropriate for ambulatory care settings.

Grade Basis: L
Lecture hours: 120.0

HART 2341 - COMMERCIAL AIR CONDITIONING

A study of components, applications, and installation of air conditioning systems with capacities of 25 tons or less.

Upon successful completion, students will be able to:

- Apply and describe the sequence of operation for commercial air conditioning systems and their accessories
- Identify components relative to commercial air conditioning
- Explain energy efficient and renewable energy technologies

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ACNT 1313 - COMPUTERIZED ACCOUNTING APPLICATIONS

Use of the computer to develop and maintain accounting records and to process common business applications for managerial decision-making.

Upon successful completion, students will be able to:

- Utilize spreadsheet and/or database software for accounting and management applications.
- Complete a comprehensive project.

Grade Basis: L

Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

AGMG 2280 - COOPERATIVE EDUCATION - AGRICULTURAL BUSINESS & MANAGEMENT, GENERAL

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.

Upon successful completion, students will be able to:

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

Grade Basis: L
Credit hours: 2.0
Lecture hours: 1.0
Lab hours: 8.0

ITSC 2380 - COOPERATIVE EDUCATION - COMPUTER & INFORMATION SCIENCES, GENERAL

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.

Upon successful completion, students will be able to:

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry.
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

Grade Basis: L
Credit hours: 3.0

Lecture hours: 16.0

Restrictions:

- Division Chair approval required unless student is in last semester of the Information Technology degree.

COSC 1436 - PROGRAMMING FUNDAMENTALS I

This course introduces the fundamental concepts of structured programming, and provides a comprehensive introduction to programming for computer science and technology majors. Topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing, and debugging. This course assumes computer literacy. This course is included in the Computer Science Field of Study Curriculum.

Upon successful completion, students will be able to:

- Describe how data are represented, manipulated, and stored in a computer
- Categorize different programming languages and their uses
- Understand and use the fundamental concepts of data types, structured programming, algorithmic design, and user interface design
- Demonstrate a fundamental understanding of software development methodologies, including modular design, pseudo code, flowcharting, structure charts, data types, control structures, functions, and arrays
- Develop projects that utilize logical algorithms from specifications and requirements statements
- Demonstrate appropriate design, coding, testing, and documenting of computer programs that implement project specifications and requirements
- Apply computer programming concepts to new problems or situations

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

COSC 1437 - PROGRAMMING FUNDAMENTALS II

This course focuses on the object-oriented programming paradigm, emphasizing the definition and use of classes along with fundamentals of object-oriented design. The course includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering processes. Students will apply techniques for testing and debugging software. This course is included in the Computer Science Field of Study Curriculum.

Upon successful completion, students will be able to:

- Identify and explain a programming development lifecycle, including planning, analysis, design, development, and maintenance
- Demonstrate a basic understanding of object-oriented programming by using structs and classes in software projects
- Use object-oriented programming techniques to develop executable programs that include elements such as inheritance and polymorphism
- Document and format code in a consistent manner
- Apply basic searching and sorting algorithms in software design
- Apply single- and multi-dimensional arrays in software
- Use a symbolic debugger to find and fix runtime and logical errors in software
- Demonstrate a basic understanding of programming methodologies, including object-oriented, structured, and procedural programming
- Describe the phases of program translation from source code to executable code

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

Prerequisites:

- COSC 1436 - PROGRAMMING FUNDAMENTALS I

COSC 2425 - COMPUTER ORGANIZATION

The organization of computer systems is introduced using assembly language. Topics include basic concepts of computer architecture and organization, memory hierarchy, data types, computer arithmetic, control structures, interrupt handling, instruction sets, performance metrics, and the mechanics of testing and debugging computer systems. Embedded systems and device interfacing are introduced. This course is included in the Computer Science Field of Study Curriculum.

Upon successful completion, students will be able to:

- Explain contemporary computer system organization
- Describe data representation in digital computers
- Explain the concepts of memory hierarchy, interrupt processing, and input/output mechanisms
- Measure the performance of a computer system
- Design and develop assembly language applications
- Explain the interfaces between software and hardware components
- Explain the design of instruction set architectures
- Develop a single-cycle processor
- Explain the concept of virtual memory and how it is realized in hardware and software
- Explain the concepts of operating system virtualization

Grade Basis: L

Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

Prerequisites:

- COSC 1436 - PROGRAMMING FUNDAMENTALS I

COSC 2436 - PROGRAMMING FUNDAMENTALS III

Further applications of programming techniques, introducing the fundamental concepts of data structures and algorithms. Topics include data structures (including stacks, queues, linked lists, hash tables, trees, and graphs), searching, sorting, recursion, and algorithmic analysis. Programs will be implemented in an appropriate object-oriented language. This course is included in the Computer Science Field of Study Curriculum.

Upon successful completion, students will be able to:

- Design and develop programs that implement basic data structures, including stacks, queues, linked lists, hash tables, trees, and graphs
- Apply recursive techniques and algorithms to solve problems
- Implement searching and sorting algorithms
- Understand algorithm efficiency, Big-O notation, and why it should be considered in programming
- Analyze and select appropriate data structures to implement a solution to a problem
- Design and implement data structures using classes and incorporating object-oriented concepts
- Demonstrate best practices of software development including testing, validation, and documentation

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

Prerequisites:

- COSC 1437 - PROGRAMMING FUNDAMENTALS II

PSYC 2330 - BIOLOGICAL PSYCHOLOGY

An introduction to the biological bases of behavior. Topics include evolution, genetics, research methods in behavioral neuroscience, motivation and emotion, sensation and perception, learning and memory, lifespan development, cognition, psychological disorders, and other complex behaviors. PSYC 2330 is included in the Psychology Field of Study.

Upon successful completion, students will be able to:

- Define and explain the biological foundations of behavior, including theories, history, and research methods.
- Describe the evolution and development of the nervous system – neuroanatomy, neurophysiology, neurotransmission, and neuroendocrinology.
- Identify the structures and function that underlie sensation, perception, and motor control.
- Identify and discuss the regulation of behavior, including motivation and emotion, sexual behavior, and biological rhythms.
- Articulate the biological components of learning, memory, and language.
- Describe the biological underpinnings of age-related changes in cognition and socioemotional functioning over the lifespan.
- Examine how biological processes impact health and well-being.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- PSYC 2301 - GENERAL PSYCHOLOGY

Restrictions:

- Must meet TSI College Readiness Standard for Reading

CRIJ 1301 - INTRODUCTION TO CRIMINAL JUSTICE

This course provides a historical and philosophical overview of the American criminal justice system, including the nature, extent, and impact of crime; criminal law; and justice agencies and processes.

Upon successful completion, students will be able to:

- Describe the history and philosophy of the American criminal justice system
- Explain the nature and extent of crime in America
- Analyze the impact and consequences of crime
- Evaluate the development, concepts, and functions of law in the criminal justice system
- Describe the structure of contemporary federal, state, and local justice agencies and processes

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

CRIJ 1306 - COURT SYSTEMS & PRACTICES

This course is a study of the court system as it applies to the structures, procedures, practices and sources of law in American courts, using federal and Texas statues and case law.

Upon successful completion, students will be able to:

- Describe the American judicial systems (civil, criminal, and juvenile) , their jurisdiction, development, and structure
- Analyze the function and dynamics of the courtroom work group
- Identify judicial processes from pretrial to appeal
- Describe the significant Constitutional Amendments, doctrines, and other sources of law in the American judicial system

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

CRIJ 1310 - FUNDAMENTALS OF CRIMINAL LAW

This course is the study of criminal law including application of definitions, statutory elements, defenses, and penalties using Texas statutes, the Model Penal Code, and case law. The course also analyzes the philosophical and historical development of criminal law and criminal culpability.

Upon successful completion, students will be able to:

- Identify the elements of crimes and defenses under Texas statutes, Model Penal Code, and case law
- Classify offenses and articulate penalties for various crimes
- Compare culpable mental states when assigning criminal responsibility
- Assess the impact of history and philosophy on current criminal laws
- Evaluate the application of criminal law to other areas of criminal justice such as law enforcement and corrections

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

CRIJ 2313 - CORRECTIONAL SYSTEMS & PRACTICES

This course is a survey of institutional and non-institutional corrections. Emphasis will be placed on the organization and operation of correctional systems, treatment and rehabilitation, populations served, Constitutional issues, and current and future issues.

Upon successful completion, students will be able to:

- Describe the organization and operation of correctional systems and alternatives to institutionalization
- Describe treatment and rehabilitative programs
- Differentiate between the short-term incarceration and long-term institutional environments
- Evaluate current and future correctional issues
- Identify the Constitutional rights applicable to the correctional setting

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

CRIJ 2328 - POLICE SYSTEMS & PRACTICES

This course examines the establishment, role and function of police in a democratic society. It will focus on types of police agencies and their organizational structure, police-community interaction, police ethics, and use of authority.

Upon successful completion, students will be able to:

- Describe the types of police agencies and explain the role of police in America within the context of a democratic society
- Describe means and methods utilized to ensure police accountability
- Explain the historical development of policing
- Describe the selection process for police officers
- Compare and contrast organizational structures, policies, strategies and tactics employed to ensure police effectiveness, efficiency and equity

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

CSME 1248 - PRINCIPLES OF SKIN CARE

An introduction of the theory and practice of skin care.

Upon successful completion, students will be able to:

- Define terminology related to skin care treatments
- Demonstrate skin care procedures
- Practice safety and sanitation according to the laws and rules of the state licensing agency
- Exhibit workplace competencies in skin care

Grade Basis: L
Credit hours: 2.0
Lecture hours: 16.0

Lab hours: 64.0

CSME 1401 - ORIENTATION TO COSMETOLOGY

An overview of the skills and knowledge necessary for the field of cosmetology.

Upon successful completion, students will be able to:

- Demonstrate introductory skills, professional ethics, safety, and sanitation
- Explain the laws and rules of the state

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 64.0

CSME 1405 - FUNDAMENTALS OF COSMETOLOGY

A course in the basic fundamentals of cosmetology. Topics include safety and sanitation, service preparation, manicure, facial, chemical services, shampoo, haircut, wet styling, and comb out.

Upon successful completion, students will be able to:

- Identify fundamental concepts related to skills required by the Texas Department of Licensing and Regulation (TDLR)
- Demonstrate basic required skills by TDLR standards

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 128.0

CSME 1410 - INTRODUCTION TO HAIRCUTTING & RELATED THEORY

Introduction to the theory and practice of haircutting. Topics include terminology, implements, sectioning and finishing techniques.

Upon successful completion, students will be able to:

- Define terminology
- Practice basic workplace competencies related to haircutting and finishing techniques
- Demonstrate use of implements, sectioning, haircutting and finishing skills

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0

Lab hours: 128.0

CSME 1420 - ORIENTATION TO FACIAL SPECIALIST

An overview of the skills and knowledge necessary for the field of facials and skin care.

Upon successful completion, students will be able to:

- Demonstrate facial and skin care skills
- Practice safety and sanitation according to the rules of the state licensing agency
- Practice professional ethics

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 96.0

CSME 1421 - PRINCIPLES OF FACIAL & SKIN CARE TECHNOLOGY I

An introduction to the principles of facial and skin care technology. Topics include anatomy, physiology, theory and related skills of facial and skin care technology.

Upon successful completion, students will be able to:

- Explain the basic anatomy and physiology of the skin
- Demonstrate the related skills of skin care and cosmetics

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

CSME 1443 - MANICURING & RELATED THEORY

Presentation of the theory and practice of nail services. Topics include terminology, application, and workplace competencies related to nail services.

Upon successful completion, students will be able to:

- Define terminology related to nail services
- Demonstrate the basic procedures of nail services
- Practice safety and sanitation according to the laws and rules of the state licensing agency
- Exhibit workplace competencies in nail services

Grade Basis: L
Credit hours: 4.0

Lecture hours: 32.0
Lab hours: 96.0

CSME 1545 - PRINCIPLES OF FACIAL & SKIN CARE TECHNOLOGY II

A continuation of the concepts and principles in skin care and other related technologies. Topics include advanced instruction in anatomy, physiology, theory, and related skills of facial and skin care technology.

Upon successful completion, students will be able to:

- Demonstrate the use of facial machines
- Explain the chemical composition of products
- Practice advanced applications of skin care and cosmetics
- Remove superfluous hair

Grade Basis: L
Credit hours: 5.0
Lecture hours: 32.0
Lab hours: 144.0

CSME 1447 - PRINCIPLES OF SKIN CARE/FACIALS & RELATED THEORY

In-depth coverage of the theory and practice of skin care, facials and cosmetics.

Upon successful completion, students will be able to:

- Define terminology related to the skin, products, and treatments
- Demonstrate applications related to skin care and cosmetics
- Practice safety and sanitation according to the laws and rules of the state licensing agency
- Exhibit workplace competencies in skin care and cosmetics

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 128.0

CSME 1453 - CHEMICAL REFORMATION & RELATED THEORY

Presentation of the theory and practice of chemical reformation including terminology, application, and workplace competencies.

Upon successful completion, students will be able to:

- Define terminology related to chemical reformation

- Follow safety and sanitation laws and rules according to the state licensing agency
- Exhibit workplace competencies related to chemical reformation

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 128.0

CSME 1534 - COSMETOLOGY INSTRUCTOR I

The fundamentals of instructing cosmetology students.

Upon successful completion, students will be able to:

- Demonstrate classroom/clinic management
- Differentiate teaching methodologies
- Identify different learning styles
- Assess lesson plans

Grade Basis: L
Credit hours: 5.0
Lecture hours: 32.0
Lab hours: 144.0

Restrictions:

- Division Chair approval required.

CSME 1535 - ORIENTATION TO THE INSTRUCTION OF COSMETOLOGY

An overview of the skills and knowledge necessary for the instruction of cosmetology students.

Upon successful completion, students will be able to:

- Identify teaching methodologies
- Observe lesson plan implementation
- Monitor various learning settings

Grade Basis: L
Credit hours: 5.0
Lecture hours: 32.0
Lab hours: 144.0

CSME 2237 - ADVANCED COSMETOLOGY TECHNIQUES

Mastery of advanced cosmetology techniques including hair designs, professional cosmetology services, and workplace competencies.

Upon successful completion, students will be able to:

- Utilize a variety of hair techniques
- Perform professional cosmetology services
- Demonstrate workplace competencies

Grade Basis: L
Credit hours: 2.0
Lecture hours: 16.0
Lab hours: 64.0

CSME 2410 - ADVANCED HAIRCUTTING & RELATED THEORY

Advanced concepts and practice of haircutting. Topics include haircuts utilizing scissors, razor, and/or clippers.

Upon successful completion, students will be able to:

- Utilize correct terminology related to advanced haircutting techniques
- Demonstrate work place competencies related to advanced haircutting techniques

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 128.0

CSME 2343 - SALON DEVELOPMENT

Procedures necessary for salon development. Topics include professional ethics, goal setting, salon operation, and record keeping.

Upon successful completion, students will be able to:

- Create a salon portfolio or business plan
- Demonstrate organizational skills related to salon operation and management

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 64.0

CSME 2501 - THE PRINCIPLES OF HAIR COLORING & RELATED THEORY

Presentation of the theory, practice, and chemistry of hair color. Topics include terminology, application, and workplace competencies related to hair color.

Upon successful completion, students will be able to:

- Define terminology
- Demonstrate hair color application
- Practice safety and sanitation according to the laws and rules of the state licensing agency
- Practice workplace competencies related to hair color

Grade Basis: L
Credit hours: 5.0
Lecture hours: 32.0
Lab hours: 144.0

CSME 2431 - PRINCIPLES OF FACIALS & SKIN CARE TECHNOLOGY III

Advanced concepts and principles of skin care and other related technologies.

Upon successful completion, students will be able to:

- Demonstrate professional ethics
- Design salon management
- Perform advanced skin care services
- Exhibit related skills in preparation for the state licensing examination

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 96.0

CSME 2441 - PREPARATION FOR THE STATE LICENSING EXAMINATION

Preparation for the state licensing examination.

Upon successful completion, students will be able to:

- Review for the written state licensing exam
- Prepare for the practical state licensing exam
- Practice safety and sanitation according to the laws and rules of the state licensing agency

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 128.0

CSME 2514 - COSMETOLOGY INSTRUCTOR II

A continuation of the fundamentals of instructing cosmetology students.

Upon successful completion, students will be able to:

- Demonstrate effective classroom and clinic management
- Implement teaching methodologies
- Develop lesson plans

Grade Basis: L
Credit hours: 5.0
Lecture hours: 32.0
Lab hours: 144.0

Restrictions:

- Division Chair approval required.

DANC 2303 - DANCE APPRECIATION I

Survey of primitive, classical, and contemporary dance and its interrelationship with cultural developments and other art forms. Meets NCTC Core Curriculum Requirement

Grade Basis: L
Credit hours: 3.0

DNTA 1015 - DENTAL ASSISTING

A study of pre-clinical chairside assisting procedures, instrumentation, OSHA and other regulatory agencies' standards.

Grade Basis: L
Lecture hours: 112.0

DNTA 1060 - DENTAL ASSISTANT EXTERNSHIP

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.

Grade Basis: P

DFTG 1305 - TECHNICAL DRAFTING

Introduction to the principles of drafting to include terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, and auxiliary views.

Upon successful completion, students will be able to:

- Create technical sketches, geometric constructions, orthographic projections, pictorial/sectional views, dimension drawings, and apply lettering techniques

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

DFTG 1309 - BASIC COMPUTER-AIDED DRAFTING

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

Upon successful completion, students will be able to:

- Identify terminology and basic functions used with CAD software
- Use CAD hardware and software to create, organize, display, and plot/print working drawings
- Use file management techniques

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

DFTG 1317 - ARCHITECTURAL DRAFTING-RESIDENTIAL

Architectural drafting procedures, practices, terms, and symbols. Preparation of detailed working drawings for residential structures. Emphasis on light frame construction methods.

Upon successful completion, students will be able to:

- Utilize architectural terms, symbols, residential construction materials, and processes to produce a set of residential construction drawings including site plan, floor plan, elevations, wall sections, schedules, details, and foundation plan using reference materials.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

DFTG 1333 - MECHANICAL DRAFTING

Study of mechanical drawings using dimensioning and tolerances, sectioning techniques, orthographic projection, and pictorial drawings.

Upon successful completion, students will be able to:

- Develop a set of working drawings including assembly, detail, and pictorial

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

DFTG 1358 - ELECTRICAL/ELECTRONICS DRAFTING

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.

Upon successful completion, students will be able to:

- Layout components and symbols, both electronic and electrical
- Apply basic math and the theory of electricity
- Utilize component identification including schematics, block, wiring, and logic
- Perform diagram construction and drafting

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

DFTG 2300 - INTERMEDIATE ARCHITECTURAL DRAFTING - RESIDENTIAL

Continued application of principles and practices used in residential construction.

Upon successful completion, students will be able to:

- Define the principles of design and implementation of advanced residential construction.

- Incorporate site and environmental considerations in planning a residential development.
- Select materials.
- Apply codes and standards in the creation of construction drawings.
- Write specifications.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- DFTG 1317 - ARCHITECTURAL DRAFTING-RESIDENTIAL

DFTG 2302 - MACHINE DRAFTING

Production of detail and assembly drawings of machines, threads, gears, utilizing tolerances, limit dimensioning, and surface finishes.

Upon successful completion, students will be able to:

- Interpret terms used in tolerancing
- Identify dimensions of two mating parts
- Draw spur and/or bevel gears
- Draw details and assemblies
- Identify interference and clearance fits
- Identify types of threads forms
- Interpret thread notes

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- DFTG 1333 - MECHANICAL DRAFTING

DFTG 2306 - MACHINE DESIGN

Theory and practice of design. Projects in problem-solving, including press fit, bolted and welded joints, and transmission components.

Upon successful completion, students will be able to:

- Utilize the steps used in the design process, terminology, mechanical processes to produce drawings

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

DFTG 2317 - DESCRIPTIVE GEOMETRY

Graphical solutions to problems involving points, lines, and planes in space.

Upon successful completion, students will be able to:

- Describe spatial relationships
- Use sequential thinking
- Create views necessary to show object's true size and shape/development using points, lines, and planes in space

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

DFTG 2319 - INTERMEDIATE COMPUTER-AIDED DRAFTING

A continuation of practices and techniques used in basic computer-aided drafting including the development and use of prototype drawings, construction of pictorial drawings, extracting data, and basics of 3D.

Upon successful completion, students will be able to:

- Produce 2D and 3D drawings and pictorial drawings
- Use external referencing of multiple drawings to construct a composite drawing
- Import and extract data utilizing attributes

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- DFTG 1305 - TECHNICAL DRAFTING
- DFTG 1309 - BASIC COMPUTER-AIDED DRAFTING

DFTG 2323 - PIPE DRAFTING

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.

Upon successful completion, students will be able to:

- Create drawings of foundations, structural supports, and process equipment
- Identify symbols and research specifications
- Generate a bill of material list
- Use charts and standards
- Generate isometric drawings
- Calculate measurements for pipe fittings

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

DFTG 2328 - ARCHITECTURAL DRAFTING - COMMERCIAL

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.

Upon successful completion, students will be able to:

- Apply commercial construction materials and processes
- Produce a set of commercial construction drawings including a site plan, floor plans, reflected ceiling plan, sections, elevations, schedules, and details

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

DFTG 2330 - CIVIL DRAFTING

An in-depth study of drafting methods and principles used in civil engineering.

Upon successful completion, students will be able to:

- Interpret field notes
- Develop documents for a civil project
- Analyze and layout drainage and utilities infrastructure
- Perform related calculations

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

DFTG 2332 - ADVANCED COMPUTER-AIDED DRAFTING

Application of advanced CAD techniques.

Upon successful completion, students will be able to:

- Use a customized CAD system to create documents and/or solid models
- Use OLE with external software

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

DFTG 2340 - SOLID MODELING & DESIGN

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.

Upon successful completion, students will be able to:

- Create three-dimensional solid model objects
- Generate pictorial and orthographic drawings

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

DFTG 2358 - ADVANCED MACHINE DESIGN

Design process skills for the production of complete design package, including jig and fixture design, extrusion dies, and injection mold design.

Upon successful completion, students will be able to:

- Analyze design problems and prepare solutions to complete a set of drawings

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

DRAM 1120 - THEATER PRACTICUM I

Practicum in theater open to all students with emphasis on technique and procedures with experience gained in play productions.

Upon successful completion, students will be able to:

- Use collaboration in the creation of theatrical productions.
- Demonstrate the practical application of appropriately leveled theatrical skills and procedures.
- Apply critical thinking skills required for the creation of a theatrical production.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

DRAM 1121 - THEATER PRACTICUM II

Continuation of DRAM1120. Practicum in theater open to all students with emphasis on technique and procedures with experience gained in play productions.

Upon successful completion, students will be able to:

- Use collaboration in the creation of theatrical productions
- Demonstrate the practical application of appropriately leveled theatrical skills and procedures.
- Apply critical thinking skills required for the creation of a theatrical production.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

Prerequisites:

- DRAM 1120 - THEATER PRACTICUM I

DRAM 1310 - INTRODUCTION TO THEATER

Survey of theater including its history, dramatic works, stage techniques, production procedures, and relation to other art forms. Participation in productions may be required. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Analyze theater through written responses to play texts and/or live performance.
- Demonstrate a basic knowledge of theater history and dramatic works.
- Describe the collaborative nature of theater arts
- Demonstrate the relationship of the arts to everyday life as well as broader historical and social contexts.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

DRAM 1330 - STAGECRAFT I

Study and application of the methods and components of theatrical production which may include one or more of the following: theater facilities, scenery construction and painting, properties, lighting, costume, makeup, sound, and theatrical management. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Apply a vocabulary and knowledge of the environment, tools, and skills required to mount a theatrical production.
- Demonstrate knowledge of the variety of work required to mount a theatrical production.
- Describe the collaborative nature of production within theatre arts.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

DRAM 1351 - ACTING I

An introduction to the fundamental principles and tools of acting as used in auditions, rehearsals, and performances. This may include ensemble performing, character and script analysis, and basic theater terminology. This exploration will emphasize the development of the actor's instrument: voice, body and imagination.

Upon successful completion, students will be able to:

- Analyze scripts from the viewpoint of the actor.
- Analyze, develop, and perform a character.
- Demonstrate effective and safe use of the voice and body.
- Define and discuss terms and concepts using the vocabulary of theater
- Perform at an appropriately skilled level in ensemble building exercises, scenes and final projects, which may include participation in plays.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

DRAM 1352 - ACTING II

Exploration and further training within the basic principles and tools of acting, including an emphasis on critical analysis of oneself and others. The tools include ensemble

performing, character and script analysis, and basic theater terminology. This will continue the exploration of the development of the actor's instrument: voice, body and imagination.

Upon successful completion, students will be able to:

- Analyze scripts more in depth from the viewpoint of the actor.
- Analyze, develop, and perform a character.
- Demonstrate effective and safe use of the voice and body.
- Define and discuss terms and concepts using an expanded vocabulary of theater
- Perform at an increasingly skilled level in ensemble building exercises, scenes and final projects, which may include participation in plays
- Analyze and critique personal and peer performances.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- DRAM 1351 - ACTING I

DRAM 2120 - THEATER PRACTICUM III

Continuation of DRAM1120 and DRAM1121. Practicum in theater open to all students with emphasis on technique and procedures with experience gained in play productions.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

Prerequisites:

- DRAM 1120 - THEATER PRACTICUM I
- DRAM 1121 - THEATER PRACTICUM II

DRAM 2121 - THEATER PRACTICUM IV

Continuation of DRAM 1120, DRAM 1121, and DRAM 2120. Practicum in theater open to all students with emphasis on technique and procedures with experience gained in play productions.

Upon successful completion, students will be able to:

- Use collaboration in the creation of theatrical productions.
- Demonstrate the practical application of appropriately leveled theatrical skills and procedures
- Apply critical thinking skills required for the creation of a theatrical production.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

Prerequisites:

- DRAM 1120 - THEATER PRACTICUM I
- DRAM 1121 - THEATER PRACTICUM II
- DRAM 2120 - THEATER PRACTICUM III

DRAM 2331 - STAGECRAFT II

Continued study of DRAM1330 and the application of the methods and components of theatrical production which may include one or more of the following: theater facilities, scenery construction, and painting, properties, lighting, costume, makeup, sound and theatrical management.

Upon successful completion, students will be able to:

- Apply an expanded vocabulary and knowledge of the environment, tools, and skills required to mount a theatrical production.
- Demonstrate increased knowledge of the variety of work required to mount a theatrical production.
- Describe in depth the collaborative nature of production within theatre arts.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- DRAM 1330 - STAGECRAFT I

DRAM 2366 - INTRODUCTION TO CINEMA

Survey and analyze cinema including history, film techniques, production procedures, selected motion pictures, and cinema's impact on and reflection of society. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Analyze film through written response.
- . Demonstrate a basic knowledge of film history, form, and genre.
- Describe the collaborative nature of cinema and the many jobs required to develop a motion picture.
- Discuss/Describe the relationship of cinema to society as it relates to his/her perspective.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

ECON 2301 - PRINCIPLES OF MACROECONOMICS

An analysis of the economy as a whole including measurement and determination of Aggregate Demand and Aggregate Supply, national income, inflation, and unemployment. Other topics include international trade, economic growth, business cycles, and fiscal policy and monetary policy. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Explain the role of scarcity, specialization, opportunity cost, and cost/benefit analysis in economic decision-making.
- Identify the determinants of supply and demand; demonstrate the impact of shifts in both market supply and demand curves on equilibrium price and output.
- Define and measure national income and rates of unemployment and inflation.
- Identify the phases of the business cycle and the problems caused by cyclical fluctuations in the market economy.
- Define money and the money supply; describe the process of money creation by the banking system and the role of the central bank.
- Construct the aggregate demand and aggregate supply model of the macro economy and use it to illustrate macroeconomic problems and potential monetary and fiscal policy solutions.
- Explain the mechanics and institutions of international trade and their impact on the macro economy
- Define economic growth and identify sources of economic growth.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

ECON 2302 - PRINCIPLES OF MICROECONOMICS

Analysis of the behavior of individual economic agents, including consumer behavior and demand, producer behavior and supply, price and output decisions by firms under various market structures, factor markets, market failures, and international trade. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Explain the role of scarcity, specialization, opportunity cost, and cost/benefit analysis in economic decision-making.
- Identify the determinants of supply and demand; demonstrate the impact of shifts in both market supply and demand curves on equilibrium price and output

- Summarize the law of diminishing marginal utility; describe the process of utility maximization.
- Calculate supply and demand elasticities, identify the determinants of price elasticity of demand and supply, and demonstrate the relationship between elasticity and total revenue.
- Describe the production function and the Law of Diminishing Marginal Productivity; calculate and graph short-run and long-run costs of production.
- Identify the four market structures by characteristics; calculate and graph the profit maximizing price and quantity in the output markets by use of marginal analysis.
- Determine the profit maximizing price and quantity of resources in factor markets under perfect and imperfect competition by use of marginal analysis.
- Describe governmental efforts to address market failure such as monopoly power, asymmetric information, externalities, and public goods.
- Identify the benefits of free trade using the concept of comparative advantage

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

EDUC 1300 - LEARNING FRAMEWORK

A study of research and theory in the psychology of learning, cognition, and motivation, factors that impact learning, and application of learning strategies. Theoretical models of strategic learning, cognition, and motivation serve as the conceptual basis for the introduction of the college-level student academic strategies. Students use assessment instruments (e.g. learning inventories) to help them identify their own strengths and weaknesses as strategic learners. Students are ultimately expected to integrate and apply the learning skills discussed across their own academic programs and become effective and efficient learners. Students developing these skills should be able to continually draw from the theoretical models they have learned.

Upon successful completion, students will be able to:

- Strengthen academic performance by identifying key components of the successful student.
- Develop self-awareness and career goals within an academic atmosphere.
- Evaluate the quality and conclusions of the research to which they are exposed, which can simultaneously influence human thought, emotion and behavior.
- Analyze and gain an understanding of historical, biological, psychological, and socio-cultural dimensions of learning and developmental psychology, dimensions that can simultaneously influence human thought, emotion, and behavior.
- Describe the research and theory in the psychology of learning, cognition, and motivation.
- Compose writing assignment(s) using Standard American English and basic computer skills.

Grade Basis: L

Credit hours: 3.0
Lecture hours: 48.0

EDUC 1301 - INTRODUCTION TO THE TEACHING PROFESSION

An enriched, integrated pre-service course and content experience that: Provides active recruitment and institutional support of students interested in a teaching career, especially in high need fields Provides students with opportunities to participate in early field observations at all levels of P-12 schools with varied and diverse students populations Provides students with support from college and school faculty for the purpose of introduction to and analysis of the culture of schooling and classrooms Course content is aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards Course must include a minimum of 16 contact hours of field experience in P-12 classrooms.

Upon successful completion, students will be able to:

- Identify current issues influencing the field of education and teacher professional development.
- Analyze the culture of schooling and classrooms from the perspectives of language, gender, socioeconomic, ethnic, and disability-based academic diversity and equity.
- Provide examples from classroom observations and course activities that demonstrate understanding of educational pedagogy and professional responsibilities of teachers.
- Evaluate personal motivations, educational philosophies, and factors related to educational career decision making.
- Recognize the various multiple intelligences/learning styles in order to be able to implement instructional practices that meet the needs of all students.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

EDUC 2301 - INTRODUCTION SPECIAL POPULATIONS

An enriched, integrated pre-service course and content experience that provides an overview of schooling and classrooms from the perspectives of language, gender, socioeconomic status, ethnic and academic diversity, and equity with an emphasis on factors that facilitate learning. The course provides students with opportunities to participate in early field observations of P- 12 special populations and should be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards. Must include a minimum of 16 contact hours of field experience in P-12 classrooms with special population.

Upon successful completion, students will be able to:

- Describe the characteristics of exceptional learners (e.g. Learning Disabilities, Gifted and Talented), including legal implications.
- Describe and analyze characteristics of diverse learners (e.g. language, gender, sexual orientation, race, and ethnicity) and how diversity impacts learning.
- Describe the impact of socio-economic status on learning and creating equitable classrooms.
- Demonstrate an understanding of the benefits and challenges of racial, ethnic, and other types of cultural diversity in the classroom.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- EDUC 1301 - INTRODUCTION TO THE TEACHING PROFESSION

EECT 1300 - TECHNICAL CUSTOMER SERVICE

General principles of customer service within a technical environment. Topics include internal/external customer relationships, time-management, best practices, and verbal and non-verbal communications skills.

Upon successful completion, students will be able to:

- Identify internal and external customer relationships
- Address customer questions and complaints in a polite and thorough manner
- Update customers on work progress to maintain customer satisfaction and public relations
- Communicate technical information in a clear, precise and logical manner
- Identify verbal and non-verbal communications skills

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

HITT 1011 - ELECTRONIC HEALTH RECORDS

Introduction to health IT standards, health-related data structures, software applications, and enterprise architecture in health care and public health. Course reviews the implementation and management of electronic health information using common electronic data interchange systems and maintaining the medical, legal, accreditation and regulatory requirements of the electronic health record.

Grade Basis: L
Lecture hours: 95.0

ELPT 1319 - FUNDAMENTALS OF ELECTRICITY I

An introduction to basic direct current (DC) theory including electron theory and direct current applications.

Upon successful completion, students will be able to:

- Explain atomic structure and basic electrical values such as voltage, current, resistance, and power
- Calculate electrical values for series, parallel, and combination circuits
- Calculate voltage drop based on conductor length, type of material, and size
- Summarize the principles of magnetism; and utilize electrical measuring instruments

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ELPT 1325 - NATIONAL ELECTRICAL CODE I

An introductory study of the National Electric Code (NEC) for those employed in fields requiring knowledge of the Code. Emphasis on wiring design, protection, methods, and materials; equipment for general use; and basic calculations.

Upon successful completion, students will be able to:

- Locate and interpret the sections in the NEC that pertain to electrical installations
- Calculate the size of conductors, boxes, raceways, and overcurrent protective devices for branch circuits supplying electrical equipment
- Calculate conductors, over-current protection, and service equipment as applied to building services
- Compute the size of branch circuits, feeders, and equipment for motors

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

ELPT 1341 - MOTOR CONTROL

Operating principles of solid-state and conventional controls along with their practical applications. Includes braking, jogging, plugging, safety interlocks, wiring, and schematic diagram interpretations.

Upon successful completion, students will be able to:

- Identify practical applications of jogging and plugging
- Describe the types of motor braking and their operating principles

- Explain different starting methods for large motors
- Demonstrate proper troubleshooting methods on circuits using wiring and schematic diagrams

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ELPT 2305 - MOTORS & TRANSFORMERS

Operation of single- and three-phase motors and transformers. Includes transformer banking, power factor correction, and protective devices.

Upon successful completion, students will be able to:

- Match the type of single-phase motor with its principles of operation
- Compare the operating characteristics of the three types of three-phase motors
- Explain the advantages of Wye and Delta connections in motor and transit applications
- Size over-current, short circuit, and ground fault protective devices
- Utilize nameplate information

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ELPT 2319 - PROGRAMMABLE LOGIC CONTROLLERS I

Fundamental concepts of programmable logic controllers, principles of operation, and numbering systems as applied to electrical controls.

Upon successful completion, students will be able to:

- Identify and describe digital logic circuits and explain numbering systems
- Explain the operation of programmable logic controllers
- Convert ladder diagrams into programs
- Incorporate timers and counters utilizing programmable logic controllers
- Execute and evaluate programs

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

EMSP 2237 - EMERGENCY PROCEDURES

Application of emergency medical procedures. This course was designed to be repeated multiple times to improve student proficiency.

Grade Basis: L
Credit hours: 2.0
Lab hours: 48.0

EMSP 1160 - CLINICAL - EMERGENCY MEDICAL TECHNICIAN/ TECHNOLOGY

A method of instruction providing detailed education, training and work-based experience, and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.

Grade Basis: L
Credit hours: 1.0

EMSP 1338 - INTRODUCTION TO ADVANCED PRACTICE

Fundamental elements associated with emergency medical services to include preparatory practices, pathophysiology, medication administration, and related topics.

Upon successful completion, students will be able to:

- Understand the roles and responsibilities of a paramedic within the EMS system
- Apply the basic concepts of development, pathophysiology and pharmacology to assessment and management of emergency patients
- Properly administer medications
- Communicate effectively with patients
- Understand the medical, legal, and ethical issues relating to EMS practice as well as the issues impacting the well being of the paramedic

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

EMSP 1355 - TRAUMA MANAGEMENT

A detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with traumatic injuries.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

EMSP 1356 - PATIENT ASSESSMENT & AIRWAY MANAGEMENT

A detailed study of the knowledge and skills required to reach competence in performing patient assessment, airway management, and artificial ventilation.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

EMSP 1501 - EMERGENCY MEDICAL TECHNICIAN

Introduction to the level of Emergency Medical Technician (EMT) - Basic. Includes all the skills necessary to provide emergency medical care at a basic life support level with an ambulance service or other specialized services.

Grade Basis: L
Credit hours: 5.0
Lecture hours: 32.0
Lab hours: 96.0

EMSP 2306 - EMERGENCY PHARMACOLOGY

Utilization of medications in treating emergency situations.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

EMSP 2261 - CLINICAL I - EMERGENCY MEDICAL TECHNICIAN/ PARAMEDIC

A method of instruction providing detailed education, training and work-based experience, and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.

Grade Basis: L
Credit hours: 2.0

EMSP 2262 - CLINICAL II - EMERGENCY MEDICAL TECHNICIAN/ PARAMEDIC

A method of instruction providing detailed education, training and work-based experience, and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.

Grade Basis: L
Credit hours: 2.0

EMSP 2305 - EMS OPERATIONS

Knowledge and skills to safely manage multi-casualty incidents and rescue situations, utilize air medical resources, identify hazardous materials, and other specialized incidents.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

EMSP 2352 - EMERGENCY MEDICAL SERVICES RESEARCH

Primary and/or secondary research in current and emerging issues in EMS. Basic research principles, scientific inquiry, and interpretation of professional literature are emphasized. Students will demonstrate computer competencies during this course. Students will be required to present research data utilizing the internet. Data presentation shall include, but not be limited to PowerPoint, Excel or other Windows platforms.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

EMSP 2434 - MEDICAL EMERGENCIES

A detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with medical emergencies.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

EMSP 2544 - CARDIOLOGY

A detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with cardiac emergencies.

Grade Basis: L
Credit hours: 5.0
Lecture hours: 64.0
Lab hours: 32.0

ENGL 1301 - COMPOSITION I

Intensive study of and practice in writing processes, from invention and researching to drafting, revising, and editing, both individually and collaboratively. Emphasis on effective rhetorical choices, including audience, purpose, arrangement, and style. Focus on writing the academic essay as a vehicle for learning, communicating, and critical analysis. Note: ENGL 1301 is a pre-requisite for all 2000-level literature courses. Meets NCTC Core Curriculum Requirement.

Upon successful completion, students will be able to:

- Demonstrate knowledge of individual and collaborative writing processes.
- Develop ideas with appropriate support and attribution.
- Write in a style appropriate to audience and purpose.
- Read, reflect, and respond critically to a variety of texts.
- Use Edited American English in academic essays.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading and Writing.

ENGL 1302 - COMPOSITION II

Intensive study of and practice in the strategies and techniques for developing research-based expository and persuasive texts. Emphasis on effective and ethical rhetorical inquiry, including primary and secondary research methods; critical reading of verbal, visual, and multimedia texts; systematic evaluation, synthesis, and documentation of information sources; and critical thinking about evidence and conclusions. Meets NCTC Core Curriculum Requirement.

Upon successful completion, students will be able to:

- Demonstrate knowledge of individual and collaborative research processes.

- Develop ideas and synthesize primary and secondary sources within focused academic arguments, including one or more research-based essays.
- Analyze, interpret, and evaluate a variety of texts for the ethical and logical uses of evidence.
- Write in a style that clearly communicates meaning, builds credibility, and inspires belief or action.
- Apply the conventions of style manuals for specific academic disciplines (e.g., APA, CMS, MLA, etc.)

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- ENGL 1301 - COMPOSITION I

Restrictions:

- Must meet TSI College Readiness Standard for Reading and Writing.

ENGL 2307 - CREATIVE WRITING

Practical experience in the techniques of imaginative writing. May include fiction, nonfiction, poetry, screenwriting, or drama.

Upon successful completion, students will be able to:

- Discuss written works of art from classic and contemporary movements.
- Create pieces of narrative work experimenting with elements of fiction (plot, character, setting, etc.), create pieces of poetic work experimenting with form, content, and style, and/or create pieces of dramatic work experimenting with elements of stage and screen (story, character, form, set, etc.), and/or create reflective work experimenting with elements of creative nonfiction.
- Discuss students' creative texts.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

ENGL 2311 - TECHNICAL & BUSINESS WRITING

Intensive study of and practice in professional settings. Focus on the types of documents necessary to make decisions and take action on the job, such as proposals, reports, instructions, policies and procedures, e-mail messages, letters, and descriptions of products and services. Practice individual and collaborative

processes involved in the creation of ethical and efficient documents. Meets NCTC Core Curriculum Requirement.

Upon successful completion, students will be able to:

- Recognize, analyze, and accommodate diverse audiences.
- Produce documents appropriate to audience, purpose, and genre.
- Analyze the ethical responsibilities involved in technical communication.
- Locate, evaluate, and incorporate pertinent information.
- Develop verbal, visual, and multimedia materials as necessary, in individual and/or collaborative projects, as appropriate.
- Edit for appropriate style, including attention to word choice, sentence structure, punctuation, and spelling.
- Design and test documents for easy reading and navigation.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading and Writing.

ENGL 2322 - BRITISH LITERATURE I

A survey of the development of British literature from the Anglo-Saxon period to the Eighteenth Century. Students will study works of prose, poetry, drama, and fiction in relation to their historical, linguistic, and cultural contexts. Texts will be selected from a diverse group of authors and traditions. Meets NCTC Core Curriculum Requirement.

Upon successful completion, students will be able to:

- Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.
- Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
- Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.
- Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.
- Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- ENGL 1301 - COMPOSITION I

Restrictions:

- Must meet TSI College Readiness Standard for Reading and Writing.

ENGL 2323 - BRITISH LITERATURE II

A survey of the development of British literature from the Romantic period to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions. Meets NCTC Core Curriculum Requirement.

Upon successful completion, students will be able to:

- Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.
- Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
- Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.
- Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.
- Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- ENGL 1301 - COMPOSITION I

Restrictions:

- Must meet TSI College Readiness Standard for Reading and Writing.

ENGL 2327 - AMERICAN LITERATURE I

A survey of American literature from the period of exploration and settlement through the Civil War. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from among a diverse group of authors for what they reflect and reveal about the evolving American experience and character. Meets NCTC Core Curriculum Requirement.

Upon successful completion, students will be able to:

- Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.
- Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
- Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.
- Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.
- Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- ENGL 1301 - COMPOSITION I

Restrictions:

- Must meet TSI College Readiness Standard for Reading and Writing.

ENGL 2328 - AMERICAN LITERATURE II

A survey of American literature from the Civil War to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from among a diverse group of authors for what they reflect and reveal about the evolving American experience and character. Meets NCTC Core Curriculum Requirement.

Upon successful completion, students will be able to:

- Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.
- Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
- Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.
- Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.
- Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

Grade Basis: L
Credit hours: 3.0

Lecture hours: 48.0

Prerequisites:

- ENGL 1301 - COMPOSITION I

Restrictions:

- Must meet TSI College Readiness Standard for Reading and Writing.

ENGL 2332 - WORLD LITERATURE I

A survey of world literature from the ancient world through the sixteenth century. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions. Meets NCTC Core Curriculum Requirement.

Upon successful completion, students will be able to:

- Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.
- Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
- Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.
- Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.
- Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- ENGL 1301 - COMPOSITION I

Restrictions:

- Must meet TSI College Readiness Standard for Reading and Writing.

ENGL 2333 - WORLD LITERATURE II

A survey of world literature from the seventeenth century to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural

contexts. Texts will be selected from a diverse group of authors and traditions. Meets NCTC Core Curriculum Requirement.

Upon successful completion, students will be able to:

- Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.
- Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
- Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.
- Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.
- Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- ENGL 1301 - COMPOSITION I

Restrictions:

- Must meet TSI College Readiness Standard for Reading and Writing.

INRW 0310 - INTEGRATED READING/WRITING

Integration of critical reading and academic writing skills. This Intervention is designed specifically for students assessed at BASE levels 3-4 and must be part of a student's co-enrollment (corequisite) enrollment: as a mainstreamed intensifier providing contact hours for additional, just-in-time instructional support for the student's success in the developmental IRW course, or as a contextualized and/or integrated basic skills instructional support for a Career/Technical Education course.

Upon successful completion, students will be able to:

- Locate explicit textual information, draw complex inferences, and describe, analyze, and evaluate the information within and across multiple texts of varying lengths.
- Comprehend and use vocabulary effectively in oral communication, reading, and writing.
- Identify and analyze the audience, purpose, and message across a variety of texts.
- Describe and apply insights gained from reading and writing a variety of texts.
- Compose a variety of texts that demonstrate reading comprehension, clear focus, logical development of ideas, and use of appropriate language that advance the writer's purpose.

- Determine and use effective approaches and rhetorical strategies for given reading and writing situations.
- Generate ideas and gather information relevant to the topic and purpose, incorporating the ideas and words of other writers in student writing using established strategies.
- Evaluate relevance and quality of ideas and information in recognizing, formulating, and developing a claim.
- Develop and use effective reading and revision strategies to strengthen the writer's ability to compose college-level writing assignments.
- Recognize and apply the conventions of standard English in reading and writing.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

HART 1356 - EPA RECOVERY CERTIFICATION PREPARATION

Certification training for HVAC refrigerant recovery, recycle, and reclaim. Instruction will provide a review of EPA guidelines for refrigerant recovery and recycling during the installation, service, and repair of all HVAC and refrigeration systems.

Upon successful completion, students will be able to:

- Define refrigerant recovery
- Recycle, and reclaim terms
- Explain refrigerant recovery, recycle, and reclaim procedures
- Analyze refrigerant recovery, recycle, and reclaim operations
- Identify Type I, Type II, and Type III appliances
- Examine and utilize Section 608 of the Clean Air Act of 1990 Refrigerant, Recovery, Recycle, and Reclaim

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

AGEQ 1401 - EQUINE BEHAVIOR AND TRAINING I

Instruction in basic equine behavior and training methods. Topics include anatomy and physiology, behavior, safety, health care management, and training methods.

Upon successful completion, students will be able to:

- Recognize behavioral patterns as they relate to training methods and desired results
- Implement appropriate training strategies
- Evaluate progress and adapt training method(s) accordingly

Grade Basis: L
Credit hours: 4.0
Lecture hours: 64.0

AGEQ 1305 - EQUINE ENTERPRISE MANAGEMENT

Overview of the equine industry. Includes equine industry segments, job market, and economic impact.

Upon successful completion, students will be able to:

- Define the various equine industry segments and explain their economic significance
- Identify employment opportunities in the equine industry

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0
Lab hours: 16.0

ACNT 2336 - FINANCIAL STATEMENT ANALYSIS

Financial statement analysis from a decision-maker's perspective. This course may also be offered for qualifying education credit for CPA examinations by Texas community colleges that meet Texas State Board of Public Accountancy standards.

Upon successful completion, students will be able to:

- Identify the objectives of financial statement.
- Examine the accounting principles used in compiling financial statements.
- Describe the qualitative characteristics of financial statements.
- Analyze financial statements including analysis of accounts, variance, trends, and ratios.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

FIRT 1349 - FIRE ADMINISTRATION II

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.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 64.0

FIRS 1203 - FIREFIGHTER AGILITY & FITNESS PREPARATION

Physical ability testing methods. Rigorous training in skills and techniques needed in typical fire department physical ability tests.

Grade Basis: L
Credit hours: 2.0
Lab hours: 48.0

FIRS 1301 - FIREFIGHTER CERTIFICATION I

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 be offered only by institutions certified as a training facility by the Texas Commission on Fire Protection (TCFP).

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

FIRS 1313 - FIREFIGHTER CERTIFICATION III

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 be offered only by institutions certified as a training facility by the Texas Commission on Fire Protection (TCFP).

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 48.0

FIRS 1319 - FIREFIGHTER CERTIFICATION IV

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 be offered only by institutions certified as a training facility by the Texas Commission on Fire Protection (TCFP).

Grade Basis: L
Credit hours: 3.0
Lecture hours: 16.0

Lab hours: 64.0

FIRS 1323 - FIREFIGHTER CERTIFICATION V

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 be offered only by institutions certified as a training facility by the Texas Commission on Fire Protection (TCFP).

Grade Basis: L
Credit hours: 3.0
Lecture hours: 16.0
Lab hours: 64.0

FIRS 1329 - FIREFIGHTER CERTIFICATION VI

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 Basic Structural Fire Suppression, Course #100. This course may be offered only by institutions certified as a training facility by the Texas Commission on Fire Protection (TCFP).

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

FIRT 1307 - FIRE PREVENTION CODES & INSPECTIONS

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. This course meets Fire and Emergency Services Higher Education(FESHE) Model Curriculum core requirements.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 64.0

FIRT 1309 - FIRE ADMINISTRATION I

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.

Grade Basis: L

Credit hours: 3.0
Lecture hours: 64.0

FIRT 1319 - FIREFIGHTER HEALTH & SAFETY

Course Description: Firefighter occupational safety and health in emergency and non-emergency situations. This course meets Fire and Emergency Services Higher Education (FESHE) Model Curriculum core requirements.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 64.0

FIRT 1329 - BUILDING CODES & CONSTRUCTION

Local building and fire prevention codes. Fire prevention inspections, practices, and procedures. This course meets Fire and Emergency Services Higher Education (FESHE) Model Curriculum core requirements.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 64.0

FIRT 1333 - FIRE CHEMISTRY I

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. This course meets Fire and Emergency Services Higher Education (FESHE) Model Curriculum core requirements.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 64.0

FIRT 1338 - FIRE PROTECTION SYSTEMS

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. This course meets Fire and Emergency Services Higher Education (FESHE) Model Curriculum core requirements.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 64.0

FIRT 2188 - INTERNSHIP-FIRE PROTECTION & SAFETY TECHNOLOGY

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.

Grade Basis: L
Credit hours: 1.0

FIRT 2309 - FIREFIGHTING STRATEGIES & TACTICS

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.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 64.0

FMKT 1301 - FLORAL DESIGN

Principles and elements of floral art with an emphasis on commercial design. Topics include basic design styles and color harmonies, identification, use, and care of processing of cut flowers and foliage, mechanical aids and containers, personal flowers, holiday designs, and plant identification and care. History of floral art in society.

Upon successful completion, students will be able to:

- Apply principles and elements of design
- Identify floral design styles
- Identify cut flowers and foliage
- Explain the care and processing methods for extended vase life
- Select containers and mechanical aids
- Create basic floral arrangements

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

FMKT 2331 - ADVANCED FLORAL DESIGN

An in-depth coverage of advanced floral design practices for the retail floral industry. Topics include contemporary floral arrangement styles and trends.

Upon successful completion, students will be able to:

- Create contemporary floral designs
- Identify specialty flowers and foliage used in retail flower shops
- Determine care and processing techniques
- Select mechanical aids
- Calculate price by various methods

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- FMKT 1301 - FLORAL DESIGN

AGCR 1341 - FORAGE & PASTURE MANAGEMENT

Study of the production and management of forage crops and pastures including establishment, fertilization, weed control, grazing systems, hay, seed production, and harvesting. Lab fees apply

Upon successful completion, students will be able to:

- Develop techniques and management practices to optimize pasture and forage production
- Determine forage nutritive quality in relation to livestock production
- Identify forage and pasture plants and weed species

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 48.0

ACNT 1305 - FORENSIC ACCOUNTING

Accounting fraud and examination designed to provide a basic understanding of the impact that fraud has on an organization.

Upon successful completion, students will be able to:

- Describe how fraud is committed.
- Explain how internal control systems can deter fraudulent acts.
- Identify signs of occupational fraud.
- Explain anti-fraud prevention methods.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

ENGL 2341 - FORMS OF LITERATURE

The study of one or more literary genres including, but not limited to, poetry, fiction, drama, and film. Meets NCTC Core Curriculum Requirement.

Upon successful completion, students will be able to:

- Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.
- Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
- Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.
- Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.
- Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- ENGL 1301 - COMPOSITION I

Restrictions:

- Must meet TSI College Readiness Standard for Reading and Writing.

FREN 1411 - BEGINNING FRENCH I

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture. Lab fees apply.

Upon successful completion, students will be able to:

- Engage in conversations using level-appropriate grammatical structures including narrating events that take place in the present and producing questions and responses on a variety of topics dealing with everyday life.
- Demonstrate understanding of level-appropriate spoken French.
- Write simple sentences and organize them into short paragraphs.
- Read and comprehend level-appropriate texts.
- Identify and discuss traditions, customs and values of the French world.
- Compare and contrast the traditions, customs and values of the French world with characteristics of their own culture.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

FREN 1412 - BEGINNING FRENCH II

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture. Lab fees apply.

Upon successful completion, students will be able to:

- Engage in conversations using level-appropriate grammatical structures including narrating events that take place in the past.
- Demonstrate understanding of level-appropriate spoken French produced by French speakers of diverse origins.
- Write simple to moderately complex sentences using level-appropriate grammatical structures and organize them into cohesive paragraphs.
- Read and comprehend level-appropriate authentic texts.
- Identify and discuss traditions, customs and values of the French world.
- Compare and contrast the traditions, customs and values of the French world with characteristics of their own culture.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

Prerequisites:

- FREN 1411 - BEGINNING FRENCH I

Restrictions:

- 1 year high school French, FREN 1411, or approval by instructor.

FREN 2311 - INTERMEDIATE FRENCH I

Review and application of skills in listening comprehension, speaking, reading, and writing. Emphasizes conversation, vocabulary acquisition, reading, composition, and culture.

Upon successful completion, students will be able to:

- Demonstrate comprehension of authentic spoken discourse produced by French speakers of diverse origins.
- Produce oral French comprehensible to native speakers using complex grammatical structures to narrate, describe and elicit information.

- Demonstrate increasing comprehension of authentic written texts in a variety of genres.
- Write descriptions and narratives at a low intermediate level using complex grammatical structures.
- Formulate cohesive paragraphs and short/simple essays.
- Describe cultural practices and products of the French-speaking world drawing on authentic materials including literature and the visual arts.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- FREN 1411 - BEGINNING FRENCH I
- FREN 1412 - BEGINNING FRENCH II

Restrictions:

- 2 years high school French, FREN 1412, or approval by instructor

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FREN 2312 - INTERMEDIATE FRENCH II

Review and application of skills in listening comprehension, speaking, reading, and writing. Emphasizes conversation, vocabulary acquisition, reading, composition, and culture.

Upon successful completion, students will be able to:

- Summarize authentic spoken discourse produced by French speakers of diverse origins.
- Produce French comprehensible to native speakers using complex grammatical structures to communicate analytical and interpretive information in both impromptu and prepared speech.
- Demonstrate increasing comprehension of authentic written texts in a variety of genres.
- Write evaluations and critiques at a high intermediate level using complex grammatical structures.
- Formulate cohesive paragraphs and essays.
- Interpret cultural practices and products of the French-speaking world drawing on authentic materials including literature and the visual arts.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- FREN 1411 - BEGINNING FRENCH I

- FREN 1412 - BEGINNING FRENCH II
- FREN 2311 - INTERMEDIATE FRENCH I

Restrictions:

- 3 years high school French, FREN 2311, or approval by instructor.

PSTR 1301 - FUNDAMENTALS OF BAKING

Fundamentals of baking including dough, quick breads, pies, cakes, cookies, and tarts. Instruction in flours, fillings, and ingredients. Topics include baking terminology, tool and equipment use, formula conversions, functions of ingredients, and the evaluation of baked products. Lab fees apply

Upon successful completion, students will be able to:

- Identify and explain baking terms, ingredients, equipment, and tools
- Scale and measure ingredients
- Convert and cost recipes
- Operate baking equipment and tools
- Prepare yeast products, quick breads, pies, tarts, cookies, various cakes, and icings • Demonstrate fundamental decorating techniques
- Demonstrate fundamental decorating techniques
- Produce commercially acceptable baked products

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 64.0

GAME 1303 - INTRODUCTION TO GAME DESIGN & DEVELOPMENT

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.

Upon successful completion, students will be able to:

- Describe the history and evolution of video and computer games and game genres
- Identify the phases and processes involved in developing a computer game
- Design a simple computer game from initial concept to final design document
- Describe current trends in the game industry with regards to hiring practices, working conditions, etc

Grade Basis: L
Credit hours: 3.0

Lecture hours: 32.0
Lab hours: 32.0

GAME 1306 - DESIGN AND CREATION OF GAMES

Introduction to game and simulation development. Includes an overview of cultural history of electronic games, survey of the major innovators, and examination of the trends that motivate game design.

Upon successful completion, students will be able to:

- Summarize the evolution of the electronic game industry
- Explain essential game and simulation elements
- Evaluate the strengths and limitations of game and simulation systems
- Identify programmatic and graphical elements of a development system
- Develop a concept document and simple game

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

GAME 1309 - INTRODUCTION TO ANIMATION PROGRAMMING

Mathematical elements and algorithms involved in basic animation. Includes generating graphics, viewing 3D environments such as visible line detection and 3D surfaces, image processing techniques, and special effects.

Upon successful completion, students will be able to:

- Develop programs that apply the basic character animation techniques, pose animated characters, and implement proper timing within animations.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

GAME 1328 - VIDEO GAME DESIGN

Introduction to video game design techniques which inspire artists and non-artists. Including characters, environments, architecture, static objects, user interface, and storyboards for games. Emphasizes applying 2D design concepts.

Upon successful completion, students will be able to:

- Describe best practices in design techniques

- Recommend design solutions
- Identify criteria for communicating design

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

GAME 1343 - GAME AND SIMULATION PROGRAMMING I

Game and simulation programming. Includes advanced pointer manipulation techniques and pointer applications, points and vectors, sound, and graphics.

Upon successful completion, students will be able to:

- Incorporate sound and graphics in programs
- Develop a game/simulation advanced pointer techniques and application

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSE 2321 - OBJECT-ORIENTED PROGRAMMING

GAME 2308 - PORTFOLIO FOR GAME DEVELOPMENT

Design and management of an industry standard portfolio. Includes techniques in self-promotion, resume writing, portfolio distribution systems, and interviewing.

Upon successful completion, students will be able to:

- Design a professional portfolio for various delivery systems
- Create resume, business card, web page, demo reel, and hardcopy

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Restrictions:

- Division Chair approval required

GAME 2342 - GAME DEVELOPMENT USING C++

Skill development in C++ programming for games and simulations.

Upon successful completion, students will be able to:

- Utilize standard game libraries
- Examine interfaces, exceptions, file access, and random numbers
- Create basic game or simulation frameworks building upon C++ knowledge

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSE 2321 - OBJECT-ORIENTED PROGRAMMING

HPRS 2231 - GENERAL HEALTH PROFESSIONS MANAGEMENT

Exploration and application of management concepts necessary for effective health profession operations.

Grade Basis: L
Credit hours: 2.0

GEOL 1401 - EARTH SCIENCE FOR NON-MAJORS I

Survey of geology, meteorology, oceanography, and astronomy. Activities will cover methods used to collect and analyze data in geology, meteorology, oceanography, and astronomy. Lab fees apply

Upon successful completion, students will be able to:

- Explain the current theories concerning the origin of the Universe and of the Solar System.
- Explain the place of Earth in the Solar System and its relationships with other objects in the Solar System.
- Relate the origin and evolution of Earth’s internal structures to its resulting geologic systems, including Earth materials and plate tectonic activities.
- Explain the operation of Earth’s geologic systems and the interactions among the atmosphere, the geosphere, and the hydrosphere, including meteorology and oceanography.
- Explain the history of the Earth including the evolution of earth systems and life forms.
- Classify rocks and minerals based on chemical composition, physical properties, and origin.

- Apply knowledge of topographic maps, diagrams, and/or photographs to identify landforms and explain the processes that created them.
- Differentiate the types of plate boundaries, explain the processes that occur at each and identify associated structural features on maps, block diagrams and cross sections.
- Apply relative and numerical age-dating techniques to construct geologic histories.
- Measure atmospheric processes that affect weather and climate.
- Describe the composition and motion of ocean water and analyze the factors controlling both.
- Compare properties and motions of objects in the solar system.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

GEOL 1402 - EARTH SCIENCES FOR NON-MAJORS II

Extension of the study of geology, astronomy, meteorology and oceanography, focusing on natural resources, hazards and climate variability. This laboratory-based course accompanies GEOL 1302 Earth Sciences II. Activities will focus on methods used to collect and analyze data related to natural resources, hazards and climate variability. Lab fees apply

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

GOVT 2305 - FEDERAL GOVERNMENT - FEDERAL CONSTITUTION & TOPICS

Origin and development of the U.S. Constitution, structure and powers of the national government including the legislative, executive, and judicial branches, federalism, political participation, the national election process, public policy, civil liberties and civil rights. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Explain the origin and development of constitutional democracy in the United States.
- Demonstrate knowledge of the federal system.
- Describe separation of powers and checks and balances in both theory and practice.
- Demonstrate knowledge of the legislative, executive, and judicial branches of the federal government.

- Evaluate the role of public opinion, interest groups, and political parties in the political system.
- Analyze the election process.
- Describe the rights and responsibilities of citizens.
- Analyze issues, and policies in U.S. politics.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading

GOVT 2306 - TEXAS GOVERNMENT - TEXAS CONSTITUTION & TOPICS

Origin and development of the Texas constitution, structure and powers of state and local government, federalism and inter-governmental relations, political participation, the election process, public policy, and the political culture of Texas. Meets Core Curriculum Requirement

Upon successful completion, students will be able to:

- Explain the origin and development of the Texas Constitution.
- Demonstrate an understanding of state and local political systems and their relationship with the federal government.
- Describe separation of powers and checks and balances in both theory and practice in Texas.
- Demonstrate knowledge of the legislative, executive, and judicial branches of Texas government.
- Evaluate the role of public opinion, interest groups, and political parties in Texas.
- Analyze the state and local election process.
- Identify the rights and responsibilities of citizens.
- Analyze issues, policies, and political culture of Texas.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading

HALT 1303 - HERBACEOUS PLANTS

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.

Upon successful completion, students will be able to:

- Identify herbaceous plants at various growth stages
- Explain methods used to propagate herbaceous plants
- Describe the cultural requirements for care and use of herbaceous plants

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HALT 1309 - INTERIOR PLANTS

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.

Upon successful completion, students will be able to:

- Identify interior plants
- Select care methods for specific plants
- Identify production methods of interior plants

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HALT 1325 - LANDSCAPE PLANT MATERIAL

Study of the identification, characteristics, cultural requirements, and landscape uses of native and adapted plants.

Upon successful completion, students will be able to:

- Identify plants
- Select plants for various landscape situations
- List characteristics of plants
- Describe cultural requirements of plants

Grade Basis: L
Credit hours: 3.0

Lecture hours: 32.0
Lab hours: 32.0

HALT 1331 - WOODY PLANT MATERIALS

Study of woody plant materials used in the horticulture industry. Topics include identification, characteristics, adaptation, cultural requirements, pest and disease problems, and use in the landscape.

Upon successful completion, students will be able to:

- Identify woody plants in various growth stages
- Describe morphological, anatomical, or other botanical features
- Explain cultural requirements of woody plants

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HALT 1333 - LANDSCAPE IRRIGATION

Coverage of irrigation systems including equipment, design, performance, and maintenance. Topics include residential and small business applications, troubleshooting, repair, and technological advances in irrigation systems.

Upon successful completion, students will be able to:

- Describe the basic installation techniques used to install an irrigation system
- Discuss the separation of zones for turf areas, shrubs, ground covers, and other plant groups
- Prepare a design for an irrigation system

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HALT 1353 - LANDSCAPE COMPUTER DESIGN

A course in computer-aided landscape design. Emphasis on the application of design concepts and techniques using software.

Upon successful completion, students will be able to:

- Design landscape plans using computer software programs
- Print a report of all hardscape and softscape materials used in the design

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- HALT 1422 - LANDSCAPE DESIGN

HALT 1372 - NATURALISTIC HORTICULTURE

An organic approach to plant production, pest management, soil fertility, and plant health. Emphasis on sustainability, xeriscaping and landscaping using native plants as well as creating wildlife landscapes.

Upon successful completion, students will be able to:

- Demonstrate and apply sustainable horticulture techniques and principles
- Explain the benefits of biodiversity in the garden
- Produce and maintain healthy soils

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HALT 1422 - LANDSCAPE DESIGN

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.

Upon successful completion, students will be able to:

- Demonstrate procedures utilized in the development of a landscape plan
- Develop a landscape design
- Perform a site analysis and incorporate the information into the final design

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

HALT 2280 - COOPERATIVE EDUCATION

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.

Upon successful completion, students will be able to:

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry

Grade Basis: L
Credit hours: 2.0
Lecture hours: 16.0
Lab hours: 160.0

HALT 2302 - GREENHOUSE CROP PRODUCTION

Production of crops within the greenhouse environment. Topics include growing techniques, environmental control, crop rotation, scheduling, preparation for sale, and marketing.

Upon successful completion, students will be able to:

- Produce crops within a greenhouse
- Explain various cultural requirements for greenhouse crops
- Implement marketing and sales
- Modify crop growth and development

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HALT 2307 - HORTICULTURAL FOOD CROPS

A study of commercial and home cultivated food crops including various vegetables, fruits, and nuts. Topics address planting, maintenance, harvest, and storage of the various crops.

Upon successful completion, students will be able to:

- Demonstrate the ability to plan, design, and plant a vegetable garden or small fruit orchard and properly cultivate, fertilize, water, and harvest the garden or orchard
- Discuss various types of gardens and their applications in both commercial and residential settings

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HALT 2308 - GREENHOUSE MANAGEMENT

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.

Upon successful completion, students will be able to:

- Compare and select architectural styles and materials for greenhouse construction
- Calculate heating, cooling, and light requirements and select appropriate equipment
- Determine cultural and business methods necessary for crop production

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HALT 2321 - SMALL FARMING

Instruction in small farming techniques with emphasis on horticulture science including comprehensive and profitable guidelines. Topics include herbs, fruits, nut, and vegetable crops.

Upon successful completion, students will be able to:

- Identify major physical and biological factors that affect crops
- Utilize innovative production techniques for a small farming operation
- Demonstrate creative marketing techniques for small farming operations
- Design productive and profitable small farming operations

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HART 1301 - BASIC ELECTRICITY FOR HVAC

Principles of electricity as required by HVAC, including proper use of test equipment, electrical circuits, and component theory and operation.

Upon successful completion, students will be able to:

- Demonstrate knowledge of basic principles of electricity, electrical current, circuitry, and air conditioning devices
- Apply Ohm's law to electrical calculations
- Perform electrical continuity, voltage, and current tests with appropriate meters
- Demonstrate electrical safety

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HART 1307 - REFRIGERATION PRINCIPLES

An introduction to the refrigeration cycle, heat transfer theory, temperature/pressure relationship, refrigerant handling, refrigeration components, and safety.

Upon successful completion, students will be able to:

- Identify refrigeration components
- Explain operation of the basic refrigeration cycle and heat transfer
- Demonstrate proper application and/or use of tools, test equipment, and safety procedures

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HART 1341 - RESIDENTIAL AIR CONDITIONING

A study of components, applications, and installation of mechanical air conditioning systems including operating conditions, troubleshooting, repair, and charging of air conditioning systems.

Upon successful completion, students will be able to:

- Identify various types of system applications
- Perform charging, recovery, and evacuation procedures of an installed system
- Perform component and part diagnostics and replacement
- Perform system maintenance

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HART 2301 - AIR CONDITIONING & REFRIGERATION CODES

HVAC standards and concepts with emphasis on the understanding, and documentation of the codes and regulations required for the state mechanical contractors license and local codes.

Upon successful completion, students will be able to:

- Demonstrate the ability to locate and identify information in code books and reference materials applicable to installation procedures governed by Texas Department of Licensing and Regulation (TDLR)

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

HART 2342 - COMMERCIAL REFRIGERATION

Theory and practical application in the maintenance of commercial refrigeration; medium, and low temperature applications and ice machines.

Upon successful completion, students will be able to:

- Explain and apply medium and low temperature systems operation
- Explain and apply ice machine and packaged refrigeration system operation
- Explain application and conversion procedures of refrigerants related to specific systems

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 64.0

HART 2358 - TESTING, ADJUSTING & BALANCING HVAC SYSTEMS

A study in the process of checking and adjusting all the building environmental systems to produce the design objectives. Emphasis on efficiency and energy savings.

Upon successful completion, students will be able to:

- Interpret HVAC design specifications and plans
- Measure air flow, water flow, and system pressure with instruments
- Perform calculations for fan and pump laws including psychometric
- Adjust and align mechanical equipment
- Diagnose malfunctioning equipment and create a punch list
- Test air quality, humidity, noise, and temperature

Grade Basis: L

Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HART 2380 - COOPERATIVE EDUCATION - HEATING, AIR CONDITIONING AND REFRIGERATION TECHNOLOGY

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 learning with work experience. Includes lecture component.

Upon successful completion, students will be able to:

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry

Grade Basis: L
Credit hours: 3.0
Lecture hours: 16.0

HART 2349 - HEAT PUMPS

A study of heat pumps, heat pump control circuits, defrost controls, auxiliary heat, air flow, and other topics related to heat pump systems.

Upon successful completion, students will be able to:

- Explain a reverse cycle system
- List the mechanical and electrical components for the heat pump operation
- Explain the operation of heat pump modes including cooling, heating, defrost, emergency heat, and auxiliary heat mode
- Identify and explain different methods of accomplishing defrost
- Charge a system correctly in the heating and cooling mode
- Troubleshoot electrical and mechanical components
- Perform tests for adequate air flow
- Determine balance point and coefficiency of performance (C.O.P.)
- Define attributes of geothermal heat pump systems

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0

Lab hours: 32.0

HIST 1301 - UNITED STATES HISTORY I

A survey of the social, political, economic, cultural, and intellectual history of the United States from the pre-Columbian era to the Civil War/Reconstruction period. United States History I includes the study of pre-Columbian, colonial, revolutionary, early national, slavery and sectionalism, and the Civil War/Reconstruction eras. Themes that may be addressed in United States History I include: American settlement and diversity, American culture, religion, civil and human rights, technological change, economic change, immigration and migration, and creation of the federal government. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Create an argument through the use of historical evidence.
- Analyze and interpret primary and secondary sources.
- Analyze the effects of historical, social, political, economic, cultural, and global forces on this period of United States history.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading

HIST 1302 - UNITED STATES HISTORY II

A survey of the social, political, economic, cultural, and intellectual history of the United States from the Civil War and Reconstruction era to the present. United States History II examines industrialization, immigration, world wars, the Great Depression, Cold War and post-Cold War eras. Themes that may be addressed in the United States History II include American culture, religion, civil and human rights, technological change, economic change, immigration and migration, urbanization and suburbanization, the expansion of the federal government, and the study of U.S. foreign policy. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Create an argument through the use of historical evidence.
- Analyze and interpret primary and secondary sources.
- Analyze the effects of historical, social, political, economic, cultural, and global forces on this period of the United States History.

Grade Basis: L
Credit hours: 3.0

Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading.

HIST 2301 - TEXAS HISTORY

A survey of the political, social, economic, cultural, and intellectual history of Texas from the pre-Columbian era to the present. Themes that may be addressed in Texas History include: Spanish colonization and Spanish Texas; Mexican Texas; the Republic of Texas; statehood and secession; oil, industrialization, and urbanization; civil rights; and modern Texas. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Create an argument through the use of historical evidence.
- Analyze and interpret primary and secondary sources.
- Analyze the effects of historical, social, political, economic, cultural, and global forces on this period of Texas History.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading.

HIST 2321 - WORLD CIVILIZATIONS I

A survey of the social, political, economic, cultural, religious, and intellectual history of the world from emergence of human cultures through the 15th century. The course examines major cultural regions of the world in Africa, the Americas, Asia, Europe, and Oceania and their global interactions over time. Themes include the emergence of early societies, the rise of civilizations, the development of political and legal systems, religion and philosophy, economic systems and trans-regional networks of exchange. The course emphasizes the development, interaction and impact of global exchange. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Create an argument through the use of historical evidence.
- Analyze and interpret primary and secondary sources.
- Analyze the effects of historical, social, political, economic, cultural, and global forces on this period of world history.

Grade Basis: L

Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading.

HIST 2322 - WORLD CIVILIZATIONS II

A survey of the social, political, economic, cultural, religious, and intellectual history of the world from the 15th century to the present. The course examines major cultural regions of the world in Africa, the Americas, Asia, Europe, and Oceania and their global interactions over time. Themes include maritime exploration and transoceanic empires, nation/state formation and industrialization, imperialism, global conflicts and resolutions, and global economic integration. The course emphasizes the development, interaction and impact of global exchange. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Create an argument through the use of historical evidence.
- Analyze and interpret primary and secondary sources.
- Analyze the effects of historical, social, political, economic, cultural, and global forces on this period of world history.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading

HITT 1205 - MEDICAL TERMINOLOGY

Study of the basic structure of medical words including prefixes, suffixes, roots, combining forms, plurals, pronunciation, spelling, and the definitions of medical terms. Emphasis is on building a professional vocabulary required for employment in the allied health care field.

Upon successful completion, students will be able to:

- Use medical terms in context
- Utilize prefixes, suffixes, root words, and plurals to construct medical terms
- Analyze medical terms
- Translate medical abbreviations
- Interpret symbols
- Identify, pronounce, and spell medical terms

Grade Basis: L
Credit hours: 2.0
Lecture hours: 2.0

HORT 1401 - HORTICULTURE

Structure, growth, and development of horticultural plants. Examination of environmental effects, basic principles of reproduction, production methods ranging from outdoor to controlled climates, nutrition, and pest management.

Upon successful completion, students will be able to:

- Identify the various horticultural industries and their roles in our society
- Investigate methods of environmental manipulation (e.g. greenhouse controls, frost management methods, hot caps)
- Apply scientific reasoning to investigate questions and utilize scientific and horticultural tools to collect and analyze data and demonstrate methods
- Use critical thinking and scientific problem - solving to make informed decisions
- Communicate effectively the results of scientific investigations
- Describe the fundamentals of plant science
- Assess the interactions of soils, water, and fertility in plant science
- Contrast the methods of plant reproduction and propagation
- Explain the impacts of production methods and technologies on plant science
- Contrast methods of pest management in plant science

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

HRPO 2301 - HUMAN RESOURCES MANAGEMENT

Behavioral and legal approaches to the management of human resources in organizations.

Upon successful completion, students will be able to:

- Explain the development of human resources management
- Explain current methods of job analysis, recruitment, selection, training/ development, performance management, promotion, and separation
- Describe management's ethical, social, and legal responsibilities
- Explain methods of compensation and benefits planning
- Describe the role of strategic human resources planning

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

HRPO 2307 - ORGANIZATIONAL BEHAVIOR

The analysis and application of organizational theory, group dynamics, motivation theory, leadership concepts and the integration of interdisciplinary concepts from the behavioral sciences.

Upon successful completion, students will be able to:

- Explain organizational theory as it relates to management practices, employee relations, and structure of the organization to fits its environment and operation
- Analyze leadership styles and determine their effectiveness in employee situations
- Identify methods in resolving organizational problems
- Describe the impact of corporate culture on employee behavior
- Analyze team dynamics, team building strategies, and cultural diversity

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

HUMA 1301 - INTRODUCTION TO THE HUMANITIES I

This stand-alone course is an interdisciplinary survey of cultures focusing on the philosophical and aesthetic factors in human values with an emphasis on the historical development of the individual and society and the need to create. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Demonstrate awareness of the scope and variety of works in the arts and humanities.
- Articulate how these works express the values of the individual and society within a historical and social context.
- Articulate an informed personal response and critically analyze works in the arts and humanities.
- Demonstrate knowledge and understanding of the influence of literature, philosophy, and the arts on cultural experiences.
- Demonstrate an awareness of the creative process and why humans create.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading.

HYDR 1345 - HYDRAULICS & PNEUMATICS

Discussion of the fundamentals of hydraulics and pneumatics, components of each system, and the operations, maintenance, and analysis of each system.

Upon successful completion, students will be able to:

- Demonstrate the operation of basic hydraulic and pneumatic systems including associated instruments
- Interpret schematics
- Troubleshoot systems
- Design a schematic drawing of a working system

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

IBUS 1305 - INTRODUCTION TO INTERNATIONAL BUSINESS & TRADE

The techniques for entering the international marketplace. Emphasis on the impact and dynamics of sociocultural, demographic, economic, technological, and political-legal factors in the foreign trade environment. Topics include patterns of world trade, internationalization of the firm, and operating procedures of the multinational enterprise.

Upon successful completion, students will be able to:

- Explain terms used in the international business environment
- Discuss internal and external factors influencing the conduct of international business

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

IMED 1316 - WEB DESIGN I

Instruction in web page design and related graphic design issues including mark-up languages and browser issues.

Upon successful completion, students will be able to:

- Identify how the Internet functions with specific attention to the file transfer
- Apply design techniques in the creation and optimization of graphics and other embedded elements
- Demonstrate the use of World Wide Web Consortium (W3C) formatting and layout standards

- Design, create, test, and maintain a web site

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

IMED 1345 - INTERACTIVE DIGITAL MEDIA I

Exploration of the use of graphics and sound to create interactive digital media applications and/or animations using industry standard authoring software. Lab fees apply

Upon successful completion, students will be able to:

- Develop an interactive digital media presentation integrating different types of media
- Design a navigation scheme
- Demonstrate animation techniques

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSE 2321 - OBJECT-ORIENTED PROGRAMMING

ITNW 1354 - IMPLEMENTING AND SUPPORTING SERVERS

Implement, administer, and troubleshoot information systems that incorporate servers in a networked computing environment.

Upon successful completion, students will be able to:

- Configure peripherals and devices
- Set up servers
- Configure directory replication
- Manage licensing
- Create and manage system policies and profiles
- Administer remote servers and disk resources
- Create and share resources
- Implement fault-tolerance
- Configure servers for interoperability
- Install and configure Remote Access Service (RAS)
- Identify and monitor performance bottlenecks and resolve configuration problems

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITCC 1414 - CCNA 1: INTRODUCTION TO NETWORKS
- ITNW 1353 - SUPPORTING NETWORK SERVER INFRASTRUCTURE
- ITNW 1358 - NETWORK+

INEW 2334 - ADVANCED WEB PROGRAMMING

Web programming using industry-standard languages and data stores.

Upon successful completion, students will be able to:

- Design, code, and implement a dynamic website
- Develop connectivity between data store and website

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSE 2321 - OBJECT-ORIENTED PROGRAMMING

INMT 1305 - INTRODUCTION TO INDUSTRIAL MAINTENANCE

Basic mechanical skills and repair techniques common to most fields of industrial maintenance. Topics include precision measuring instruments and general safety rules common in industry, including lock-out/tag-out.

Upon successful completion, students will be able to:

- Identify various types of fasteners common to industrial maintenance
- Utilize various hand and power tools
- Utilize precision measuring instruments
- Demonstrate proper lock-out/tag-out procedures

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

INMT 2303 - PUMPS, COMPRESSORS & MECHANICAL DRIVES

A study of the theory and operations of various types of pumps and compressors. Topics include mechanical power transmission systems including gears, v-belts, and chain drives.

Upon successful completion, students will be able to:

- Identify the principles involved in the operation of centrifugal and positive displacement pumps and compressors
- Explain the function of various components in pumps and compressors, disassemble and reassemble pumps, compressors and mechanical drives, and troubleshoot pumps, compressors and mechanical drives

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

INMT 2345 - INDUSTRIAL TROUBLESHOOTING

An advanced study of the techniques used in troubleshooting various types of industrial equipment to include mechanical, electrical, hydraulic, and pneumatic systems and their control devices. Emphasis will be placed on the use of schematics and diagrams in conjunction with proper troubleshooting procedures.

Upon successful completion, students will be able to:

- Demonstrate various troubleshooting techniques
- Troubleshoot hydraulic, pneumatic, electrical mechanical drive systems using schematics and diagrams

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

INMT 2380 - COOPERATIVE EDUCATION - MANUFACTURING TECHNOLOGY

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.

Upon successful completion, students will be able to:

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry

Grade Basis: L
Credit hours: 3.0
Lecture hours: 16.0

INRW 0305 - INTEGRATED READING AND WRITING

Integration of critical reading and academic writing skills. Successful completion of this course fulfills TSI requirements for reading and/or writing.

Upon successful completion, students will be able to:

- Locate explicit textual information, draw complex inferences, and describe, analyze, and evaluate the information within and across multiple texts of varying lengths.
- Comprehend and use vocabulary effectively in oral communication, reading, and writing.
- Identify and analyze the audience, purpose, and message across a variety of texts.
- Describe and apply insights gained from reading and writing a variety of texts.
- Compose a variety of texts that demonstrate reading comprehension, clear focus, logical development of ideas, and use of appropriate language that advance the writer’s purpose.
- Determine and use effective approaches and rhetorical strategies for given reading and writing situations.
- Generate ideas and gather information relevant to the topic and purpose, incorporating the ideas and words of other writers in student writing using established strategies.
- Evaluate relevance and quality of ideas and information in recognizing, formulating, and developing a claim.
- Develop and use effective reading and revision strategies to strengthen the writer’s ability to compose college-level writing assignments.
- Recognize and apply the conventions of standard English in reading and writing.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

ACNT 2303 - INTERMEDIATE ACCOUNTING I

Analysis of generally accepted accounting principles, concepts, and theory underlying the preparation of financial statements.

Upon successful completion, students will be able to:

- Identify objectives of financial accounting.
- Define generally accepted accounting principles.
- Prepare and analyze financial statements.
- Analyze complex transactions affecting asset accounts.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ACNT 2304 - INTERMEDIATE ACCOUNTING II

Continued in-depth analysis of generally accepted accounting principles underlying the preparation of financial statements including comparative analysis and statement of cash flows.

Upon successful completion, students will be able to:

- Prepare financial statements.
- Analyze financial statements.
- Apply concepts in measuring, recording, and reporting stockholder's equity and earnings per share.
- Analyze complex transactions affecting liability and equity accounts.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ACNT 2331 - INTERNAL CONTROL AND AUDITING

Internal controls, auditing standards and processes used by internal auditors, managers, and independent public accountants.

Upon successful completion, students will be able to:

- Analyze internal control procedures.
- Describe auditing standards, procedures and the audit reports.
- Prepare audit working papers with related schedules.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

DFTT 2386 - INTERNSHIP-DRAFTING AND DESIGN TECHNOLOGY/ TECHNICIAN, GENERAL

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.

Upon successful completion, students will be able to:

- As outlined in the learning plan, apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry.
- Will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

Grade Basis: L
Credit hours: 3.0

Restrictions:

- Must complete in the last semester.
- Instructor approval required.

ACNT 1304 - INTRODUCTION TO ACCOUNTING II

A study of accounting for merchandising, notes payable, notes receivable, valuation of receivables and equipment, and valuation of inventories in a manual and computerized environment.

Upon successful completion, students will be able to:

- Define accounting terminology.
- Analyze and record business transactions for a merchandising operation in a manual and computerized environment.
- Calculate interest.
- Apply valuation methods for receivables and payables.
- Utilize various inventory and depreciation methods.
- Identify internal control procedures for inventory, receivables, and payables.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

WLDG 1313 - INTRODUCTION TO BLUEPRINT READING FOR WELDERS

A study of industrial blueprints. Emphasis placed on terminology, symbols, graphic description, and welding processes. Includes systems of measurement and industry standards. Also includes interpretation of plans and drawings used by industry to facilitate field application and production.

Upon successful completion, students will be able to:

- Define terms and abbreviations
- Interpret views, lines, dimensions, detail drawings and welding symbols
- Identify structural shapes
- Demonstrate the proper use of measuring devices
- Calculate dimensions; and develop bill of materials

Grade Basis: L
Credit hours: 3.0
Lecture hours: 3.0

MCHN 1326 - INTRODUCTION TO COMPUTER AIDED MANUFACTURING (CAM)

A study of Computer-Aided Manufacturing (CAM) software which is used to develop applications for manufacturing. Emphasis on tool geometry, tool selection, and the tool library.

Upon successful completion, students will be able to:

- Use Computer-Aided Manufacturing software to create part programs
- Transfer programs to the machine control unit
- Use Computer-Aided Manufacturing software to create machine parts

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

FDNS 1301 - INTRODUCTION TO FOODS

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. Lab fees apply

Upon successful completion, students will be able to:

- Explain esthetic values applied to food preparation, acid/base characteristics, use of heat in cookery, protein properties, composition of milk, egg, cheese, meat and fish, and properties of starch foods
- Describe what makes a solution
- Define carbohydrates, lipids, objective food analysis
- List standards of fruit/vegetable selection
- Demonstrate approved measuring techniques, microwave cookery, and cooking principles for cereal, pasta, starch, plant protein, fruit, vegetables, cheese, poultry, fish, meat and sauces
- Explain and demonstrate principles of various dough products, quick and yeast breads, and cooking with fat

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

BARB 1307 - INTRODUCTION TO HAIR DESIGN

Introduction to hair styling with emphasis on the fundamentals of haircutting and related skills.

Upon successful completion, students will be able to:

- Identify career opportunities and define professional ethics
- Identify sanitation methods, and explain how to use them
- Identify and demonstrate implements, tools, and equipment
- Explain the structure and functions of the hair and scalp

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Restrictions:

- Texas Cosmetology Operator License

WLDG 1317 - INTRODUCTION TO LAYOUT & FABRICATION

A fundamental course in layout and fabrication related to the welding industry. Major emphasis on structural shapes and use in construction.

Upon successful completion, students will be able to:

- Interpret welding symbols
- Utilize measuring instruments and tools for fabricating projects
- Define layout and fabrication terminology

- Identify structural shapes and materials

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 64.0

DFTG 1302 - INTRODUCTION TO TECHNICAL ANIMATION AND RENDERING

Basic study of technical computer models and animation.

Upon successful completion, students will be able to:

- Identify basic terminology and concepts associated with the development of technical computer models and animation
- Create a technical 3-D simulation using lighting, camera, materials, textures, views, and scenes
- Demonstrate importing models from computer-aided design or solid modeling programs

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HPRS 1201 - INTRODUCTION TO HEALTH PROFESSIONS

An overview of roles of various members of the health care system, educational requirements, and issues affecting the delivery of health care.

Grade Basis: L
Credit hours: 2.0

ITCC 1414 - CCNA 1: INTRODUCTION TO NETWORKS

This course covers networking architecture, structure, and functions; introduces the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations to provide a foundation for the curriculum. Certification Agency: Cisco

Upon successful completion, students will be able to:

- Build simple LANs
- Perform basic configuration on routers and switches
- Implement IP addressing schemes

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

ITCC 1440 - CCNA 2: ROUTING AND SWITCHING ESSENTIALS

Describes the architecture, components, and basic operation of routers and explains the basic principles of routing and routing protocols. It also provides an in-depth understanding of how switches operate and are implemented in the LAN environment for small and large networks. Certification Agency: Cisco

Upon successful completion, students will be able to:

- Configure and maintain routers and switches
- Resolve common issues with routing protocols, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

Prerequisites:

- ITCC 1414 - CCNA 1: INTRODUCTION TO NETWORKS

Restrictions:

- Must complete ITCC 1414 - CCNA 1 with a C or higher to enroll

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ITCC 2412 - CCNA 3: SCALING NETWORKS

CCNA R&S: Scaling Networks (ScaN) covers the architecture, components, and operations of routers and switches in larger and more complex networks. Students learn how to configure routers and switches using advanced protocols. Certification Agency: Cisco

Upon successful completion, students will be able to:

- Configure advanced routing and switching
- Resolve common issues with OSPF, EIGRP, and STP in IP networks
- Implement a WLAN in a small-to-medium network

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

Prerequisites:

- ITCC 1440 - CCNA 2: ROUTING AND SWITCHING ESSENTIALS

Restrictions:

- Must complete ITCC 1440 - CCNA 2 with a C or higher to enroll

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ITCC 2413 - CCNA 4: CONNECTING NETWORKS

WAN technologies and network services required by converged applications in a complex network; enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Certification Agency: Cisco

Upon successful completion, students will be able to:

- Configure and troubleshoot network devices
- Resolve common issues with data link protocols
- Resolve common issues with OSPF, EIGRP, and STP in both IPv4 and IPv6 networks
- Implement virtual private network (VPN) operations in a complex network
- Implement security best practices

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

Prerequisites:

- ITCC 2412 - CCNA 3: SCALING NETWORKS

Restrictions:

- Must complete ITCC 2412 - CCNA 3 with a C or higher to enroll

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ITNW 1308 - IMPLEMENTING AND SUPPORTING CLIENT SYSTEMS

The fundamentals of managing and configuring network clients.

Upon successful completion, students will be able to:

- Install and configure network clients
- Setup users, groups, policies, and profiles
- Configure hardware components and applications
- Setup and maintain logon security and security for files and printers
- Configure and optimize clients in multiple environments

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ITNW 1313 - COMPUTER VIRTUALIZATION

Implement and support virtualization of clients of servers in a networked computing environment. This course explores installation, configuration, and management of computer virtualization workstation and servers.

Upon successful completion, students will be able to:

- Install and configure virtual machine managers
- Create and network virtual machines and set priorities for accessing resources
- Move and clone virtual machines
- Ensure high availability for applications within virtual machines

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITCC 1414 - CCNA 1: INTRODUCTION TO NETWORKS
- ITNW 1358 - NETWORK+

ITNW 1335 - INFORMATION STORAGE AND MANAGEMENT

An introduction to data storage-related technologies. Topics include data storage for cloud, Big Data, mobile, social media, and software-defined data centers. Provides a strong understanding of storage technologies and prepares students for advanced concepts, technologies, and processes.

Upon successful completion, students will be able to:

- Differentiate storage architectures and key data center elements
- Explain the components of storage infrastructure including subsystems, RAID and intelligent storage systems
- Demonstrate network technologies used in storage systems
- Outline the benefits and components of Storage Area Networks (SANs)
- Adapt contingency plans for backup, replication and archiving
- Evaluate information security requirements and recommend solutions
- List SAN management issues and requirements

Grade Basis: L
Credit hours: 3.0

Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITCC 1414 - CCNA 1: INTRODUCTION TO NETWORKS
- ITCC 1440 - CCNA 2: ROUTING AND SWITCHING ESSENTIALS
- ITNW 1358 - NETWORK+

ITNW 1353 - SUPPORTING NETWORK SERVER INFRASTRUCTURE

Installing, configuring, managing, and supporting a network infrastructure.

Upon successful completion, students will be able to:

- Install and configure DHCP, DNS, remote access, network security using public key infrastructure
- Integrate network services
- Deploy operating systems using remote installation services

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITCC 1414 - CCNA 1: INTRODUCTION TO NETWORKS
- ITCC 1440 - CCNA 2: ROUTING AND SWITCHING ESSENTIALS
- ITNW 1308 - IMPLEMENTING AND SUPPORTING CLIENT SYSTEMS
- ITNW 1358 - NETWORK+

ITNW 1358 - NETWORK+

Assists individuals in preparing for the Computing Technology Industry Association (CompTIA) Network+ certification exam and career as a network professional.

Upon successful completion, students will be able to:

- Identify and define terminology, hardware, and software components of computer networks
- Utilize equipment, protocols, and topologies to differentiate between various network systems
- Demonstrate skills in installing network hardware, software, and cable
- Troubleshoot network connectivity
- Configure network protocol
- Install and configure network client software

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ITNW 2280 - COOPERATIVE EDUCATION - COMPUTER SYSTEMS NETWORKING

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.

Upon successful completion, students will be able to:

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry

Grade Basis: L
Credit hours: 2.0
Lecture hours: 16.0

Restrictions:

- Departmental Chair approval required unless student is in last semester of the Networking Degree.

ITSC 1316 - LINUX INSTALLATION AND CONFIGURATION

Introduction to Linux operating system. Includes Linux installation, basic administration, utilities and commands, upgrading, networking, security, and application installation. Emphasizes hands-on setup, administration, and management of Linux.

Upon successful completion, students will be able to:

- Install, administer, and manage a Linux system
- Demonstrate proficiency with Linux utilities, commands, and applications
- Identify and resolve security-based issues
- Integrate a Linux system into an existing network

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0

Lab hours: 32.0

ITSC 1325 - PERSONAL COMPUTER HARDWARE

A study of current personal computer hardware including assembly, upgrading, setup, configuration, and troubleshooting.

Upon successful completion, students will be able to:

- Assemble, setup, and upgrade personal computer systems
- Diagnose and isolate faulty components
- Optimize system performance
- Install and connect peripherals

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ITSE 1302 - COMPUTER PROGRAMMING

Introduction to computer programming including design, development, testing, implementation, and documentation.

Upon successful completion, students will be able to:

- Design, write, test, and document computer programs

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSE 2321 - OBJECT-ORIENTED PROGRAMMING

ITSE 1303 - INTRODUCTION TO MySQL

Introduction to fundamentals of SQL and relational databases.

Upon successful completion, students will be able to:

- Identify database terminology and concepts
- Plan, define, and design a database
- Design and generate tables
- Devise and process queries
- Install and start the MySQL server

- Troubleshoot syntax

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ITSE 1311 - BEGINNING WEB PROGRAMMING

Skills development in web programming including mark-up and scripting languages.

Upon successful completion, students will be able to:

- Demonstrate the use of markup and scripting languages
- Create interactive web pages

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ITSE 1333 - MOBILE APPLICATIONS DEVELOPMENT

An overview of different mobile platforms and their development environments.

Upon successful completion, students will be able to:

- Design, write, and test small interactive programs for mobile platforms

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ITSE 1345 - INTRODUCTION TO ORACLE SQL

An introduction to the design and creation of relational databases using Oracle. Topics include storing, retrieving, updating, and displaying data using Structured Query Language (SQL).

Upon successful completion, students will be able to:

- Write Structured Query Language (SQL) statements using Oracle
- Select and sort data
- Produce reports with SQL
- Create and manage tables which include constraints
- Create Views and other database objects

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSE 2321 - OBJECT-ORIENTED PROGRAMMING

ITSE 1346 - DATABASE THEORY AND DESIGN

Introduction to the analysis and utilization of data requirements and organization into normalized tables using the four normal forms of database design.

Upon successful completion, students will be able to:

- Organize data into normalized tables by applying the four normal forms of database design
- Create Entity-Relationship models and diagrams to graphically represent their database design
- Design database tables with One-to-Many and Many-to-Many relationships
- Create tables using the SQL "create" and "insert" statements
- Retrieve data from tables using SQL "select" statement
- Maintain data in tables using the SQL "update" and "delete" statements
- Implement stored procedures, triggers, and constraints using SQL statements

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ITSE 2302 - INTERMEDIATE WEB PROGRAMMING

Server-side and client-side techniques for Web development.

Upon successful completion, students will be able to:

- Create and use client-side and server-side scripts to design and implement dynamic websites

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- IMED 1316 - WEB DESIGN I

ITSE 2310 - iOS APPLICATION PROGRAMMING

Course explores developing applications for iOS devices. Will include the current iOS programming language, use of the iOS SDK environment, and current programming issues in the iOS environment.

Upon successful completion, students will be able to:

- Complete the procedures to become a registered Apple iOS developer.
- Design interfaces for iOS applications
- Produce concept documentation
- Create iOS applications in native SDK.
- Deploy applications for various iOS devices.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ITSE 2317 - JAVA PROGRAMMING

Java programming for applications and web applets.

Upon successful completion, students will be able to:

- Design, write and document Java applications and applets

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSE 2321 - OBJECT-ORIENTED PROGRAMMING

ITSE 2321 - OBJECT-ORIENTED PROGRAMMING

Program design with classes, including development, testing, implementation, and documentation.

Upon successful completion, students will be able to:

- Develop executable programs
- Create appropriate documentation
- Write programs using classes and objects using object-oriented programming techniques.

Grade Basis: L

Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ITSE 2333 - IMPLEMENTING A DATABASE ON MICROSOFT SQL SERVER

Skills development in the implementation of a database solution using Microsoft SQL Server client/server database management system.

Upon successful completion, students will be able to:

- Describe the elements of Microsoft SQL Server and its operational environments
- Describe the elements of the Transact-SQL language
- Demonstrate and configure the data storage architecture of SQL server
- Write, maintain, and tune advanced queries
- Manage locking options and transactions to ensure data concurrency and recoverability
- Create views of data
- Design and create stored procedures
- Design and create triggers
- Use distributed data

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ITSE 2343 - ADVANCED MOBILE PROGRAMMING

Programming for mobile devices including file access methods, data structures, modular programming, program testing and documentation.

Upon successful completion, students will be able to:

- Design, write, and document mobile programs

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSE 1333 - MOBILE APPLICATIONS DEVELOPMENT
- ITSE 2321 - OBJECT-ORIENTED PROGRAMMING

ITSE 2354 - ADVANCED ORACLE PL/SQL

Advanced use of Oracle SQL. Topics include hierarchical queries, set based queries, correlated subqueries, scripting, and scripting generation.

Upon successful completion, students will be able to:

- Retrieve data including SET operators, correlated subqueries, and hierarchical queries
- Write SQL scripts that execute remote procedure calls
- Create a package to group together variables, cursors, exceptions, procedures, and functions
- Invoke a package constraint

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSE 1345 - INTRODUCTION TO ORACLE SQL

ITSE 2356 - ORACLE DATABASE ADMINISTRATION I

Fundamentals of the tasks and functions required of a database administrator using Oracle.

Upon successful completion, students will be able to:

- Create an operational database using Oracle
- Create, delete, and modify associated files, table spaces, segments, extents, and blocks
- Start up and shut down an Oracle instance and database
- Add, delete, and modify users, privileges, and resources
- Demonstrate use of National Language and Support (NLS) features

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSE 1345 - INTRODUCTION TO ORACLE SQL

ITSE 2358 - ORACLE DATABASE ADMINISTRATION II

A continuation of Oracle Database Administration I. Topics include the recovery procedures, logical backups, standby database capabilities, and performance tuning of the Oracle Server. Common performance problems and the use of diagnostic tools to troubleshoot and optimize throughout will be discussed.

Upon successful completion, students will be able to:

- List the Oracle backup and recovery components
- Formulate a backup and recovery strategy
- Practice backup and recovery operations
- Use Oracle tools to diagnose performance problems
- Optimize and troubleshoot Oracle database performance

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSE 2356 - ORACLE DATABASE ADMINISTRATION I

ITSE 2380 - COOPERATIVE EDUCATION - COMPUTER PROGRAMMER

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and employer, the student combines classroom learning with work experience. Includes a lecture component.

Upon successful completion, students will be able to:

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry

Grade Basis: L
Credit hours: 3.0
Lecture hours: 16.0

Restrictions:

- Departmental Chair approval required unless student is in last semester of the Computer Information Degree.

ITSW 1307 - INTRODUCTION TO DATABASE

Introduction to database theory and the practical applications of a database.

Upon successful completion, students will be able to:

- Identify database terminology and concepts
- Plan, define, and design a database
- Design and generate tables, forms, and reports
- Devise and process queries

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ITSW 2337 - ADVANCED DATABASE

Advanced concepts of database design and functionality.

Upon successful completion, students will be able to:

- Explain relational database theory
- Collect and distribute data
- Analyze data
- Perform complex queries, data validation and table relationships

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSW 1307 - INTRODUCTION TO DATABASE

ITSY 1342 - INFORMATION TECHNOLOGY SECURITY

Instruction in security for network hardware, software, and data, including physical security, backup procedures, relevant tools, encryption, and protection from viruses.

Upon successful completion, students will be able to:

- National Institute of Standards and Technology (NIST) Guidelines and other best practices

- Develop backup procedures to provide for data security
- Use network operating system features to implement network security
- Identify computer and network threats and vulnerabilities and methods to prevent their effects
- Use tools to enhance network security
- Use encryption techniques to protect network data

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITCC 1414 - CCNA 1: INTRODUCTION TO NETWORKS
- ITCC 1440 - CCNA 2: ROUTING AND SWITCHING ESSENTIALS
- ITNW 1358 - NETWORK+

ITSY 2300 - OPERATING SYSTEM SECURITY

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.

Upon successful completion, students will be able to:

- Identify network security risks, security design, and monitoring solutions
- Identify sources of computer threats, evaluate potential practices, tools, and technologies to protect individual network systems
- Establish and sustain an operating system security plan utilizing systems and application security tools
- Implement procedures to secure and monitor audit logs and set system administrator alerts
- Develop an organizational operating system security plan that provides for periodic reviews of security policies, procedures, authorized users list, and software update patches

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSY 1342 - INFORMATION TECHNOLOGY SECURITY

ITSY 2301 - FIREWALLS AND NETWORK SECURITY

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.

Upon successful completion, students will be able to:

- Demonstrate system security skills through firewall implementation and testing
- Use system tools, practices, and relevant technologies to implement a security plan
- Evaluate practices, tools, and technologies to identify security breaches, sources of attacks, and protect mission critical systems
- Establish an appropriate level of security based on an analysis of security logs
- Use relevant tools to secure a network, respond to and follow up on various types of attacks

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ITSY 2330 - INTRUSION DETECTION

Computer information systems security monitoring, intrusion detection, and crisis management. Includes alarm management, signature configuration, sensor configuration, and troubleshooting components. Emphasizes identifying, resolving, and documenting network crises and activating the response team.

Upon successful completion, students will be able to:

- Build IDS sensors and attach them to the network (hardware and software)
- Install and manage a secure communication link between all sensors and the monitor
- Install and manage event database(s)
- Analyze an event and trends
- Install, manage, and interpret syslog servers and system logs
- Identify legal and policy issues associated with system and network monitoring
- Deploy, implement, and test IDS security plan

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSY 2300 - OPERATING SYSTEM SECURITY
- ITSY 2301 - FIREWALLS AND NETWORK SECURITY

ITSY 2342 - INCIDENT RESPONSE & HANDLING

In-depth coverage of incident response and incident handling, including identifying sources of attacks and security breaches; analyzing security logs; recovering the system to normal; performing postmortem analysis; and implementing and modifying security measures.

Upon successful completion, students will be able to:

- Identify sources of attacks
- Restore the system to normal operation
- Identify and prevent security threats
- Perform a postmortem analysis
- Identify computer investigation issues
- Identify the roles and responsibility of the incident response team

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSY 2300 - OPERATING SYSTEM SECURITY
- ITSY 2301 - FIREWALLS AND NETWORK SECURITY

ITSY 2343 - COMPUTER SYSTEM FORENSICS

In-depth study of system forensics including methodologies used for analysis of computer security breaches. Collect, document and evaluate evidence to perform postmortem analysis of a security breach.

Upon successful completion, students will be able to:

- Identify computer investigation issues
- Identify legal issues associated with computer investigations
- Collect, document, and evaluate evidence
- Evaluate network traffic

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSY 2300 - OPERATING SYSTEM SECURITY
- ITSY 2342 - INCIDENT RESPONSE & HANDLING

ITSY 2382 - COOPERATIVE EDUCATION-COMPUTER & INFORMATION SYSTEM SECURITY

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.

Upon successful completion, students will be able to:

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry

Grade Basis: L
Credit hours: 3.0
Lecture hours: 16.0

Restrictions:

- Departmental Chair approval required unless student is in last semester of the Cyber Security Degree.

ITSY 2445 - NETWORK DEFENSE AND COUNTERMEASURES

This is a practical application and comprehensive course that includes the planning, design, and construction of defenses for a complex network that will sustain an attack, document events, and mitigate the effects of the attack.

Upon successful completion, students will be able to:

- Assemble network defense tools
- Differentiate between authorized and unauthorized activity on a network
- Respond to a breach in security through the use of countermeasures designed to minimize the impact of the breach on the network
- Document network events
- Present an analysis of network breach and plan for remediation

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

Prerequisites:

- ITSY 2300 - OPERATING SYSTEM SECURITY
- ITSY 2330 - INTRUSION DETECTION
- ITSY 2342 - INCIDENT RESPONSE & HANDLING

RNSG 1003 - IV THERAPY BASICS

Basic theory and techniques of venipuncture, intravenous (IV) infusions, and blood drawing. Basic information regarding venous system physiology, fluid, electrolytes, blood, blood products, total parenteral nutrition, lipids, and complications of IV therapy.

Grade Basis: L
Lecture hours: 30.0

ACNT 2311 - MANAGERIAL ACCOUNTING

Practical applications of accounting with emphasis on cost behavior, capital management decisions, budgeting, and financial statement analysis.

Upon successful completion, students will be able to:

- Apply accounting concepts to analyze and interpret information for management decision-making.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

MATH 0303 - PRE-ALGEBRA

The course supports students in developing skills, strategies, and reasoning needed to succeed inmathematics, including communication and appropriate use of technology. Topics include the study ofnumeracy and the real number system; algebraic concepts, notation, and reasoning; quantitativerelationships; mathematical models; and problem solving. This introductory course includes a general overview of basic arithmetic: fractions, decimals, and percent. Other topics include algebraic concepts, integers, solving equations, linear equations, graphing and polynomials. Simple geometric concepts are also discussed. This course is designed for those students with little or no algebra background. This course does not count toward graduation at NCTC.

Upon successful completion, students will be able to:

- Use appropriate symbolic notation and vocabulary to communicate, interpret, and explain mathematical concepts.
- Define, represent, and perform operations on real numbers, applying numeric reasoning to investigate and describe quantitative relationships and solve real world problems in a variety of contexts.

- Use algebraic reasoning to solve problems that require ratios, rates, percentages, and proportions in a variety of contexts using multiple representations.
- Apply algebraic reasoning to manipulate expressions and equations to solve real world problems.
- Use graphs, tables, and technology to analyze, interpret, and compare data sets.
- Construct and use mathematical models in verbal, algebraic, graphical, and tabular form to solve problems from a variety of contexts and to make predictions and decisions.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

MATH 0305 - BEGINNING ALGEBRA

This course supports students in developing skills, strategies, and reasoning needed to succeed in mathematics, including communication and appropriate use of technology. Topics include the study of numeracy and the real number system; algebraic concepts, notation, and reasoning; quantitative relationships; mathematical models; and problem solving. This course also includes basic algebraic concepts and notations, algebraic expressions and equations, factoring polynomials and graphing. Some algebra is required. This course does not count toward graduation at NCTC.

Upon successful completion, students will be able to:

- Use appropriate symbolic notation and vocabulary to communicate, interpret, and explain mathematical concepts.
- Define, represent, and perform operations on real numbers, applying numeric reasoning to investigate and describe quantitative relationships and solve real world problems in a variety of contexts.
- Use algebraic reasoning to solve problems that require ratios, rates, percentages, and proportions in a variety of contexts using multiple representations.
- Apply algebraic reasoning to manipulate expressions and equations to solve real world problems.
- Use graphs, tables, and technology to analyze, interpret, and compare data sets.
- Construct and use mathematical models in verbal, algebraic, graphical, and tabular form to solve problems from a variety of contexts and to make predictions and decisions.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

MATH 0310 - INTERMEDIATE ALGEBRA

A study of relations and functions, inequalities, algebraic expressions and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic expressions and equations.

Upon successful completion, students will be able to:

- Define, represent, and perform operations on real and complex numbers.
- Recognize, understand, and analyze features of a function.
- Recognize and use algebraic (field) properties, concepts, procedures (including factoring), and algorithms to combine, transform, and evaluate absolute value, polynomial, radical, and rational expressions.
- Identify and solve absolute value, polynomial, radical, and rational equations.
- Identify and solve absolute value and linear inequalities
- Model, interpret and justify mathematical ideas and concepts using multiple representations.
- Connect and use multiple strands of mathematics in situations and problems, as well as in the study of other disciplines.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

MATH 1314 - COLLEGE ALGEBRA

In-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included. This course is intended for STEM (Science, Technology, Engineering, and Mathematics) majors, as well as students pursuing some Business and Education programs. It is a preparation for advanced coursework in mathematics. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses.
- Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations.
- Apply graphing techniques.
- Evaluate all roots of higher degree polynomial and rational functions.
- Recognize, solve and apply systems of linear equations using matrices.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness standard for Mathematics

MATH 1316 - PLANE TRIGONOMETRY

In-depth study and applications of trigonometry including definitions, identities, inverse functions, solutions of equations,graphing, and solving triangles. Additional topics such as vectors, polar coordinates and parametric equations may be included. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians.
- Graph trigonometric functions and their transformations.
- Prove trigonometric identities.
- Solve trigonometric equations.
- Solve right and oblique triangles.
- Use the concepts of trigonometry to solve applications.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness standard for Mathematics

MATH 1324 - MATHEMATICS FOR BUSINESS & SOCIAL SCIENCES

The application of common algebraic functions, including polynomial, exponential, logarithmic, and rational, to problems in business, economics, and the social sciences are addressed. The applications include mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Apply elementary functions, including linear, quadratic, polynomial, rational, logarithmic, and exponential functions to solving real-world problems.
- Solve mathematics of finance problems, including the computation of interest, annuities, and amortization of loans.
- Apply basic matrix operations, including linear programming methods, to solve application problems.
- Demonstrate fundamental probability techniques and application of those techniques, including expected value, to solve problems.

- Apply matrix skills and probability analyses to model applications to solve real-world problems.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness standard for Mathematics

MATH 1325 - CALCULUS FOR BUSINESS & SOCIAL SCIENCES

This course is the basic study of limits and continuity, differentiation, optimization, and graphing, and integration of elementary functions, with emphasis on applications in business, economics, and social sciences. This course is not a substitute for MATH 2413 Calculus I. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Apply calculus to solve business, economics, and social sciences problems.
- Apply appropriate differentiation techniques to obtain derivatives of various functions, including logarithmic and exponential functions.
- Solve application problems involving implicit differentiation and related rates.
- Solve optimization problems with emphasis on business and social sciences applications.
- Determine appropriate technique(s) of integration.
- Integrate functions using the method of integration by parts or substitution, as appropriate.
- Solve business, economics, and social sciences applications problems using integration techniques.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- MATH 1314 - COLLEGE ALGEBRA
- MATH 1324 - MATHEMATICS FOR BUSINESS & SOCIAL SCIENCES

MATH 1332 - CONTEMPORARY MATHEMATICS (Quantitative Reasoning)

General mathematics course, intended for Non STEM (Science, Technology, Engineering, and Mathematics) majors. Topics include introductory treatments of sets and logic, financial mathematics, probability and statistics with appropriate applications.

Number sense, proportional reasoning, estimation, technology, and communication should be embedded throughout the course. Additional topics may be covered. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Apply the language and notation of sets.
- Determine the validity of an argument or statement and provide mathematical evidence.
- Solve problems in mathematics of finance.
- Demonstrate fundamental probability/counting techniques and apply those techniques to solve problems.
- Interpret and analyze various representations of data.
- Demonstrate the ability to choose and analyze mathematical models to solve problems from real-world settings, including, but not limited to, personal finance, health literacy, and civic engagement.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness standard for Mathematics

MATH 1342 - ELEMENTARY STATISTICAL METHODS

Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Explain the use of data collection and statistics as tools to reach reasonable conclusions.
- Recognize, examine and interpret the basic principles of describing and presenting data.
- Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics.
- Explain the role of probability in statistics.
- Examine, analyze and compare various sampling distributions for both discrete and continuous random variables.
- Describe and compute confidence intervals.
- Solve linear regression and correlation problems.
- Perform hypothesis testing using statistical methods.

Grade Basis: L
Credit hours: 3.0

Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness standard for Mathematics

MATH 1350 - MATHEMATICS FOR TEACHERS I

This course is intended to build or reinforce a foundation in fundamental mathematics concepts and skills. It includes the conceptual development of the following: sets, functions, numeration systems, number theory, and properties of the various number systems with an emphasis on problem solving and critical thinking.

Upon successful completion, students will be able to:

- Explain and model the arithmetic operations for whole numbers and integers.
- Explain and model computations with fractions, decimals, ratios, and percentages.
- Describe and demonstrate how factors, multiples, and prime numbers are used to solve problems.
- Apply problem-solving skills to numerical applications.
- Represent and describe relationships among sets using the appropriate mathematical terminology and notation.
- Compare and contrast structures of numeration systems

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- MATH 1314 - COLLEGE ALGEBRA

MATH 1351 - MATHEMATICS FOR TEACHERS II

This course is intended to build or reinforce a foundation in fundamental mathematics concepts and skills. It includes the concepts of geometry, measurement, probability, and statistics with an emphasis on problem solving and critical thinking.

Upon successful completion, students will be able to:

- Apply fundamental terms of geometry such as points, lines, and planes to describe two and three dimensional figures.
- Make and test conjectures about figures and geometric relationships.
- Use a variety of methods to identify and justify congruency and similarity of geometric objects.
- Perform geometric transformations.
- Demonstrate fundamental probability techniques and apply those techniques to solve problems.

- Explain the use of data collection and statistics as tools to reach reasonable conclusions.
- Recognize, examine, and utilize the basic principles of describing and presenting data.
- Perform measurement processes and explain the concept of a unit of measurement.
- Develop and use formulas for the perimeter, area, and volume for a variety of figures.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- MATH 1314 - COLLEGE ALGEBRA

MATH 2318 - LINEAR ALGEBRA

Introduces and provides models for application of the concepts of vector algebra. Topics include finite dimensional vector spaces and their geometric significance, representing and solving systems of linear equations using multiple methods including Gaussian elimination and matrix inversion, matrices, determinants, linear transformations, quadratic forms, eigenvalues and eigenvector, and applications in science and engineering.

Upon successful completion, students will be able to:

- Be able to solve systems of linear equations using multiple methods, including Gaussian elimination and matrix inversion.
- Be able to carry out matrix operations, including inverses and determinants.
- Demonstrate understanding of the concepts of vector space and subspace.
- Demonstrate understanding of linear independence, span, and basis.
- Be able to determine eigenvalues and eigenvectors and solve problems involving eigenvalues.
- Apply principles of matrix algebra to linear transformations.
- Demonstrate application of inner products and associated norms.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- MATH 2414 - CALCULUS II

MATH 2320 - DIFFERENTIAL EQUATIONS

Ordinary differential equations, including linear equations, systems of equations, equations with variable coefficients, existence and uniqueness of solutions, series solutions, singular points, transform methods, boundary value problems; application of differential equations to real-world problems.

Upon successful completion, students will be able to:

- Identify homogeneous equations, homogeneous equations with constant coefficients, and exact and linear differential equations.
- Solve ordinary differential equations and systems of equations using: a) Direct integration b) Separation of variables c) Reduction of order d) Methods of undetermined coefficients and variation of parameters e) Series solutions f) Operator methods for finding particular solutions g) Laplace transform methods
- Determine particular solutions to differential equations with given boundary conditions or initial conditions.
- Analyze real-world problems in fields such as Biology, Chemistry, Economics, Engineering, and Physics, including problems related to population dynamics, mixtures, growth and decay, heating and cooling, electronic circuits, and Newtonian mechanics.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- MATH 2414 - CALCULUS II

MATH 2412 - PRE-CALCULUS MATH

In-depth combined study of algebra, trigonometry, and other topics for calculus readiness. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Demonstrate and apply knowledge of properties of functions.
- Recognize and apply algebraic and transcendental functions and solve related equations.
- Apply graphing techniques to algebraic and transcendental functions.
- Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians.
- Prove trigonometric identities.
- Solve right and oblique triangles.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 80.0

Prerequisites:

- MATH 1314 - COLLEGE ALGEBRA

MATH 2413 - CALCULUS I

Limits and continuity; the Fundamental Theorem of Calculus; definition of the derivative of a function and techniques of differentiation; applications of the derivative to maximizing or minimizing a function; the chain rule, mean value theorem, and rate of change problems; curve sketching; definite and indefinite integration of algebraic, trigonometric, and transcendental functions, with an application to calculation of areas. Meets NCTC Core Curriculum Requirement.

Upon successful completion, students will be able to:

- Develop solutions for tangent and area problems using the concepts of limits, derivatives, and integrals.
- Draw graphs of algebraic and transcendental functions considering limits, continuity, and differentiability at a point.
- Determine whether a function is continuous and/or differentiable at a point using limits.
- Use differentiation rules to differentiate algebraic and transcendental functions.
- Identify appropriate calculus concepts and techniques to provide mathematical models of real-world situations and determine solutions to applied problems.
- Evaluate definite integrals using the Fundamental Theorem of Calculus.
- Articulate the relationship between derivatives and integrals using the Fundamental Theorem of Calculus.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 64.0

Prerequisites:

- MATH 2412 - PRE-CALCULUS MATH

MATH 2414 - CALCULUS II

Differentiation and integration of transcendental functions; parametric equations and polar coordinates; techniques of integration; sequences and series; improper integrals.

Upon successful completion, students will be able to:

- Use the concepts of definite integrals to solve problems involving area, volume, work, and other physical applications.
- Use substitution, integration by parts, trigonometric substitution, partial fractions, and tables of anti-derivatives to evaluate definite and indefinite integrals.
- Define an improper integral.

- Apply the concepts of limits, convergence, and divergence to evaluate some classes of improper integrals.
- Determine convergence or divergence of sequences and series.
- Use Taylor and MacLaurin series to represent functions.
- Use Taylor or MacLaurin series to integrate functions not integrable by conventional methods.
- Use the concept of polar coordinates to find areas, lengths of curves, and representations of conic sections.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 64.0

Prerequisites:

- MATH 2413 - CALCULUS I

MATH 2415 - CALCULUS III

Advanced topics in calculus, including vectors and vector-valued functions, partial differentiation, Lagrange multipliers, multiple integrals, and Jacobians, and application of the line integral including Green's Theorem, the Divergence Theorem, and Stokes' Theorem.

Upon successful completion, students will be able to:

- Perform calculus operations on vector#valued functions, including derivatives, integrals, curvature, displacement, velocity, acceleration, and torsion.
- Perform calculus operations on functions of several variables, including partial derivatives, directional derivatives, and multiple integrals.
- Find extrema and tangent planes
- Solve problems using the Fundamental Theorem of Line Integrals, Green's Theorem, the Divergence Theorem, and Stokes' Theorem.
- Apply the computational and conceptual principles of calculus to the solutions of real-world problems.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 64.0

Prerequisites:

- MATH 2414 - CALCULUS II

MCHN 1302 - PRINT READING FOR MACHINING TRADES

A study of blueprints for machining trades with emphasis on machine drawings.

Upon successful completion, students will be able to:

- Identify the elements of machine drawings
- Interpret dimensions, tolerances, and geometric aspects of blueprints
- Explain Geometric Dimensioning and Tolerancing (GD&T) symbols and their meanings

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

MCHN 1343 - MACHINE SHOP MATHEMATICS

Designed to prepare the student with technical, applied mathematics that will be necessary in future machine shop-related courses.

Upon successful completion, students will be able to:

- Identify conversion methods of numbering systems
- Convert fractions to decimals and back
- Use formulas to solve measurement problems

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

MCHN 2303 - FUNDAMENTALS OF COMPUTER NUMERICAL CONTROLLED (CNC) MACHINE CONTROLS

Programming and operation of Computer Numerical Controlled (CNC) machine shop equipment.

Upon successful completion, students will be able to:

- Demonstrate operations of CNC machine controls
- Compare and contrast the differences between conventional and CNC machines
- Utilize CNC machine applications for machining operations

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

MCHN 2380 - COOPERATIVE EDUCATION - MACHINE TOOL TECHNOLOGY/MACHINIST

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

Upon successful completion, students will be able to:

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry

Grade Basis: L
Credit hours: 3.0
Lecture hours: 16.0

MCHN 2434 - OPERATION OF CNC MACHINING CENTERS

A study of CNC operations with an emphasis on vertical machining centers.

Upon successful completion, students will be able to:

- Set up and operate CNC machining centers
- Set machine and tool offsets for machining operations
- Edit the program as required

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 64.0

MCHN 2435 - ADVANCED CNC MACHINING

The study of advanced CNC operation with an emphasis on programming and operations of machining and turning centers.

Upon successful completion, students will be able to:

- Set up and operate CNC machining centers and CNC turning centers
- Select proper tooling with correct speeds and feeds
- Produce a part to specific tolerances

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 64.0

POFM 1017 - MEDICAL ADMINISTRATIVE ASSISTANT

Instruction in medical office procedures including appointment scheduling, medical records creation and maintenance, telephone communications, third party reimbursement and application of governmental health care guidelines.

Grade Basis: L
Lecture hours: 60.0

HITT 1013 - MEDICAL BILLING & CODING

An overview of skills and knowledge in ICD and CPT coding and claims forms for reimbursement of medical services.

Grade Basis: L
Lecture hours: 80.0

HPRS 2302 - MEDICAL TERMINOLOGY FOR ALLIED HEALTH

A study of medical terminology, word origin, structure, and application with an emphasis on building a professional vocabulary required for employment within the allied health care field.

Grade Basis: L
Credit hours: 3.0

METL 1301 - INTRODUCTION TO METALLURGY

A study of refining, mechanical, and physical properties of ferrous and non-ferrous materials including the theory of alloys, heat treatment, and testing.

Upon successful completion, students will be able to:

- Define the physical and mechanical properties of ferrous and non-ferrous metals
- Describe the steel making process
- Name and describe methods of destructive and nondestructive testing
- Explain the effects of hot working, cold working, welding, machining, and heat treating on metal properties
- Define metallurgical terms and processes
- Recognize defects and their causes

Grade Basis: L

Credit hours: 3.0
Lecture hours: 48.0

ENGL 2351 - MEXICAN AMERICAN LITERATURE

A survey of Mexican American/Chicanx literature from Mesoamerica to the present. Students will study literary works of fiction, poetry, drama, essays, and memoirs in relation to their historical, linguistic, political, regional, gendered, and cultural contexts. Texts will be selected from a diverse group of authors, literary movements, and media forms. Topics and themes may include the literary performance of identity and culture, aesthetic mediation of racialization, struggle and protest, and artistic activism. Meets NCTC Core Curriculum Requirement.

Upon successful completion, students will be able to:

- Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.
- Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
- Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.
- Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.
- Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- ENGL 1301 - COMPOSITION I

Restrictions:

- Must meet TSI College Readiness Standard for Reading and Writing.

ELPT 2305 - MOTORS & TRANSFORMERS

Operation of single and three phase motors and transformers. Includes transformer banking, power factor correction, and protective device. Lab fees apply.

Upon successful completion, students will be able to:

- Match the type of single-phase motor with its principles of operation
- Compare the operating characteristics of the three types of three-phase motors

- Explain the advantages of Wye and Delta connections in motor and transit applications
- Size overcurrent, short circuit, and ground fault protective devices
- Utilize nameplate information

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

MRKG 1301 - CUSTOMER RELATIONSHIP MANAGEMENT

General principles of customer relationship management including skills, knowledge, attitudes, and behaviors.

Upon successful completion, students will be able to:

- Examine internal and external customer relationship management (CRM) strategies

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

MRKG 1311 - PRINCIPLES OF MARKETING

Introduction to the marketing mix functions and process. Includes identification of consumer and organizational needs and explanation of environmental issues.

Upon successful completion, students will be able to:

- Identify the marketing mix components in relation to market segmentation
- Explain the environmental factors which influence consumer and organizational decision-making processes
- Outline a marketing plan

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

MUAP 1176 - APPLIED VOICE

Individual instruction in voice, instrument, composition, or conducting. Lab fees apply

Upon successful completion, students will be able to:

- Identify vocal literature and demonstrate correct vocal technique.
- Demonstrate vocal production.

- Demonstrate vocal skills necessary for the development and growth of students' vocal performance.
- Demonstrate proper breath control, diction, posture, vocal exercises, interpretation, and general musicianship.

Grade Basis: L
Credit hours: 1.0
Lab hours: 8.0

MUAP 1273 - APPLIED STRINGS

Individual instruction in voice, instrument, composition, or conducting. Lab fees apply

Upon successful completion, students will be able to:

- Demonstrate correct techniques of string instrument playing, knowledge of literature, and knowledge of music fundamentals.
- Apply theory as related to the string instrument.
- Demonstrate an ability to read music as applicable to the string instrument.

Grade Basis: L
Credit hours: 2.0
Lab hours: 16.0

MUAP 1274 - APPLIED PIANO

Individual instruction in voice, instrument, composition, or conducting. Lab fees apply

Upon successful completion, students will be able to:

- Demonstrate keyboard technique and knowledge of keyboard skills and patterns which foster a practical understanding of music rudiments and harmony.
- Demonstrate skill in reading music accurately and musically through exercises designed to build visual and aural familiarity with piano score idioms.
- Develop a repertoire utilizing music representative of various stylistic periods.

Grade Basis: L
Credit hours: 2.0
Lab hours: 16.0

MUAP 1277 - APPLIED BRASS

Individual instruction in voice, instrument, composition, or conducting. Lab fees apply

Upon successful completion, students will be able to:

- Demonstrate the ability to identify techniques and literature of individual brass instruments.

- Demonstrate proficiency in playing brass instruments.
- Demonstrate proper breath control, tone production, interpretation, and general musicianship.

Grade Basis: L
Credit hours: 2.0
Lab hours: 16.0

MUAP 1278 - APPLIED PERCUSSION

Individual instruction in voice, instrument, composition, or conducting. Lab fees apply

Upon successful completion, students will be able to:

- Demonstrate the ability to identify techniques and literature of individual percussion instruments.
- Demonstrate proficiency in playing of percussion instruments.

Grade Basis: L
Credit hours: 2.0
Lab hours: 16.0

MUAP 1279 - APPLIED WOODWINDS

Individual instruction in voice, instrument, composition, or conducting. Lab fees apply

Upon successful completion, students will be able to:

- Demonstrate the ability to identify techniques and literature of individual woodwind instruments.
- Demonstrate proficiency in playing of woodwind instruments.
- Demonstrate proper breath control, tone production, interpretation, and general musicianship.

Grade Basis: L
Credit hours: 2.0
Lab hours: 16.0

MUAP 1272 - APPLIED GUITAR

Individual instruction in voice, instrument, composition, or conducting. Lab fees apply

Upon successful completion, students will be able to:

- Demonstrate correct techniques of guitar playing; knowledge of literature; and knowledge of music fundamentals.
- Apply theory as related to the guitar.
- Demonstrate an ability to read music as applicable to the guitar.

Grade Basis: L
Credit hours: 2.0
Lab hours: 16.0

MUEN 1125 - JAZZ BAND

May be repeated for credit. Consisting of 16-21 instrumentalists, the band performs both traditional and contemporary jazz literature. A number of performances occur on and off campus including some travel. Open to all students.

Upon successful completion, students will be able to:

- Demonstrate proficiency in playing individual instruments in an ensemble setting.
- Demonstrate the ability to identify musical literature as it relates to jazz ensemble performance.
- Demonstrate proficiency in jazz improvisation.
- Gain musical competence through public performances.

Grade Basis: L
Credit hours: 1.0
Lab hours: 48.0

Restrictions:

- Audition required.

MUEN 1131 - WIND ENSEMBLE

May be repeated for credit. Study and performance of a wide range of wind instrument repertoire (woodwind, brass, and percussion) from the Renaissance through the Twentieth Century. Open to all students. Lab fees apply

Upon successful completion, students will be able to:

- Demonstrate proficiency in playing wind instruments in weekly rehearsals.
- Demonstrate the ability to identify musical literature as it relates to wind instruments.
- Gain musical competence through public performances.

Grade Basis: L
Credit hours: 1.0
Lab hours: 48.0

Restrictions:

- Audition required.

MUEN 1135 - GUITAR ENSEMBLE

May be repeated for credit. Study and performance of a wide range of guitar repertoire from the Renaissance through the Twentieth Century. Open to all students.

Upon successful completion, students will be able to:

- Demonstrate the ability to identify and perform guitar music of extended length.
- Demonstrate the development of guitar proficiency.
- Demonstrate the musical growth through performance situations.
- Demonstrate critical skills in analyzing music for different stylistic periods.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

Restrictions:

- Audition required.

MUEN 1138 - STRINGS ENSEMBLE

May be repeated for credit. Study and performance of a wide range of string instrument repertoire including the double bass, violin, viola, cello from Renaissance through the 20th Century. Open to all students. Lab fees apply

Upon successful completion, students will be able to:

- Demonstrate the ability to identify and perform string music of extended length.
- Demonstrate the development of sting instrument proficiency.
- Demonstrate the musical growth through performance situations.
- Demonstrate critical skills in analyzing music for different stylistic periods

Grade Basis: L
Credit hours: 1.0
Lab hours: 48.0

Restrictions:

- Audition required.

MUEN 1151 - COLLEGE ENSEMBLE

May be repeated for credit. Entrance by audition only from College Singers. This group will perform in connection with public relations activities and recruitment for the College. Travel in the service area will be required. Lab fees apply

Upon successful completion, students will be able to:

- Demonstrate the ability to identify and perform vocal music of extended length.
- Demonstrate the development of vocal proficiency.
- Demonstrate the musical growth through performance situations.
- Demonstrate critical skills in analyzing music for different stylistic periods.

Grade Basis: L
Credit hours: 1.0
Lab hours: 48.0

Restrictions:

- Must be a member of MUEN 1154 College Singers

MUEN 1154 - COLLEGE SINGERS

May be repeated for credit. Entrance by audition only. Study and performance of a broad range of music from Renaissance motets and madrigals to pop and show. This group will be involved in public relations activities for the college. Lab fees apply

Upon successful completion, students will be able to:

- Perform music from a wide-range of periods and styles from Renaissance to Jazz and popular music.
- Demonstrate vocal proficiency.
- Demonstrate critical skills in analyzing music from different stylistic periods.
- Demonstrate the ability to be involved in public music performances.

Grade Basis: L
Credit hours: 1.0
Lab hours: 48.0

MUSI 1116 - SIGHT SINGING & EAR TRAINING I

Singing tonal music in treble and bass clefs, and aural study of elements of music, such as scales, intervals and chords, and dictation of basic rhythm, melody, and diatonic harmony.

Upon successful completion, students will be able to:

- Apply a method of sight singing to diatonic melodies in treble and bass clef, and oral demonstration of simple rhythms
- Classify elements of music, such as scales, intervals and chords.
- Transcribe aural rhythms and diatonic melodies.
- Transcribe and analyze aural basic harmonic progressions
- Read and reproduce rhythms in various simple meters.

Grade Basis: L
Credit hours: 1.0

Lecture hours: 32.0

MUSI 1117 - SIGHT SINGING & EAR TRAINING II

Singing tonal music in various clefs, continued aural study of the elements of music, and dictation of intermediate rhythm, melody, and diatonic harmony.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 32.0

Prerequisites:

- MUSI 1116 - SIGHT SINGING & EAR TRAINING I

MUSI 1181 - CLASS PIANO I

Beginning class instruction in the fundamentals of keyboard technique.

Upon successful completion, students will be able to:

- Produce five finger patterns in major and minor keys.
- Play major and minor scales in selected keys.
- Construct and play chords of different qualities.
- Harmonize a melody
- Perform selected compositions.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 32.0

MUSI 1182 - ADVANCED CLASS PIANO

Advanced beginning class instruction in the fundamentals of keyboard technique.

Upon successful completion, students will be able to:

- Play additional major and minor scales.
- Introduce select chord progressions and concepts of voice leading
- Continued harmonization of melodies.
- Perform selected compositions.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 32.0

MUSI 1192 - BEGINNING CLASS GUITAR

Class instruction in fundamental guitar playing, including technique, music-reading, fretboard theory, melodic and harmonic realizations.

Upon successful completion, students will be able to:

- Show proper left and right hand technique.
- Demonstrate an understanding of basic music reading in first position.
- Perform basic harmonic chord progressions.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 32.0

MUSI 1306 - MUSIC APPRECIATION

Understanding music through the study of cultural periods, major composers, and musical elements. Illustrated with audio recordings and live performances. Course does not apply to a music major degree. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Identify musical works and elements in a variety of styles.
- Analyze the elements and structures of music using appropriate terminology.
- Critically evaluate the influence of social, political, technological, and/or cultural ideas on music
- Articulate the significance of music as an art form within historical, cultural and social contexts.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

MUSI 1310 - AMERICAN MUSIC

A general survey of various styles of music of the Americas, including but not limited to jazz, folk, rock, and contemporary music. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Identify the elements, styles, and musicians representative of music within the chosen style(s)
- Analyze the elements and structures of music using appropriate terminology.
- Critically evaluate the influence of social, political, technological, and/or cultural ideas on the chosen musical style(s).
- Articulate an informed personal reflection of the chosen musical style(s).

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

MUSI 1311 - MUSIC THEORY I

The study of analysis and writing of tonal melody and diatonic harmony, including fundamental music concepts, scales, intervals, chords, 7th chords, and early four-part writing. Analysis of small compositional forms.

Upon successful completion, students will be able to:

- Construct and identify major scale and all forms of the minor scale.
- Construct and identify triads and seventh chords in all inversions.
- Analyze triads in harmonic context utilizing standard roman-numeral symbols.
- Compose music in standard four-part chorale style.
- Identify small musical forms.
- Demonstrate musical concepts covered in class, including scales, triads, and basic harmonic progression on the keyboard.
- Demonstrate an understanding of rhythmic meter and note duration through score analysis and composition.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

MUSI 1312 - MUSIC THEORY II

Continuation of MUSI 1311. The study of analysis and writing of tonal melody and diatonic harmony, including all diatonic chords and seventh chords in root position and inversions, non-chord tones, and functional harmony. Introduction to more complex topics, such as modulation, may occur. Optional correlated study at the keyboard.

Upon successful completion, students will be able to:

- Construct and identify all triads and seventh chords in root position and inversions.
- Properly utilize and identify all non-chord tones.
- Analyze harmonic progressions utilizing standard roman-numeral symbols.
- Compose original harmonic progressions that properly utilize functional harmony.
- Demonstrate on the keyboard musical concepts covered in class, including triads in inversions and progressions with non-chord tones.
- Demonstrate an understanding of rhythmic meter and note duration through score analysis and composition.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- MUSI 1311 - MUSIC THEORY I

MUSI 2116 - SIGHT SINGING & EAR TRAINING III

Singing more difficult tonal music in various clefs, aural study including dictation of more complex rhythm, melody, chromatic harmony, and extended tertian structures.

Upon successful completion, students will be able to:

- Apply a method of sight singing to more difficult tonal melodies, oral demonstration of complex rhythms.
- Classify more difficult elements of music, including extended-tertian chords, compound intervals, and non-diatonic scales
- Transcribe more complex rhythms and diatonic and non-diatonic melodies.
- Transcribe and analyze diatonic and chromatic harmonies
- Read and reproduce rhythms in various meters, including syncopation and irregular beat divisions

Grade Basis: L
Credit hours: 1.0
Lecture hours: 32.0

Prerequisites:

- MUSI 1116 - SIGHT SINGING & EAR TRAINING I
- MUSI 1117 - SIGHT SINGING & EAR TRAINING II

MUSI 2117 - SIGHT SINGING & EAR TRAINING IV

Singing advanced tonal music and introduction of modal and post-tonal melodies. Aural study including dictation of advanced rhythm, melody, and harmony.

Upon successful completion, students will be able to:

- Apply a method of sight singing to more difficult diatonic and non-diatonic melodies, including modes and non-tonal scales.
- Transcribe more complex rhythms, including contemporary materials.
- Transcribe increasingly more chromatic melodies.
- Transcribe and analyze diatonic and chromatic harmonies.
- Read and reproduce rhythms in various meters, including asymmetrical meters, syncopation, and irregular beat divisions.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 32.0

Prerequisites:

- MUSI 1116 - SIGHT SINGING & EAR TRAINING I
- MUSI 1117 - SIGHT SINGING & EAR TRAINING II
- MUSI 2116 - SIGHT SINGING & EAR TRAINING III

MUSI 2311 - MUSIC THEORY III

Advanced harmony voice leading, score analysis and writing of more advanced tonal harmony including chromaticism and extended-tertian structures. Optional correlated study at the keyboard.

Upon successful completion, students will be able to:

- Construct and identify extended-tertian and chromatic harmonies.
- Analyze musical compositions, which include various forms of tonal modulation utilizing standard roman-numeral symbols.
- Demonstrate proper voice-leading practices through composition in appropriate styles.
- Demonstrate concepts covered in class on the keyboard, including progressions that utilize modulation.
- . Demonstrate an understanding of rhythmic meter and note duration through score analysis and composition.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- MUSI 1311 - MUSIC THEORY I
- MUSI 1312 - MUSIC THEORY II

MUSI 2312 - MUSIC THEORY IV

Continuation of MUSI 2311. Continuation of advanced chromaticism and survey of analytical and compositional procedures in post-tonal music. Optional correlated study at the keyboard.

Upon successful completion, students will be able to:

- Construct and identify advanced chromatic harmonies.
- Analyze musical compositions that utilize advanced chromatic harmonies and foreign-key modulation techniques.
- Analyze musical compositions that utilize a variety of post-tonal practices.
- Compose music utilizing appropriate post-tonal practices.
- Demonstrate musical concepts covered in class on the keyboard.

- Demonstrate an understanding of rhythmic meter and note duration through score analysis and composition.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- MUSI 1311 - MUSIC THEORY I
- MUSI 1312 - MUSIC THEORY II
- MUSI 2311 - MUSIC THEORY III

NCBM 0100 or 01XX - NON-COURSE BASED OPTION FOR MATHEMATICS

The NCBM supports students in developing skills, strategies, and reasoning needed to succeed in mathematics, including communication and appropriate use of technology. Topics include the study of numeracy and the real number system; algebraic concepts, notation, and reasoning; quantitative relationships; mathematical models; and problem solving. This course is a developmental education intervention and supports topics in MATH 1332 or MATH 1342. Course may include basic study skills such as note-taking, time management, learning styles, math anxiety, and test-taking strategies. Must be taken concurrently with a MATH 1332 or MATH 1342 course. NCBM 0100 indicates an intervention paired with any section of MATH1332 or 1342. An NCBM course specifically tied to a MATH 1332 or 1342 course will be indicated by the last two digits (e.g., MATH 1332 + NCBM 0132). This course does not count toward graduation at NCTC.

Upon successful completion, students will be able to:

- Use appropriate symbolic notation and vocabulary to communicate, interpret, and explain mathematical concepts.
- Define, represent, and perform operations on real numbers, applying numeric reasoning to investigate and describe quantitative relationships and solve real world problems in a variety of contexts.
- Use algebraic reasoning to solve problems that require ratios, rates, percentages, and proportions in a variety of contexts using multiple representations.
- Apply algebraic reasoning to manipulate expressions and equations to solve real world problems.
- Use graphs, tables, and technology to analyze, interpret, and compare data sets.
- Construct and use mathematical models in verbal, algebraic, graphical, and tabular form to solve problems from a variety of contexts and to make predictions and decisions.

Grade Basis: P
Credit hours: 1.0
Lecture hours: 16.0

NCBM 0205 - DEVELOPMENTAL MATHEMATICS - BASE INTERVENTION

The BASE NCBO supports students in developing skills, strategies, and reasoning needed to succeed in mathematics, including communication and appropriate use of technology. Topics include the study of numeracy and the real number system; algebraic concepts, notation, and reasoning; quantitative relationships; mathematical models; and problem solving. This intervention is designed specifically for students assessed at BASE levels 3-4 and must be part of a student's co-enrollment (co-requisite) enrollment: as a mainstreamed intensifier providing contact hours for additional, just-in-time instructional support for the student's success in the developmental math course, or as a contextualized and/or integrated basic skills instructional support for a Career/Technical Education course. This course is a BASE developmental education intervention and supports topics in mathematics such as fractions, integers, decimals, percentages, algebraic concepts, solving equations, and polynomials. This course is designed for students with little algebraic background and will be paired with MATH 0305. The course may also include basic study skills such as note-taking, time management, learning styles, math anxiety, and test-taking strategies. This course does not count toward graduation at NCTC.

Upon successful completion, students will be able to:

- Use appropriate symbolic notation and vocabulary to communicate, interpret, and explain mathematical concepts.
- Define, represent, and perform operations on real numbers, applying numeric reasoning to investigate and describe quantitative relationships and solve real world problems in a variety of contexts.
- Use algebraic reasoning to solve problems that require ratios, rates, percentages, and proportions in a variety of contexts using multiple representations.
- Apply algebraic reasoning to manipulate expressions and equations to solve real world problems.
- Use graphs, tables, and technology to analyze, interpret, and compare data sets.
- Construct and use mathematical models in verbal, algebraic, graphical, and tabular form to solve problems from a variety of contexts and to make predictions and decisions.

Grade Basis: P
Credit hours: 2.0
Lecture hours: 32.0

NCTC 1001 - FIRST YEAR EXPERIENCE

The First Year Experience Course is a one credit, 4 week course designed to provide students with the tools needed to persist and succeed at North Central Texas College. Topics covered in the course include: learning styles, study techniques, note-taking, test-taking, personal wellness and finance, time management, career

and educational planning, and interpersonal skill development. First time college students, excluding dual credit, are required to pass NCTC 1001. Students that have successfully completed 9 hours of dual credit courses on campus, are not required to enroll. The course does not satisfy requirements for any degree plan at NCTC, has no prerequisites, and is non-transferable.

Grade Basis: L
Credit hours: 1.0

NURA 1060 - CNA CLINICAL

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.

Grade Basis: P

MCHN 2431 - OPERATION OF CNC TURNING CENTERS

CNC operations with an emphasis on turning centers.

Upon successful completion, students will be able to:

- Set up and operate CNC turning centers
- Set the tool and workpiece offsets for machining operations
- Edit the program as required

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 64.0

OSHT 1320 - ENERGY INDUSTRIAL SAFETY

An overview for industrial workers of state/federal regulations and guidelines which require industrial safety training. Topics include the 29 C.F.R. 1910, 1926 and National Fire Protection Association (NFPA) 70E standards such as confined space entry, emergency action, lock out/tag out, arc flash, and other work related subjects.

Upon successful completion, students will be able to:

- Describe the basic components of safety, health, and environmental systems as defined by the Occupational Safety and Health Administration
- Describe Hazardous Waste Operator (HAZWOPER) standards
- Locate Material Safety Data Sheets (MSDS) and interpret the data
- Select and don Personal Protective Equipment (PPE)
- Perform lock out and tag out procedures
- Complete a confined space and hot work permit

- Select and employ fall protection equipment
- Fill out a Job Hazard Analysis (JHA)

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

EMSP 2364 - PRACTICUM - EMERGENCY MEDICAL TECHNOLOGY/ TECHNICIAN EMT/PARAMEDIC

A method of instruction providing detailed education, training an work-based experience, and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.

Grade Basis: L
Credit hours: 3.0

HPRS 2201 - PATHOPHYSIOLOGY

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.

Grade Basis: L
Credit hours: 2.0

ACNT 1329 - PAYROLL & BUSINESS TAX ACCOUNTING

A study of payroll procedures, taxing entities, and reporting requirements of local, state, and federal taxing authorities in a manual and computerized environment.

Upon successful completion, students will be able to:

- Calculate employee payroll and employer-related taxes
- Prepare related tax forms
- Manage payroll records required to reflect current laws and regulations

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

PTRT 2359 - PETROLEUM COMPUTER APPLICATIONS

Computer applications used in the petroleum industry. Includes the automation of open and closed loop systems.

Upon successful completion, students will be able to:

- Describe the different computer systems used to monitor and control petroleum processes
- Troubleshoot components and operating systems of modern process control

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HPRS 2300 - PHARMACOLOGY FOR HEALTH PROFESSIONS

A study of drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages.

Grade Basis: L
Credit hours: 3.0

PHRA 1001 - PHARMACY TECHNICIAN

An overview of the qualifications, operational guidelines, and job duties of a pharmacy technician. Instruction includes drug interactions, terminology, and dosage calculations.

Grade Basis: L
Lecture hours: 60.0

PHED 1108 - BOWLING I

This course is designed to introduce the student to basic bowling skills, etiquette, safety procedures, and scoring.

Upon successful completion, students will be able to:

- Exhibit proper etiquette and safety while bowling and spectating.
- Demonstrate the proper grip, stance, approach, and delivery.
- Define basic terminology associated with bowling.
- Show mastery of the rules and scoring.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1109 - BOWLING II

This course is designed to introduce the student to basic bowling skills, etiquette, safety procedures, and scoring.

Upon successful completion, students will be able to:

- Exhibit proper etiquette and safety while bowling and spectating.
- Demonstrate the proper grip, stance, approach, and delivery.
- Define basic terminology associated with bowling.
- Show mastery of the rules and scoring.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1110 - GOLF I

This course is designed to introduce the student to basic golf skills, etiquette, safety procedures, and swing.

Upon successful completion, students will be able to:

- Understand scoring in golf.
- Identify rules dealing with water hazards.
- Knowledge of club assignment.
- Understanding etiquette on putting.
- Knowledge of time management and golf etiquette.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1111 - GOLF II

This course is designed to introduce the student to basic golf skills, etiquette, safety procedures, and swing.

Upon successful completion, students will be able to:

- Identify rules dealing with water hazards.
- Knowledge of tee box etiquette.
- Knowledge of bag and club rules.
- Identify markers and course layout.
- Knowledge of fairway etiquette.

Grade Basis: L
Credit hours: 1.0

Lecture hours: 48.0

PHED 1114 - VARSITY SPORTS I

This course is designed to support the institutional mission to provide competitive athletic opportunities for student/athletes to pursue academic success, physical and emotional well-being and social development.

Upon successful completion, students will be able to:

- Have knowledge and understanding of sport specific rules.
- Understand and demonstrate competitive team play and sport related skills.
- Demonstrate positive teamwork and sportsmanship.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

Restrictions:

- Varsity athletes only.

PHED 1115 - VARSITY SPORTS II

This course is designed to support the institutional mission to provide competitive athletic opportunities for student/athletes to pursue academic success, physical and emotional well-being and social development.

Upon successful completion, students will be able to:

- Have knowledge and an understanding of offensive and defensive tactics.
- Develop and perform teamwork with all members of the team.
- Acknowledge the importance of understanding scoring system, rules, rotations and communication on the field/court.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

Restrictions:

- Varsity athletes only.

PHED 1116 - VARSITY CONDITIONING I

This course is designed to support the institutional mission to provide competitive athletic opportunities for student/athletes to pursue academic success, physical and emotional well-being and social development.

Upon successful completion, students will be able to:

- Define aerobic and anaerobic exercise and recognize the difference.
- Have knowledge of simple skeletal and muscular systems of the body.
- Understand the importance of proper nutrition and hydration in an individual exercise program.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

Restrictions:

- Varsity athletes only.

PHED 1117 - VARSITY CONDITIONING II

This course is designed to support the institutional mission to provide competitive athletic opportunities for student/athletes to pursue academic success, physical and emotional well-being and social development.

Upon successful completion, students will be able to:

- Understand the purpose of exercise movements as they relate to muscle function and balance.
- Demonstrate basic principles of training: Cardiovascular, muscular strength and endurance, flexibility and body composition.
- Execute discipline, hard work and teamwork.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

Restrictions:

- Varsity athletes only.

PHED 1118 - JOGGING/WALKING I

This course is designed to improve or maintains the student's cardiovascular endurance and knowledge of cardiovascular fitness such as heart rates, body mass index and body fat percentage according to the student's age, gender, height and weight.

Upon successful completion, students will be able to:

- Have Knowledge of the benefits of jogging and walking for cardiovascular health.
- Explain and demonstrate basic concepts of jogging and walking for weight loss.
- Understand the role of proper nutrition and hydration before, during and after exercise.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1119 - JOGGING/WALKING II

This course is designed to improve or maintain the student's cardiovascular endurance and knowledge of cardiovascular fitness such as heart rates, body mass index and body fat percentage according to the student's age, gender, height and weight.

Upon successful completion, students will be able to:

- Have Knowledge of the benefits of jogging and walking for cardiovascular health.
- Explain and demonstrate basic concepts of jogging and walking for weight loss.
- Understand the role of proper nutrition and hydration before, during and after exercise.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1120 - AEROBIC WORKOUT I

This course is designed to improve the student's maximum muscular and cardiovascular endurance.

Upon successful completion, students will be able to:

- Determine maximum heart rate
- Identify aerobic and anaerobic exercise
- Define flexibility, agility, balance and coordination
- Understand the importance of flexibility, agility, balance and coordination
- Calculate body fat percentage
- List different types of aerobic activity

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1121 - AEROBIC WORKOUT II

This course is designed to improve the student's maximum muscular and cardiovascular endurance.

Upon successful completion, students will be able to:

- Identify aerobic and anaerobic exercise

- Define flexibility, agility, balance and coordination
- Understand the importance of flexibility, agility, balance and coordination
- Calculate body fat percentage
- List different types of aerobic activity
- Determine what constitutes Anaerobic Threshold
- Describe reaction time as it pertains to exercise
- Knowledgeable in muscular endurance and strength
- Identify how oxygen is carried through the blood

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1124 - WEIGHT TRAINING I/JOGGING

This course is designed to improve the student's muscular strength, endurance, and cardiovascular endurance and introduce the student to the basic muscular groups.

Upon successful completion, students will be able to:

- Have knowledge of the human muscular system
- Demonstrate and have knowledge of the benefits of weight training in a total fitness program.
- Have knowledge of popular exercises for sport specific training.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1125 - WEIGHT TRAINING II/JOGGING

This course is designed to improve the student's muscular strength, endurance, and cardiovascular endurance and introduce the student to the basic muscular groups.

Upon successful completion, students will be able to:

- Know the importance of nutrition in weight training and conditioning performance.
- Understand various weight training and conditioning programs for specific sports.
- Knowledge of what muscles a specific exercise works as well as proper technique for performing certain lifts.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1126 - MARTIAL ARTS I

This course is designed to condition the body in a manner to enhance ones ability to do moves and activities in martial arts. This will encompass conditioning moves targeted directly to the parts of the body required to improve ones flexibility, punches, kicks and cardio.

Upon successful completion, students will be able to:

- Demonstrate proper endurance routines.
- Demonstrate proper stretching and flexibility routines.
- Demonstrate the 15 choreographed moves of Tai Chi.
- Demonstrate Upper and Lower body Kata Forms.
- Written test on History, Terminology, Etiquette, Stories and Keynotes.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1127 - MARTIAL ARTS II

This course is designed to condition the body in a manner to enhance ones ability to do moves and activities in martial arts. This will encompass conditioning moves targeted directly to the parts of the body required to improve ones flexibility, punches, kicks and cardio.

Upon successful completion, students will be able to:

- Name and demonstrate 3 Falling Techniques @ 100%
- Name and demonstrate 4 kicks and blocks with reaction @ 100%
- Name and demonstrate 4 Punches and blocks with reaction @ 100%
- Name and demonstrate 10 Break nerves with reaction @ 100%
- Memorize and verbally test 20 terminology terms @ 100%

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1134 - BASKETBALL I

This course is designed to teach the student the rules, skills, and fundamentals necessary to play the game. The course is also designed to improve the student's physical fitness.

Upon successful completion, students will be able to:

- Gain knowledge of court dimensions for a high school court.
- Gain knowledge of the three point line distance on a high school court.

- Gain knowledge of the free throw line distance from the backboard.
- Gain knowledge of the proper game ball sizes for high school boys and girls.
- Gain knowledge of the terms consistent with the game.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1135 - BASKETBALL II

This course is designed to teach the student the rules, skills, and fundamentals necessary to play the game. The course is also designed to improve the student's physical fitness.

Upon successful completion, students will be able to:

- Students will be able to demonstrate knowledge of game official’s duties.
- Students will gain general principals of offensive strategies.
- Students will gain general principals of defensive strategies.
- Students will gain an understanding of basketball terminology.
- Students will be to identify the three main passing techniques.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1140 - CARDIO FITNESS I

This course is designed to improve the student's maximum muscular and cardio vascular endurance through a variety of exercises and help teach the basics of the muscles used during physical activity in cardio and weight lifting and making healthy food choices and how they all work together for overall cardio fitness.

Upon successful completion, students will be able to:

- Demonstrate basic knowledge of all the various nutrition categories.
- Knowledge of determining what maximum heart rate is and how to find theirs.
- All students will have the knowledge of identifying the different muscle groups and their functions.
- Students will be able to define what fitness is and how it affects them.
- Students will be able to define what a calorie is.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1141 - CARDIO FITNESS II

This course is designed to improve the student's maximum muscular and cardio vascular endurance through a variety of exercises and help teach the basics of the muscles used during physical activity in cardio and weight lifting and making healthy food choices and how they all work together for overall cardio fitness.

Upon successful completion, students will be able to:

- Students will be able to calculate recommended percentage of maximum heart rate for exercising and where the range is for themselves.
- Students will be able to define RPE, what it stands for and how it affects everyday life before and after the use of exercise.
- All students will be able calculate calories to pound formula during and after exercising.
- Students will be able to define DOMS and what it does.
- Students will be able to name the three muscles types and what they do.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1146 - YOGA I

This course is designed to improve the student's body flexibility, muscular strength and endurance, breath capacity, posture, balance and concentration.

Upon successful completion, students will be able to:

- Importance of modification of the pose
- Functional muscular strength and flexibility
- Postural alignment

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1147 - YOGA II

This course is designed to improve the student's body flexibility, muscular strength and endurance, breath capacity, posture, balance and concentration.

Upon successful completion, students will be able to:

- Diverse Styles of Yoga and Use
- Muscle Group Interaction
- Benefits of Yoga

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1148 - PILATES I

This course is designed to improve the student's knowledge of the basic principles of biomechanical body awareness, breath capacity, muscular endurance and stamina in accordance to the Pilates Principles.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1149 - PILATES II

This course is designed to improve the student's knowledge of the basic principles of biomechanical body awareness, breath capacity, muscular endurance and stamina in accordance to the Pilates Principles.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 1301 - INTRODUCTION TO PHYSICAL FITNESS & SPORT

The purpose of this course is to provide students with an introduction to human movement that includes the historical development of physical education, exercise science and sport. This course offers the student both an introduction to the knowledge base, as well as, information on expanding career opportunities.

Upon successful completion, students will be able to:

- Distinguish between and identify terminology and research within the sub-disciplines in the field of Kinesiology and their application to diverse careers.
- Summarize the historical and philosophical approaches to physical activity, physical education, exercise science and sport.
- Identify the characteristics of a physically educated person and the importance of assessment and advocacy in physical education, exercise science, and sport.
- Discuss how the changing nature of education and technological advances may influence physical education, exercise science, and sport in the future.
- Identify major professional organizations, foundations, and associations supporting physical activity at local, state, national and international levels as well as data tools and resources.

Grade Basis: L
Credit hours: 3.0

Lecture hours: 48.0

PHED 1308 - SPORTS OFFICIATING

The purpose of this course is to study the officiating requirements for sports and games with an emphasis on mechanics, rule interpretation, and enforcement.

Upon successful completion, students will be able to:

- Interpret and enforce contest rules in a variety of sports and games.
- Demonstrate officiating mechanics and techniques in a variety of sports and games for appropriate age and skill level.
- Develop a personal philosophy guided by rules, ethics, and etiquette necessary to be an effective official.
- Apply problem-solving techniques relevant to officiating a sports contest and how to maintain a positive self-image in a group contest environment.
- Assess and manage player, coach, and spectator behaviors when officiating to provide a healthy sport environment.
- Identify governing bodies of various sports and procedures for becoming an official.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

PHED 1321 - COACHING, SPORTS & ATHLETICS

Study of the history, theories, philosophies, rules, and terminology of competitive sports. Includes coaching techniques.

Upon successful completion, students will be able to:

- Develop a philosophy of coaching based on sound educational principals
- Become familiar with the scope and content of the fields of Sport Psychology, Sport Pedagogy, Sport Physiology and Sport Management.
- Develop an understanding of the role of sports in the schools, and their relationship to the home, community, and academic environments.
- Become aware of the problem related to safety, liability and law in relation to facilities, conduct of practices and competitive events.
- Discussed policies related to team discipline, substance abuse, conditioning, conduct of players, grades, response to officials, and team cohesiveness.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

PHED 1338 - CONCEPTS OF PHYSICAL FITNESS

This course is designed to familiarize students with knowledge, understanding, and values of health related fitness and its influence on the quality of life emphasizing the development and implementation of fitness programs.

Upon successful completion, students will be able to:

- Describe the elements of health related physical fitness, performance related physical fitness, inactivity, and hypokinetic diseases on health and wellness
- Distinguish the influence of personal behavior and responsibility on the development, treatment, and prevention of infectious diseases, stress, and addictions.
- Compare and contrast the relationships among physical activity, nutrition, and body composition.
- Participate in physical fitness activities that will aid in assessing personal health related fitness
- Design, implement, and evaluate fitness programs to promote societal lifetime physical fitness.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

PHED 2101 - RACQUETBALL

This course is designed to instruct the student in rules, terminology, court dimensions and the playing of singles, doubles, cut-throat, and tournament formatting.

Upon successful completion, students will be able to:

- Demonstrate the grip, strokes, serves, and footwork.
- Show mastery of the games rules, terminology, history, and strategy.
- Exhibit proper etiquette while playing and spectating the sport.
- Participate in tournament play.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

PHED 2356 - CARE & PREVENTION OF ATHLETIC INJURIES

Prevention and care of athletic injuries with emphasis on qualities of a good athletic trainer, avoiding accidents and injuries, recognizing signs and symptoms of specific sports injuries and conditions, immediate and long-term care of injuries, and administration procedures in athletic training.

Upon successful completion, students will be able to:

- Organize and administer a sports medicine program including a sports medical coverage team, designing a facility, developing conditioning programs, and pre-participation physical exams. Organize and administer pre-participation sports physicals.
- Distinguish signs and symptoms of environmental injuries and conditions that occur in sports such as heat illness, hypothermia, lightning safety and participation at altitude.
- Perform the steps of a primary and secondary survey of an injured athlete
- Learn the basic anatomy, signs and symptoms, and evaluation techniques of sports injuries to the ankle, leg, knee, thigh, high, should elbow, hand, and head.
- Perform basic wrapping and taping techniques for sports injuries.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

PHIL 1301 - INTRODUCTION TO PHILOSOPHY

A study of major issues in philosophy and/or the work of major philosophical figures in philosophy. Topics in philosophy may include theories of reality, theories of knowledge, theories of value, and their practical applications. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Read, analyze, and critique philosophical texts.
- Demonstrate knowledge of key concepts, major arguments, problems, and terminology in philosophy.
- Present logically persuasive arguments both orally and in writing.
- Demonstrate critical thinking skills in evaluation an application of philosophical concepts to various aspects of life.
- Evaluate the personal and social responsibilities of living in a diverse world.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading.

PHIL 2303 - INTRODUCTION TO FORMAL LOGIC

The purpose of the course is to introduce the student symbolic logic, including syllogisms, propositional and predicate logic, and logical proofs in a system of rules.

Upon successful completion, students will be able to:

- Determine the logical structure of English arguments by identifying premises and conclusions.
- Understand basic concepts in logic, such as truth functionality, validity, soundness, counter-examples, tautology, self-contradiction, logical equivalence, logical contradictoriness, and logical consistence.
- Translate English statements into propositional and/or predicate notation.
- Determine the validity of symbolic propositional or predicate arguments using such methods as direct/indirect truth tables, natural deduction, and/or the finite universe method.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading

PHIL 2306 - INTRODUCTION TO ETHICS

The systematic evaluation of classical and/or contemporary ethical theories concerning the good life, human conduct in society, morals, and standards of value. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Read, analyze, and critique philosophical texts.
- Define and appropriately use important terms such as relativism, virtue, duty, rights, utilitarianism, natural law, egoism, altruism, autonomy, and care ethics.
- Demonstrate knowledge of major arguments and problems in ethics.
- Present and discuss well-reasoned ethical positions in writing.
- Apply ethical concepts and principles to address moral concerns.
- Apply course material to various aspects of life.
- Discuss ways of living responsibly in a world where people have diverse ethical beliefs.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading

PLAB 1023 - CERTIFIED PHLEBOTOMY TECHNICIAN

Skill development in the performance of a variety of blood collection methods using proper techniques and standard precautions. Includes vacuum collection devices,

syringes, capillary skin puncture, butterfly needles and blood culture, and specimen collection on adults, children, and infants. Emphasis on infection prevention, patient identification, specimen labeling, quality assurance, specimen handling, processing, accessioning, professionalism, ethics, and medical terminology.

Grade Basis: L
Lecture hours: 60.0

PHYS 1401 - COLLEGE PHYSICS I

Fundamental principles of physics, using algebra and trigonometry; the principles and applications of classical mechanics and thermodynamics, including harmonic motion, mechanical waves and sound, physical systems, Newton's Laws of Motion, and gravitation and other fundamental forces with emphasis on problem solving.\ Laboratory activities will reinforce fundamental principles of physics, using algebra and trigonometry; the principles and applications of classical mechanics and thermodynamics, including harmonic motion,mechanical waves and sound, physical systems, Newton’s Laws of Motion, and gravitation andother fundamental forces; emphasis will be on problem solving. Lab fees apply. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Determine the components of linear motion (displacement, velocity, and acceleration), and especially motion under conditions of constant acceleration.
- Apply Newton’s laws to physical problems including gravity
- Solve problems using principles of energy.
- Use principles of impulse and linear momentum to solve problems.
- Solve problems in rotational kinematics and dynamics, including the determination of the location of the center of mass and center of rotation for rigid bodies in motion.
- Solve problems involving rotational and linear motion.
- Describe the components of a wave and relate those components to mechanical vibrations, sound, and decibel level.
- Demonstrate an understanding of equilibrium, including the different types of equilibrium.
- Discuss simple harmonic motion and its application to quantitative problems or qualitative questions.
- Solve problems using the principles of heat and thermodynamics.
- Solve basic fluid mechanics problems.
- Demonstrate techniques to set up and perform experiments, collect data from those experiments, and formulate conclusions from an experiment.
- Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0

Lab hours: 48.0

Prerequisites:

- MATH 1314 - COLLEGE ALGEBRA
- MATH 1316 - PLANE TRIGONOMETRY
- MATH 2412 - PRE-CALCULUS MATH

PHYS 1402 - COLLEGE PHYSICS II

Fundamental principles of physics, using algebra and trigonometry; the principles and applications of electricity and magnetism, including circuits, electrostatics, electromagnetism, waves, sound, light, optics, and modern physics topics; with emphasis on problem solving. Laboratory activities will reinforce fundamental principles of physics, using algebra and trigonometry; the principles and applications of electricity and magnetism, including circuits, electrostatics, electromagnetism, waves, sound, light, optics, and modern physics topics; with emphasis on problem solving. Lab fees apply Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Solve problems involving the inter-relationship of fundamental charged particles, and electrical forces, fields, and currents.
- Apply Kirchhoff's Rules to analysis of circuits with potential sources, capacitance, inductance, and resistance, including parallel and series capacitance and resistance
- Solve problems in the electrostatic interaction of point charges through the application of Coulomb's Law.
- Solve problems involving the effects of magnetic fields on moving charges or currents, and the relationship of magnetic fields to the currents that produce them.
- Use Faraday's and Lenz's laws to determine electromotive forces and solve problems involving electromagnetic induction.
- Articulate the principles of reflection, refraction, diffraction, interference, and superposition of waves.
- Describe the characteristics of light and the electromagnetic spectrum.
- Develop techniques to set up and perform experiments, collect data from those experiments, and formulate conclusions from an experiment.
- Demonstrate the collections, analysis, and reporting of data using the scientific method.
- Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 48.0

Prerequisites:

- PHYS 1401 - COLLEGE PHYSICS I

PHYS 1415 - PHYSICAL SCIENCE

Physics Science course is designed for non-science majors. Surveys topics from physics, chemistry, geology, astronomy, and meteorology. Lab fees apply Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Use the principles of mechanics to solve problems involving motion, forces, energy, momentum, and repetitive motion.
- Describe the basic principles of fluid mechanics.
- Demonstrate an understanding of the principles of heat and thermodynamics.
- Solve basic problems involving electricity.
- Describe the relationship between electricity and magnetism.
- Describe the characteristics of light and the electromagnetic spectrum.
- Demonstrate an understanding of the atomic model and nuclear energy.
- Demonstrate understanding of the basis of science using terms such as scientific method, hypothesis, law, theory, and pseudoscience.
- Discuss energy resources.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

PHYS 2425 - UNIVERSITY PHYSICS I

Fundamental principles of physics, using calculus, for science, computer science, and engineering majors; the principles and applications of classical mechanics, including harmonic motion, physical systems and thermodynamics; and emphasis on problem solving. Basic laboratory experiments supporting theoretical principles involving the principles and applications of classical mechanics, including harmonic motion and physical systems; experimental design, data collection and analysis, and preparation of laboratory reports. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Determine the components of linear motion (displacement, velocity, and acceleration), and especially motion under conditions of constant acceleration.
- Solve problems involving forces and work.
- Apply Newton’s laws to physical problems.
- Identify the different types of energy.
- Solve problems using principles of conservation of energy.
- Define the principles of impulse, momentum, and collisions.
- Use principles of impulse and momentum to solve problems.

- Determine the location of the center of mass and center of rotation for rigid bodies in motion.
- Discuss rotational kinematics and dynamics and the relationship between linear and rotational motion.
- Solve problems involving rotational and linear motion.
- Define equilibrium, including the different types of equilibrium.
- Discuss simple harmonic motion and its application to real-world problems.
- Solve problems involving the First and Second Laws of Thermodynamics.
- Prepare laboratory reports that clearly communicate experimental information in a logical and scientific manner.
- Conduct basic laboratory experiments involving classical mechanics.
- Relate physical observations and measurements involving classical mechanics to theoretical principles
- Evaluate the accuracy of physical measurements and the potential sources of error in the measurements.
- Design fundamental experiments involving principles of classical mechanics.
- Identify appropriate sources of information for conducting laboratory experiments involving classical mechanics.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 48.0

Prerequisites:

- MATH 2413 - CALCULUS I

PHYS 2426 - UNIVERSITY PHYSICS II

Principles of physics for science, computer science, and engineering majors, using calculus, involving the principles of electricity and magnetism, including circuits, electromagnetism, waves, sound, light, and optics. Laboratory experiments supporting theoretical principles presented in the lecture involving the principles of electricity and magnetism, including circuits, electromagnetism, waves, sound, light and optics, experimental design, data collection and analysis, and preparation of laboratory reports. Lab fees apply Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Articulate the fundamental concepts of electricity and electromagnetism, including electrostatic potential energy, electrostatic potential, potential difference, magnetic field, induction, and Maxwell’s Laws
- State the general nature of electrical forces and electrical charges, and their relationship to electrical current.
- Solve problems involving the inter-relationship of electrical charges, electrical forces, and electrical fields.

- Apply Kirchhoff’s Laws to analysis of circuits with potential sources, capacitance, and resistance, including parallel and series capacitance and resistance.
- Calculate the force on a charged particle between the plates of a parallel-plate capacitor.
- Apply Ohm’s law to the solution of problems
- Describe the effects of static charge on nearby materials in terms of Coulomb’s Law.
- Use Faraday’s and Lenz’s laws to find the electromotive forces.
- Describe the components of a wave and relate those components to mechanical vibrations, sound, and decibel level.
- Articulate the principles of reflection, refraction, diffraction, interference and superposition of waves.
- Solve real-world problems involving optics, lenses, and mirrors.
- Prepare laboratory reports that clearly communicate experimental information in a logical and scientific manner.
- Conduct basic laboratory experiments involving electricity and magnetism.
- Relate physical observations and measurements involving electricity and magnetism to theoretical principles.
- Evaluate the accuracy of physical measurements and the potential sources of error in the measurements.
- Design fundamental experiments involving principles of electricity and magnetism.
- Identify appropriate sources of information for conducting laboratory experiments involving electricity and magnetism.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 48.0

Prerequisites:

- MATH 2414 - CALCULUS II
- PHYS 2425 - UNIVERSITY PHYSICS I

MDCA 1064 - CLINICAL MEDICAL ASSISTANT EXTERNSHIP

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

Grade Basis: P

PLAB 1060 - PHLEBOTOMY TECHNICIAN EXTERNSHIP

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.

Grade Basis: P

ACNT 1325 - PRINCIPLES OF ACCOUNTING I

A study of accounting concepts and their application in transaction analysis and financial statement preparation. Emphasis on the accounting cycle for service and merchandising enterprises.

Upon successful completion, students will be able to:

- Apply generally accepted accounting principles, concepts, and procedures
- Complete the accounting cycle for service and merchandising enterprises

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

ACCT 2301 - PRINCIPLES OF FINANCIAL ACCOUNTING

This course is an introduction to the fundamental concepts of financial accounting as prescribed by U.S. generally accepted accounting principles (GAAP) and applied to transactions and events that affect business organizations. Students will examine the procedures and systems to accumulate, analyze, measure, and record financial transactions. Students will use recorded financial information to prepare a balance sheet, income statement, statement of cash flows, and statement of shareholders' equity to communicate the business entity's results of operations and financial position to users of financial information who are external to the company. Students will study the nature of assets, liabilities, and owners' equity while learning to use reported financial information for purposes of making decisions about the company. Students will be exposed to International Financial Reporting Standards (IFRS).

Upon successful completion, students will be able to:

- Use basic accounting terminology and the assumptions, principles, and constraints of the accounting environment.
- Identify the difference between accrual and cash basis accounting.
- Analyze and record business events in accordance with U.S. generally accepted accounting principles (GAAP).
- Prepare adjusting entries and close the general ledger.
- Prepare financial statements in an appropriate U.S. GAAP format, including the following: income statement, balance sheet, statement of cash flows, and statement of shareholders' equity.
- Analyze and interpret financial statements using financial analysis techniques.
- Describe the conceptual differences between International Financial Reporting Standards and U.S. generally accepted accounting principles.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

PSYC 1300 - LEARNING FRAMEWORK

A study of the research and theory in the psychology of learning, cognition, and motivation, factors that impact learning, and application of learning strategies. Theoretical models of strategic learning, cognition, and motivation serve as the conceptual basis for the introduction of the college-level student academic strategies. Students use assessment instruments (e.g. learning inventories) to help them identify their own strengths and weaknesses as strategic learners. Students are ultimately expected to integrate and apply the learning skills discussed across their own academic programs and become effective and efficient learners. Students developing these skills should be able to continually draw from the theoretical models they have learned. This course is cross-listed as EDUC 1300. The student may register for either EDUC 1300 or PSYC 1300 but may receive credit for only one of the two.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

PSYC 2301 - GENERAL PSYCHOLOGY

General Psychology is a survey of the major psychological topics, theories, and approaches to the scientific study of behavior and mental processes. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Identify various research methods and their characteristics used in the scientific study of psychology
- Describe the historical influences and early schools of thought that shaped the field of psychology
- Describe some of the prominent perspectives and approaches used in the study of psychology
- Use terminology unique to the study of psychology
- Describe accepted approaches and standards in psychological assessment and evaluation
- Identify factors in physiological and psychological processes involved in human behavior

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading.

PSYC 2314 - LIFESPAN GROWTH & DEVELOPMENT

Lifespan Growth and Development is a study of social, emotional, cognitive and physical factors and influences of a developing human from conception to death. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Describe the stages of the developing person at different periods of the life span from birth to death
- Discuss the social, political, economic, and cultural forces that affect the development process of the individual
- Identify factors of responsible personal behavior with regard to issues such as sexual activity, substance abuse, marriage and parenting
- Explain the biosocial, cognitive, and psychological includes throughout the lifespan as an ongoing set of processes involving both continuity and change
- Describe the different development perspectives of the major theories of development (i.e. cognitive, learning, humanistic and psychodynamic)
- Identify examples of some of the cultural and ethnic differences that influence development throughout the lifespan
- Discuss the various causes or reasons for disturbances in the developmental process

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading.

PSYC 2319 - SOCIAL PSYCHOLOGY

Study of individual behavior within the social environment. Topics may include socio-psychological processes, attitude formation and change, interpersonal relations, group processes, self, social cognition, and research methods.

Upon successful completion, students will be able to:

- Define social psychology and related terminology.
- Discuss the relationship between the person and the situation and its influence on attitudes, prejudice, aggression, prosocial behavior, and interpersonal relationships.
- Describe the dynamics of group behavior in areas of social influence, such as altruism, conformity, obedience, deindividuation, leadership, intergroup relations, and conflict and cooperation.

- Identify and evaluate the current and historical research, and research methods of social psychology, including ethical considerations.
- Apply social psychological principles to real-world issues.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- PSYC 2301 - GENERAL PSYCHOLOGY

Restrictions:

- Must meet TSI College Readiness Standard for Reading

PTRT 1301 - INTRODUCTION TO PETROLEUM INDUSTRY

An introduction to the various aspects of petroleum industry including equipment, systems, instrumentation, operations, and the various scientific principles. Addresses a variety of petroleum technologies: exploration, drilling, production, transportation, marketing, and chemical processing industries.

Upon successful completion, students will be able to:

- Identify the concepts of exploration, production, refining, marketing, and transportation
- Describe the terms and phrases associated with the petroleum industry

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

PTRT 1303 - DRILLING

A study of practices and procedures that are involved in drilling operations. Topics on rig equipment, casing design, fishing, and proper procedures to successfully drill a well are discussed.

Upon successful completion, students will be able to:

- Describe fundamentals operations in the drilling industry
- Identify the five major systems and equipment of a drilling rig
- Describe specific down-hole problems; and explain solutions

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

PTRT 1307 - RECOVERY & PRODUCTION METHODS

Petroleum recovery and production methods.

Upon successful completion, students will be able to:

- Describe natural reservoir drive mechanisms, and artificial lift methods
- Identify the components of surface systems, identify factors used to select and describe basic life and recovery methods

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

PTRT 1317 - NATURAL GAS PROCESSING I

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.

Upon successful completion, students will be able to:

- Describe the basic components of processing equipment
- Explain various gas plant operational procedures

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

PTRT 1324 - PETROLEUM INSTRUMENTATION

Study of instruments, instrument systems, terminology, process variables, and control coops as used in a petroleum environment.

Upon successful completion, students will be able to:

- Describe the oil field instrumentation
- Identify the basic instruments used with temperature, pressure, level, flow, and analytical field applications
- Describe the basic components of a control loop

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

PTRT 2331 - WELL COMPLETIONS

Drilling and wellbore analysis data to develop a well completion plan.

Upon successful completion, students will be able to:

- Analyze production and completion data
- Develop a plan of action for completing a well

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

PTRT 2380 - COOPERATIVE EDUCATION - PETROLEUM TECHNOLOGY/TECHNICIAN

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.

Upon successful completion, students will be able to:

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry

Grade Basis: L
Credit hours: 3.0
Lecture hours: 16.0

RADR 1160 - CLINICAL I

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.

Grade Basis: L
Credit hours: 1.0

RADR 1201 - INTRODUCTION TO RADIOGRAPHY

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.

Grade Basis: L
Credit hours: 2.0
Lecture hours: 32.0

RADR 1166 - PRACTICUM I

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

Grade Basis: L
Credit hours: 1.0

RADR 1267 - PRACTICUM II

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

Grade Basis: L
Credit hours: 2.0

RADR 1303 - PATIENT CARE

An introduction in patient assessment, infection control procedures, emergency and safety procedures, communication and patient interaction skills, and basic pharmacology. Lab fees apply

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

RADR 1313 - PRINCIPLES OF RADIOGRAPHIC IMAGING I

Radiographic image quality and the effects of exposure variables.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

RADR 1411 - BASIC RADIOGRAPHIC PROCEDURES

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. Lab fees apply

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 64.0

RADR 2205 - PRINCIPLES OF IMAGING II

A continuation of the study of radiographic imaging technique formulation, image quality assurance, and the synthesis of all variables in image production.

Grade Basis: L
Credit hours: 2.0
Lecture hours: 48.0

RADR 2209 - RADIOGRAPHIC IMAGING EQUIPMENT

A study of the equipment and physics of x-ray production, basic x-ray circuits, and the relationship of equipment components to the imaging process.

Grade Basis: L
Credit hours: 2.0
Lecture hours: 48.0

RADR 2217 - RADIOGRAPHIC PATHOLOGY

A presentation of the disease process and common diseases and their appearance on medical images.

Grade Basis: L
Credit hours: 2.0
Lecture hours: 32.0

RADR 2401 - INTERMEDIATE RADIOGRAPHY PROCEDURES

A continuation of study of the proper manipulation of radiograhic equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of anatomy. Lab fees apply

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0

Lab hours: 64.0

RADR 2313 - RADIATION BIOLOGY & PROTECTION

A study of the effects of radiation exposure on biological systems, typical medical exposure levels, methods for measuring and monitoring radiation, and methods for protecting personnel and patients from excessive exposure.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

RADR 2333 - ADVANCED MEDICAL IMAGING

An exploration of specialized imaging modalities.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

RADR 2335 - RADIOLOGIC TECH SEMINAR

A capstone course focusing on the synthesis of professional knowledge, skills, and attitudes in preparation for professional employment and lifelong learning.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

RADR 2466 - PRACTICUM III

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

Grade Basis: L
Credit hours: 4.0

RADR 2267 - PRACTICUM IV

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

Grade Basis: L
Credit hours: 2.0

AGCR 1307 - RANGE MANGEMENT

Practical problems of managing native pastures and rangelands. Includes rangeland ecology, stocking rates, rotation systems, toxic plants, range reseeding, brush control, and ecological and physiological responses of range vegetation to grazing.

Upon successful completion, students will be able to:

- Identify range problems including toxic plants, overgrazing, and water distribution
- Evaluate brush control methods including biological, mechanical, chemical, and range burning
- Devise range reseeding and water development plans
- Design rotational grazing systems; and compute stocking rates

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

HART 2345 - RESIDENTIAL AIR CONDITIONING SYSTEMS DESIGN

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.

Upon successful completion, students will be able to:

- Calculate heat loss and heat gain
- Size heating and cooling equipment to the structure
- Read and interpret detailed HVAC design plans
- Perform a load calculation using industry standards
- Design a complete air distribution system including ventilation requirements and indoor air quality

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

RNSG 1162 - TRANSITION CLINICAL I

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.

Grade Basis: L
Credit hours: 1.0
Lecture hours: 48.0

RNSG 1163 - CLINICAL - PSYCHIATRIC NURSING

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. Emphasis is on nursing skills essential for the care of patients along the mental health and mental illness continuum.

Grade Basis: L
Credit hours: 1.0

RNSG 1219 - INTEGRATED NURSING SKILLS I

Study of the concepts and principles necessary to perform basic nursing skills for care of diverse patients across the life span; demonstrate competence in the performance of nursing procedures. Content includes knowledge, judgment, skills, and professional values within a legal and ethical framework. Lab fees apply

Grade Basis: L
Credit hours: 2.0
Lecture hours: 16.0
Lab hours: 48.0

RNSG 1229 - INTEGRATED NURSING SKILLS II

Study of the concepts and principles necessary to perform intermediate or advanced nursing skills for care of patients across the lifespan. Content includes knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to an integrated approach.

Grade Basis: L
Credit hours: 2.0
Lecture hours: 16.0
Lab hours: 32.0

RNSG 1261 - CLINICAL NURSING I

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.

Grade Basis: L
Credit hours: 2.0

RNSG 1300 - HEALTH ASSESSMENT ACROSS THE LIFESPAN

Development of skills and techniques required for a comprehensive nursing health assessment of patients across the lifespan: pediatric, adult, and geriatric. Includes assessment of patients' health promotion and maintenance, illness and injury prevention and restoration, and application of the nursing process within a legal/ethical framework. Lab fees apply

Grade Basis: L
Credit hours: 3.0
Lecture hours: 16.0
Lab hours: 48.0

RNSG 1423 - INTRODUCTION TO PROFESSIONAL NURSING FOR INTEGRATED PROGRAMS

Introduction to the profession of nursing including the roles of the professional nurse as provider of patient-centered care, patient safely advocate, member of health care team, and member of the profession with emphasis on health promotion and primary disease prevention across the life span, essential components of the nursing health assessment, identification of deviations from expected health patterns, the application of a systematic, problem-solving process to provide basic nursing care to diverse patients across the lifespan, and applicable competencies in knowledge, judgment, skills, and professional values within a legal and ethical framework.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 16.0

RNSG 1462 - CLINICAL NURSING II

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.

Grade Basis: L
Credit hours: 4.0

RNSG 2161 - TRANSITION CLINICAL III

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.

Grade Basis: L
Credit hours: 1.0

RNSG 2162 - TRANSITION CLINICAL II

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.

Grade Basis: L
Credit hours: 1.0

RNSG 2404 - INTEGRATED CARE OF THE PATIENT WITH COMMON HEALTH CARE NEEDS

Application of a systematic problem-solving process, critical thinking skills and concepts to provide nursing care to diverse patients and families across the life span with common health care needs including, but not limited to, common childhood/adolescent diseases, uncomplicated perinatal care, mental health concepts, perioperative care, frequently occurring adult health problems and health issues related to aging. Emphasis on secondary disease prevention and collaboration with members of the interdisciplinary health care team. Content includes roles of the professional nurse and applicable competencies in knowledge, judgment, skills, and professional values within a legal/ethical framework. Lab fees apply

Grade Basis: L
Credit hours: 4.0
Lecture hours: 64.0
Lab hours: 32.0

RNSG 2414 - INTEGRATED CARE OF THE PATIENT WITH COMPLEX HEALTH CARE NEEDS

Application of a systematic problem solving process, critical thinking skills and concepts to provide comprehensive nursing care to diverse patients and families across the life span with complex health care needs including, but not limited to, complex childhood/adolescent diseases, complicated perinatal care, acute mental illness, complex perioperative care, serious adult health problems and health issues related to aging. Emphasis on tertiary disease prevention, health maintenance/restoration and collaboration with members of the multidisciplinary health care team. Content includes the roles of the professional nurse and applicable competencies in knowledge, judgment, skills, and professional values within a legal/ethical framework. Lab fees apply

Grade Basis: L
Credit hours: 4.0
Lecture hours: 64.0
Lab hours: 32.0

RNSG 2435 - INTEGRATED PATIENT CARE MANAGEMENT

Application of independent nursing interventions to care for diverse patients and families throughout the life span whose health care needs may be difficult to predict. Emphasis on collaborative clinical reasoning, nursing leadership skills, and patient management. Content includes the significance of professional development, trends in nursing and health care, and applicable knowledge, judgment, skills, and professional values within a legal/ethical framework.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 64.0
Lab hours: 32.0

RNSG 2461 - CLINICAL NURSING III

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.

Grade Basis: L
Credit hours: 4.0

RNSG 2462 - CLINICAL NURSING IV

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.

Grade Basis: L
Credit hours: 4.0

CHEF 1305 - SANITATION AND SAFETY

A study of personal cleanliness, sanitary practices in food preparation, causes, investigation, control of illness caused by food contamination (Hazard Analysis Critical Control Points), and work place safety standards.

Upon successful completion, students will be able to:

- Identify causes of and prevention procedures for food-borne illness, intoxication, and infection
- Discuss personal hygiene and safe food handling procedures
- Describe food storage and refrigeration techniques
- Explain sanitation of dishes, equipment, and kitchens including cleaning material, garbage, and refuse disposal

- Discuss Occupational Safety and Health Administration (OSHA) requirements and workplace safety programs

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

ITSY 2359 - SECURITY ASSESSMENT & AUDITING

Comprehensive experience for the security curriculum. Synthesizes technical material covered in prior courses to monitor, audit, analyze, and revise computer and network security systems that ensure appropriate levels of protection are in place to assure regulatory compliance.

Upon successful completion, students will be able to:

- Appraise security plan to ensure appropriate level of protection
- Assess network security design
- Audit network system based on security design
- Use relevant tools to assure security requirements
- Review security policies and procedures on a regular basis

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

Prerequisites:

- ITSY 1342 - INFORMATION TECHNOLOGY SECURITY

SOCI 1301 - INTRODUCTION TO SOCIOLOGY

The scientific study of human society, including ways in which groups, social institutions, and individuals affect each other. Causes of social stability and social change are explored through the application of various theoretical perspectives, key concepts, and related research methods of sociology. Analysis of social issues in their institutional context may include topics such as social stratification, gender, race/ethnicity, and deviance. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Compare and contrast the basic theoretical perspectives of sociology.
- Identify the various methodological approaches to the collection and analysis of data in sociology.
- Describe key concepts in sociology.
- Describe the empirical findings of various subfields of sociology.

- Explain the complex links between individual experiences and broader institutional forces.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading

SOCI 1306 - SOCIAL PROBLEMS

Application of sociological principles and theoretical perspectives to major social problems in contemporary society such as inequality, crime and violence, substance abuse, environmental issues, deviance, or family problems. Meets NCTC Core Curriculum Requirement

Upon successful completion, students will be able to:

- Describe how the sociological imagination can be used to explain the emergence and implications of contemporary social problems
- Explain the nature of social problems from at least one sociological perspective, e.g., critical, functional, interpretive, etc.
- Identify multidimensional aspects of social problems including the global, political, economic, and cultural dimensions of social problems
- Discuss how “solutions” to social problems are often contentious due to diverse values in society
- Describe how the proposed “solutions” to a social problem, including social policies, may bring rise to other social problems

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading.

SOCI 2301 - MARRIAGE & THE FAMILY

Sociological and theoretical analysis of the structures and functions of the family, the varied cultural patterns of the American family, and the relationships that exist among the individuals within the family, as well as the relationships that exist between the family and other institutions in society.

Upon successful completion, students will be able to:

- Demonstrate understanding of the family and marriage as social institutions through theoretical perspectives.
- Examine the diversity and complexity of contemporary families.
- Explore changing cultural attitudes about marriage and alternatives to marriage.
- Critically evaluate such issues as sexuality, partner choice, resolving marital issues, having and raising children, and combining work and family.
- Demonstrate understanding of the relationship between theories and research methods used in the scientific study of marriage and family.
- Describe some of the historical changes and current trends regarding the structural nature of the American family including the role of gender in relationships.
- Identify causes and consequences of relevant problems within contemporary families.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading.

SOCI 2319 - MINORITY STUDIES

This course studies minority-majority group relations, addressing their historical, cultural, social, economic, and institutional development in the United States. Both sociological and social psychological levels of analysis will be employed to discuss issues including experiences of minority groups within the context of their cultural heritage and tradition, as well as that of the dominant culture. Core concepts to be examined include (but are not limited to) social inequality, dominance/subordination, prejudice, and discrimination. Particular minority groups discussed may include those based on poverty, race/ethnicity, gender, sexual orientation, age, disability, or religion.

Upon successful completion, students will be able to:

- Explain how the concept of social inequality pertains to minority group status defined in terms of identities that may include social class, race/ethnicity, gender, sexual orientation, age, disability, or religion
- Differentiate between important concepts and theories of prejudice and discrimination including the effects of prejudice and discrimination on the everyday lives of minority group members in the context of social institutions
- Analyze the history of culture, experiences of inequality, and current life opportunities of various minority groups in the United States with contrasting reference to other countries
- Analyze minority group interactions in the United States focusing on immigration and migration patterns, assimilation processes, and adjustments to American life

Grade Basis: L
Credit hours: 3.0

Lecture hours: 48.0

SOCI 2326 - SOCIAL PSYCHOLOGY

Study of individual behavior within the social environment. May include topics such as the socio-psychological process, attitude formation and change, interpersonal relations, and group processes. Cross-listed as PSYC 2319

Upon successful completion, students will be able to:

- Explain how the concept of social inequality pertains to minority group status defined in terms of identities that may include social class, race/ethnicity, gender, sexual orientation, age, disability, or religion.
- Differentiate between important concepts and theories of prejudice and discrimination including the effects of prejudice and discrimination on the everyday lives of minority group members in the context of social institutions.
- Analyze the history of culture, experiences of inequality, and current life opportunities of various minority groups in the United States with contrasting reference to other countries.
- Analyze minority group interactions in the United States focusing on immigration and migration patterns, assimilation processes, and adjustments to American life.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Restrictions:

- Must meet TSI College Readiness Standard for Reading.

AGCR 2313 - SOIL & WATER CONSERVATION MANAGEMENT

Study of physical and chemical soil deterioration and loss, water conservation, and principles for protection and maintenance of these resources. Topics include plant/water relationships, water conservation methods, basic terrace engineering principles, sediment loss, and land use plans.

Upon successful completion, students will be able to:

- Summarize the principles of soil and water conservation; explain soil loss potentials; develop treatment plans to protect soil resources
- Demonstrate water conservation, runoff, and water quality maintenance techniques; evaluate land use; and develop land use plans

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

SPAN 1411 - BEGINNING SPANISH I

Basic Spanish language skills in listening, speaking, reading, and writing within a cultural framework. Students will acquire the vocabulary and grammatical structures necessary to communicate and comprehend at the beginner level. Lab fees apply.

Upon successful completion, students will be able to:

- Engage in conversations using level-appropriate grammatical structures including narrating events that take place in the present and producing questions and responses on a variety of topics dealing with everyday life.
- Demonstrate understanding of level-appropriate spoken Spanish.
- Write simple sentences and organize them into short paragraphs.
- Read and comprehend level-appropriate texts. 5. Identify and discuss traditions, customs and values of the Hispanic world.
- Compare and contrast the traditions, customs and values of the Hispanic world with characteristics of their own culture.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

SPAN 1412 - BEGINNING SPANISH II

Continued development of basic Spanish language skills in listening, speaking, reading, and writing within a cultural framework. Students acquire the vocabulary and grammatical structures necessary to communicate and comprehend at the high beginner to low intermediate level. Lab fees apply.

Upon successful completion, students will be able to:

- Engage in conversations using level-appropriate grammatical structures including narrating events that take place in the past.
- Demonstrate understanding of level-appropriate spoken Spanish produced by Spanish speakers of diverse origins.
- Write simple to moderately complex sentences using level-appropriate grammatical structures and organize them into cohesive paragraphs.
- Read and comprehend level-appropriate authentic texts.
- Identify and discuss traditions, customs and values of the Hispanic world.
- Compare and contrast the traditions, customs and values of the Hispanic word with characteristics of their own culture.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

Prerequisites:

- SPAN 1411 - BEGINNING SPANISH I

Restrictions:

- 1-year high school Spanish, Span 1411, or approval by instructor.

SPAN 2311 - INTERMEDIATE SPANISH I

The consolidation of skills acquired at the introductory level. Further development of proficiency in listening, speaking, reading and writing. Emphasis on comprehension, appreciation, and interpretation of the cultures of the Spanish-speaking world. Meets NCTC Core Curriculum Requirement.

Upon successful completion, students will be able to:

- Demonstrate comprehension of authentic spoken discourse produced by Spanish speakers of diverse origins.
- Produce oral Spanish comprehensible to native speakers using complex grammatical structures to narrate, describe and elicit information.
- Demonstrate increasing comprehension of authentic written texts in a variety of genres.
- Write descriptions and narratives at a low intermediate level using complex grammatical structures.
- Formulate cohesive paragraphs and short/simple essays.
- Describe cultural practices and products of the Spanish-speaking world drawing on authentic materials including literature and the visual arts.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- SPAN 1411 - BEGINNING SPANISH I
- SPAN 1412 - BEGINNING SPANISH II

Restrictions:

- 2 years high school Spanish, Span 1412, or approval by instructor.

SPAN 2312 - INTERMEDIATE SPANISH II

The consolidation of skills acquired at the introductory level. Further development of proficiency in listening, speaking, reading and writing. Emphasis on comprehension, appreciation, and interpretation of the cultures of the Spanish-speaking world.

Upon successful completion, students will be able to:

- Summarize authentic spoken discourse produced by Spanish speakers of diverse origins.
- Produce Spanish comprehensible to native speakers using complex grammatical structures to communicate analytical and interpretive information in both impromptu and prepared speech.
- Demonstrate increasing comprehension of authentic written texts in a variety of genres.
- Write evaluations and critiques at a high intermediate level using complex grammatical structures.
- Formulate cohesive paragraphs and essays.
- Interpret cultural practices and products of the Spanish-speaking world drawing on authentic materials including literature and the visual arts.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

Prerequisites:

- SPAN 1411 - BEGINNING SPANISH I
- SPAN 1412 - BEGINNING SPANISH II
- SPAN 2311 - INTERMEDIATE SPANISH I

Restrictions:

- 3 years of high school Spanish, Spanish 1411/1412/2311, or approval by instructor.

SPAN 2315 - SPANISH FOR HERITAGE / NATIVE SPEAKERS

Builds upon existing oral proficiencies of heritage speakers of Spanish. Enhances proficiencies in the home-based language by developing a full range of registers including public speaking and formal written discourse. Emphasis on comprehension, appreciation, and interpretation of the cultures of the Spanish-speaking world.

Upon successful completion, students will be able to:

- Write dialogues, descriptions and narratives demonstrating: Correct orthography and punctuation. Cohesion between sentences. Appropriate register.
- Demonstrate an expanded vocabulary.
- Apply strategies for linking ideas in complex sentences.
- Identify similarities and differences among distinct varieties of Spanish.
- Give oral presentations in a formal register appropriate for professional and academic settings.
- Describe cultural practices and products of the Spanish-speaking world drawing on authentic materials including literature and the visual arts.

Grade Basis: L
Credit hours: 3.0

Lecture hours: 48.0

Restrictions:

- Approval by instructor required.

SPCH 1315 - PUBLIC SPEAKING

Application of communication theory and practice to the public speaking context, with emphasis on audience analysis, speaker delivery, ethics of communication, cultural diversity, and speech organizational techniques to develop students' speaking abilities, as well as ability to effectively evaluate oral presentations. Meets NCTC Core Curriculum Requirement.

Upon successful completion, students will be able to:

- Demonstrate an understanding of the foundational models of communication.
- Apply elements of audience analysis.
- Demonstrate ethical speaking and listening skills by analyzing presentations for evidence and logic.
- Research, develop and deliver extemporaneous speeches with effective verbal and nonverbal techniques.
- Demonstrate effective usage of technology when researching and/or presenting speeches.
- Identify how culture, ethnicity and gender influence communication.
- Develop proficiency in presenting a variety of speeches as an individual or group (e.g. narrative, informative or persuasive).

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

SPCH 1318 - INTERPERSONAL COMMUNICATION

Application of communication theory to interpersonal relationship development, maintenance, and termination in relationship contexts including friendships, romantic partners, families, and relationships with co-workers and supervisors. Meets NCTC Core Curriculum Requirement

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

SPCH 1321 - BUSINESS & PROFESSIONAL COMMUNICATION

Study and application of communication within the business and professional context. Special emphasis will be given to communication competencies in presentations,

dyads, teams and technologically mediated formats. Meets NCTC Core Curriculum Requirement.

Upon successful completion, students will be able to:

- Demonstrate communication competence and critical thinking through an understanding of the foundational communication models.
- Demonstrate essential public speaking skills in professional presentations.
- Demonstrate written and oral competencies as it relates to employment (including job searches, interviews, interpersonal interaction, conflict management, leadership and performance appraisals.)
- Apply essential dyadic and small group processes as they relate to the workplace.
- Utilize various technologies as they relate to competent communication.
- Demonstrate effective cross-cultural communication.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

CSME 1491 - SPECIAL TOPICS COURSE FACIALS AND RELATED THEORY

An overview of the skills necessary to perform a facial treatment service according to the Texas Department of Licensing and Regulations while following safety and sanitation laws and rules; practice different methods of temporary hair removal; introduction to the skills and knowledge necessary for the field of facials and skin care; and overview of cosmetics and the application of artificial eyelash strips.

Upon successful completion, students will be able to:

- Demonstrate the skills necessary to pass the facial treatment portion of the state board exam while following all safety and sanitation laws
- Demonstrate the different methods used for hair removal
- Practice the related skills of facials, skin care and applying makeup
- Demonstrate practical skills necessary to safely and effectively apply eyelash strips according to TDLR laws and rules.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 64.0

AGCR 1393 - SPECIAL TOPICS IN PLANT PROTECTION - INTEGRATED PEST MANAGEMENT

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.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

SPCH 1311 - INTRODUCTION TO SPEECH COMMUNICATION

Introduces basic human communication principles and theories embedded in a variety of contexts including interpersonal, small group, and public speaking. Meets NCTC Core Curriculum Requirement.

Upon successful completion, students will be able to:

- Apply the principles of human communication including perception, verbal communication, nonverbal communication, listening, and audience analysis.
- Demonstrate how to establish and maintain relationships through the use of interpersonal communication.
- Apply small group communication skills including problem-solving, group roles, leadership styles, and cohesiveness.
- Develop, research, organize, and deliver formal public speeches.
- Recognize how to communicate within diverse environments.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

SRGT 1261 - CLINICAL - SURGICAL/OPERATING ROOM TECHNOLOGIST - INTRODUCTORY

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.

Upon successful completion, students will be able to:

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

Grade Basis: P

Credit hours: 2.0

SRGT 1441 - SURGICAL PROCEDURES I

Introduction to surgical pathology and its relationship to surgical procedures. Emphasis on surgical procedures related to the general, OB/GYN, genitourinary, and orthopedic surgical specialities incorporating instruments, equipment, and supplies required for safe patient care.

Upon successful completion, students will be able to:

- Relate anatomy and pathology for selected procedures
- Demonstrate patient preparation; utilize instruments, equipment, and supplies
- Demonstrate case management skills, sequentially
- Identify outcomes and possible complications

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

Prerequisites:

- HITT 1205 - MEDICAL TERMINOLOGY
- SRGT 1261 - CLINICAL - SURGICAL/OPERATING ROOM TECHNOLOGIST - INTRODUCTORY
- SRGT 1505 - INTRODUCTION TO SURGICAL TECHNOLOGY
- SRGT 1509 - FUNDAMENTALS OF PERIOPERATIVE CONCEPTS & TECHNIQUES
- VNSG 1420 - ANATOMY & PHYSIOLOGY FOR ALLIED HEALTH

SRGT 1442 - SURGICAL PROCEDURES II

Introduction to surgical pathology and its relationship to surgical procedures. Emphasis on surgical procedures related to the thoracic, peripheral vascular, plastic/ reconstructive, EENT, cardiac, and neurological surgical specialities incorporating instruments, equipment, and supplies required for safe patient care. Lab fees apply

Upon successful completion, students will be able to:

- Relate anatomy and pathology for selected procedures
- Demonstrate patient preparation; utilize instruments, equipment, and supplies
- Demonstrate case management skills
- Identify outcomes and possible complications for selected procedures

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0

Lab hours: 32.0

Prerequisites:

- HITT 1205 - MEDICAL TERMINOLOGY
- SRGT 1261 - CLINICAL - SURGICAL/OPERATING ROOM TECHNOLOGIST - INTRODUCTORY
- SRGT 1441 - SURGICAL PROCEDURES I
- SRGT 1505 - INTRODUCTION TO SURGICAL TECHNOLOGY
- SRGT 1509 - FUNDAMENTALS OF PERIOPERATIVE CONCEPTS & TECHNIQUES
- VNSG 1420 - ANATOMY & PHYSIOLOGY FOR ALLIED HEALTH

SRGT 1505 - INTRODUCTION TO SURGICAL TECHNOLOGY

Orientation to surgical technology theory, surgical pharmacology and anesthesia technological sciences, and patient care concepts.

Upon successful completion, students will be able to:

- Identify the physical, interpersonal, and ethical aspects of the perioperative environment
- Discuss basic concepts of surgical pharmacology and anesthesia
- Identify basic concepts of technological sciences
- Demonstrate patient care concepts

Grade Basis: L
Credit hours: 5.0
Lecture hours: 64.0
Lab hours: 32.0

SRGT 1509 - FUNDAMENTALS OF PERIOPERATIVE CONCEPTS & TECHNIQUES

In-depth coverage of perioperative concepts such as aseptic principles and practices, infectious processes, wound healing, and creation and maintenance of the sterile field.

Upon successful completion, students will be able to:

- Demonstrate principles and practices of aseptic/sterile techniques
- Identify infectious processes and concepts of wound healing
- Create a sterile field utilizing basic case preparation
- Exhibit maintenance of the sterile field during procedures

Grade Basis: L
Credit hours: 5.0
Lecture hours: 64.0
Lab hours: 32.0

SRGT 1661 - CLINICAL - SURGICAL/OPERATING ROOM TECHNOLOGIST - INTERMEDIATE

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.

Upon successful completion, students will be able to:

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

Grade Basis: P
Credit hours: 6.0

Prerequisites:

- HITT 1205 - MEDICAL TERMINOLOGY
- SRGT 1261 - CLINICAL - SURGICAL/OPERATING ROOM TECHNOLOGIST - INTRODUCTORY
- SRGT 1505 - INTRODUCTION TO SURGICAL TECHNOLOGY
- SRGT 1509 - FUNDAMENTALS OF PERIOPERATIVE CONCEPTS & TECHNIQUES
- VNSG 1420 - ANATOMY & PHYSIOLOGY FOR ALLIED HEALTH

SRGT 1662 - CLINICAL - SURGICAL/OPERATING ROOM TECHNOLOGIST -ADVANCED

An advanced 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.

Upon successful completion, students will be able to:

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry

- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

Grade Basis: P
Credit hours: 6.0

Prerequisites:

- HITT 1205 - MEDICAL TERMINOLOGY
- SRGT 1261 - CLINICAL - SURGICAL/OPERATING ROOM TECHNOLOGIST - INTRODUCTORY
- SRGT 1441 - SURGICAL PROCEDURES I
- SRGT 1442 - SURGICAL PROCEDURES II
- SRGT 1505 - INTRODUCTION TO SURGICAL TECHNOLOGY
- SRGT 1509 - FUNDAMENTALS OF PERIOPERATIVE CONCEPTS & TECHNIQUES
- SRGT 1661 - CLINICAL - SURGICAL/OPERATING ROOM TECHNOLOGIST - INTERMEDIATE
- VNSG 1420 - ANATOMY & PHYSIOLOGY FOR ALLIED HEALTH

SRGT 1060 - STERILE PROCESSING TECHNICIAN

Instruction on safeguarding patients from infection and disease controls and procedures to produce a sterile clinical and operatory environment.

Grade Basis: L
Lecture hours: 140.0

TECA 1303 - FAMILY, SCHOOL & COMMUNITY

A study of the child, family, community, and schools, including parent education and involvement, family and community lifestyles, child abuse, and current family life issues. Course content must be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards and coincide with the National Association for the Education of Young Children position statement related to developmentally appropriate practices for children from birth through age eight. Requires students to participate in field experiences with children from infancy through age 12 in a variety of settings with varied and diverse populations. The course includes a minimum of 16 hours of field experiences.

Upon successful completion, students will be able to:

- Identify characteristics and issues relating to diverse cultures and caregiving lifestyles.
- Analyze ways in which factors in the home and community (e.g. parent expectations, availability of community resources, community issues) impact

learning, including an awareness of social and cultural factors to enhance development and learning.
- Identify and apply strategies to maintain positive, collaborative relationships with diverse families (e.g. families with children with disabilities, poverty, single parent, cultural, homelessness, and dual-language learners).
- Investigate community/educational resources (e.g. dentist on wheels, library programs, GED programs, family education programs, Early Childhood Intervention Strategies) to empower families to support children's development.
- Recognize signs of abuse and neglect and describe ways to work effectively with abused and neglected children and their families.
- Explain the importance of family involvement/home-school relationships in education.
- Explain the importance of maintaining codes of ethical conduct and legal issues when working with families, colleagues, and community professionals.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

TECA 1311 - EDUCATING YOUNG CHILDREN

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. Course content must be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards and coincide with the National Association for the Education of Young Children position statement related to developmentally appropriate practices for children from birth through age eight. Requires students to participate in field experiences with children from infancy through age 12 in a variety of settings with varied and diverse populations and the course includes a minimum of 16 hours of field experiences.

Upon successful completion, students will be able to:

- Identify the features of a quality developmentally appropriate program for young children.
- Explain contributions of historical and contemporary professionals and theorists to the field of early childhood education.
- Analyze various early childhood programs and curricular models that have influenced practice.
- Describe current and future trends and issues in the field of education.
- Apply classroom observation and assessment skills to identify developmentally appropriate programs in diverse early childhood educational settings.
- Describe and adhere to professional code of legal and ethical requirements for educators.

Grade Basis: L

Credit hours: 3.0
Lecture hours: 48.0

TECA 1318 - WELLNESS OF THE YOUNG CHILD

A study of the factors that impact the well-being of the young child including healthy behavior, food, nutrition, fitness, and safety practices. Focuses on local and national standards and legal implications of relevant policies and regulations. Course content must be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards and coincide with the National Association for the Education of Young Children position statement related to developmentally appropriate practices for children from birth to age eight. Requires students to participate in field experiences with children from infancy through age 12 in a variety of settings with varied and diverse populations. Course includes a minimum of 16 hours of field experiences.

Upon successful completion, students will be able to:

- Describe the relationship between health, safety and nutrition.
- Describe the basic principles of healthy behavior and guidance practices that influence health promotion, safe practices and disease prevention for young children.
- Analyze principles of nutrition and the application to nutritional assessment.
- Identify policy and regulatory requirements for nutrition.
- Describe the role of physical fitness as it contributes to healthy behavior.
- Evaluate and make recommendations for modifications of regulations regarding child’s safety, safety procedures, and children’s environments for safety.
- Describe how physical, social, and emotional environments influence a child’s health.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

TECA 1354 - CHILD GROWTH & DEVELOPMENT

A study of the physical, emotional, social, and cognitive factors impacting growth and development of children through adolescence.

Upon successful completion, students will be able to:

- Summarize principles of growth and development.
- Identify typical stages of cognitive, social, physical, language, and emotional development.
- Compare, contrast and apply theories of development in practice.
- Discuss the impact of developmental processes on educational practices.

- Identify the stages of play development (i.e. from solitary to cooperative) and describe the important role of play in young children’s learning and development.
- Identify the stages of play development (i.e. from solitary to cooperative) and describe the important role of play in young children’s learning and development.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

TECM 1301 - INDUSTRIAL MATHEMATICS

Math skills applicable to industrial occupations. Includes fraction and decimal manipulation, measurement, percentage, and problem solving techniques for equations and ratio/proportion applications.

Upon successful completion, students will be able to:

- Convert between decimals and fractions
- Use measuring tools
- Calculate ratios and proportions in a technical application
- Transpose linear equations to solve for unknowns

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

RNSG 1327 - TRANSITION TO PROFESSIONAL NURSING

Content includes health promotion, expanded assessment, analysis of data, critical thinking skills and systematic problem solving process, pharmacology, interdisciplinary teamwork, communication, and applicable competencies in knowledge, judgment, skills, and professional values within a legal/ethical framework throughout the lifespan.

Grade Basis: L
Credit hours: 3.0

VNSG 1219 - PROFESSIONAL DEVELOPMENT

Study of the importance of professional growth. Topics include the role of the LVN in the multidisciplinary healthcare team, professional organizations, continuing education, delegating authority, resume writing, and job interviewing.

Grade Basis: L
Credit hours: 2.0
Lecture hours: 32.0

VNSG 1227 - ESSENTIALS OF MEDICATION ADMINISTRATION

General principles of medication administration including determination of dosage, preparation, safe administration, and documentation of multiple forms of drugs. Instruction includes various systems of measurement.

Grade Basis: L
Credit hours: 2.0
Lecture hours: 32.0

VNSG 1230 - MATERNAL - NEONATAL NURSING

Utilization of the nursing process in the assessment and management of the childbearing family. Emphasis on the bio-psycho-socio-cultural needs of the family during the phases of pregnancy, childbirth, and the neonatal period including abnormal conditions.

Grade Basis: L
Credit hours: 2.0
Lecture hours: 32.0

VNSG 1234 - PEDIATRICS

Study of childhood diseases and childcare from infancy through adolescence. Focus on the care of the well and the ill child utilizing the nursing process.

Grade Basis: L
Credit hours: 2.0
Lecture hours: 32.0

VNSG 1323 - BASIC NURSING SKILLS

Mastery of entry level nursing skills and competencies for a variety of health care settings. Utilization of the nursing process as the foundation for all nursing interventions. Related aspects of nutrition, pharmacology, and medical terminology included. Lab fees apply

Grade Basis: L
Credit hours: 3.0
Lecture hours: 80.0
Lab hours: 32.0

VNSG 1331 - PHARMACOLOGY

Fundamentals of medications and their diagnostic, therapeutic, and curative effects. Includes nursing interventions associated with the various pharmacotherapeutic agents.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0

VNSG 1360 - CLINICAL I

This course provides clinical experience in fundamental nursing skills. The nursing process is applied to provide individualized care designed to meet a client's particular needs. The geriatric client is the focus of care.

Grade Basis: L
Credit hours: 3.0

VNSG 1363 - CLINICAL II - SPRING ADMISSION

This course is offered in the summer semester for the January admission class. It provides a continuation of Clinical I with the emphasis on utilizing the nursing process in providing individualized care of the client in all stages of development. The principles of safety in medication administration and other care are closely monitored.

Grade Basis: L
Credit hours: 3.0

VNSG 1400 - NURSING IN HEALTH & ILLNESS I

Introduction to general principles of growth and development, primary health care needs of the client across the life span, and therapeutic nursing interventions.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 80.0

VNSG 1420 - ANATOMY & PHYSIOLOGY FOR ALLIED HEALTH

Introduction to the normal structure and function of the body, including an understanding of body systems in maintaining homeostasis. Principles of microbiology also included.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 64.0

VNSG 1463 - CLINICAL II - FALL ADMISSION

This course is offered in the spring semester for the August admission class. It provides a continuation of Clinical I with the emphasis on utilizing the nursing process in

providing individualized care of the client in all stages of development. The principles of safety in medication administration and other care are closely monitored.

Grade Basis: L
Credit hours: 4.0

VNSG 1509 - NURSING IN HEALTH & ILLNESS II

Introduction to common health problems requiring medical and surgical interventions.

Grade Basis: L
Credit hours: 5.0
Lecture hours: 80.0

VNSG 2360 - CLINICAL III - FALL ADMISSION

This course is offered in the summer semester for the August admission class. It assists the student in the continued development of their knowledge and skill in the role and functions of the vocational nurse. It provides learning experiences in the clinical setting focusing on further refinement of the nursing process in caring for clients exhibiting health-illness continuum through the life span.

Grade Basis: L
Credit hours: 3.0

VNSG 2460 - CLINICAL III - SPRING ADMISSION

This course is offered in the fall semester for the January admission class. It assists the student in the continued development of their knowledge and skill in the role and functions of the vocational nurse. It provides learning experiences in the clinical setting focusing on further refinement of the nursing process in caring for clients exhibiting health-illness continuum through the life span.

Grade Basis: L
Credit hours: 4.0

VNSG 2510 - NURSING IN HEALTH & ILLNESS III

Continuation of Nursing in Health and Illness II. Further study of common medical-surgical health problems of the client.

Grade Basis: L
Credit hours: 5.0
Lecture hours: 80.0

WLDG 2432 - WELDING AUTOMATION

Overview of automated welding and cutting applications. Special emphasis on safe use and operation of equipment.

Upon successful completion, students will be able to:

- Set up, program, operate, and troubleshoot various automated welding and/or cutting equipment.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 96.0

WLDG 1323 - WELDING SAFETY, TOOLS & EQUIPMENT

An introduction to welding equipment and safety practices, including OSHA standards for industry. Note: WLDG 1323 applies to the Petroleum Technology program or may be taken as a stand alone course. It is not a part of the Welding Certificate or AAS Degree.

Upon successful completion, students will be able to:

- Apply welding safety practices, OSHA and the Hazardous Communications Act, and DS
- List hazards associated with welding equipment and processes
- Use and maintain tools and equipment
- Identify hazards associated with gases, fluxes, electrodes and equipment
- Explain different welding processes and their operation

Grade Basis: L
Credit hours: 3.0
Lecture hours: 32.0
Lab hours: 32.0

HPRS 1202 - WELLNESS & HEALTH PROMOTION

An overview of wellness theory and its application throughout the life span. Focus is on attitude development, impact of cultural beliefs, and communication of wellness.

Grade Basis: L
Credit hours: 2.0

WLDG 1407 - INTRODUCTION TO WELDING USING MULTIPLE PROCESSES

Basic welding techniques using some of the following processes: Oxy-fuel welding (OFW) and cutting, shielded metal arc welding (SMAW), gas metal arc welding (GMAW), and gas tungsten arc welding (GTAW).

Upon successful completion, students will be able to:

- Demonstrate machine set-up and complete welds and cutting operations
- Demonstrate basic shop safety
- Identify types of electrodes used in welding processes
- Identify various welding and cutting standards
- Demonstrate proper joint preparation techniques

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 96.0

WLDG 1427 - WELDING CODES

An in-depth study of welding codes and their development in accordance with structural standards, welding processes, destructive and nondestructive test methods.

Upon successful completion, students will be able to:

- Categorize major codes
- Identify welding procedures
- Identify welding and NDT symbols
- List responsibilities of inspectors
- Evaluate post-weld heat treatments and destructive testing
- List alloys and phases of metals
- State the effects of heating and cooling
- Apply pre-weld, in-process, and shop inspection standards
- Develop welding procedures
- Calculate preheat and post-weld heat treatments
- Identify NDT test methods and welding discontinuities

Grade Basis: L
Credit hours: 4.0
Lecture hours: 64.0

WLDG 1428 - INTRODUCTION TO SHIELDED METAL ARC WELDING (SMAW)

An introduction to the shielded metal arc welding process. Emphasis placed on power sources, electrode selection, oxy-fuel cutting, and various joint designs. Instruction provided in SMAW fillet welds in various positions.

Upon successful completion, students will be able to:

- Select electrodes and amperage settings for various thicknesses of materials and welding positions
- Define principles of arc welding
- Explain electrode classifications
- Perform SMAW operations in various positions using selected electrodes and different joint designs

Grade Basis: L
Credit hours: 4.0
Lecture hours: 48.0
Lab hours: 32.0

WLDG 1435 - INTRODUCTION TO PIPE WELDING

An introduction to welding of pipe using the shielded metal arc welding process (SMAW), including electrode selection, equipment setup, and safe shop practices. Emphasis on weld positions 1G and 2G using various electrodes.

Upon successful completion, students will be able to:

- Describe equipment and required pipe preparation and perform 1G and 2G welds using various electrodes

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 64.0

WLDG 1457 - INTERMEDIATE SHIELDED METAL ARC WELDING (SMAW)

A study of the production of various fillets and groove welds. Preparation of specimens for testing in various positions.

Upon successful completion, students will be able to:

- Identify principles of arc welding
- Describe arc welding operations of fillet and groove joints
- Explain heat treatments of low alloy steels

- Explain weld size and profiles
- Prepare test plates
- Perform fillet welds in the overhead position
- Perform air carbon arc weld removal
- Perform bevel groove welds with backing plates in various positions
- Demonstrate use of tools and equipment

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 32.0

WLDG 2352 - ADVANCED FLUX CORED ARC WELDING

Advanced concepts of flux cored arc welding of structural and fabricated steel products. Skill development in multi-pass fillet and v-groove welding.

Upon successful completion, students will be able to:

- Perform safety inspections of equipment and accessories
- Perform multi-pass fillet and v-groove welds in various positions

Grade Basis: L
Credit hours: 3.0
Lecture hours: 48.0
Lab hours: 32.0

WLDG 2380 - COOPERATIVE EDUCATION - WELDING TECHNOLOGY

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.

Upon successful completion, students will be able to:

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry

Grade Basis: L
Credit hours: 3.0
Lecture hours: 16.0

WLDG 2413 - INTERMEDIATE WELDING USE MULTIPLE PROCESSES

Instruction using layout tools and blueprint reading with demonstration and guided practices with some of the following welding processes: oxy-fuel gas cutting and welding, shield metal arc welding (SMAW), gas metal arc welding (GMAW), flux-cored arc welding (FCAW), gas tungsten arc welding (GTAW), or any other approved welding process.

Upon successful completion, students will be able to:

- Identify proper safety equipment and tools and identify and select the proper welding process for a given application
- Demonstrate skills training using more than one approved welding process
- Demonstrate ability to analyze situations and make decisions using skills as taught concerning safety and electrode selections
- Select the most economic and practical welding process for the given task

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 96.0

WLDG 2447 - ADVANCED GAS METAL ARC WELDING (GMAW)

Advanced topics in Gas Metal Arc Welding (GMAW). Includes welding in various positions.

Upon successful completion, students will be able to:

- Demonstrate proficiency in various welding positions
- Describe safety rules and equipment use
- Describe the effects of welding parameters in GMAW
- Weld various joint designs and diagnose welding problems and perform visual inspection

Grade Basis: L
Credit hours: 4.0
Lecture hours: 32.0
Lab hours: 64.0
