The programs, policies, statements, fees and courses contained herein are subject to continual review and evaluation. Please refer to the college website for the latest updates. Collin College reserves the right to make changes or deletions at any time without notice. This publication is intended for information only and is not intended as a contract

Please refer to [http://www.collin.edu/academics/programs/index.html](http://www.collin.edu/academics/programs/index.html) for the most current information.
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ABOUT COLLIN COLLEGE

COLLEGE MISSION STATEMENT
Collin College is a student- and community-centered institution committed to developing skills, strengthening character and challenging the intellect.

VISION STATEMENT
Delivering a brighter future for our students and communities.

CORE VALUES
We have a passion for:
- Learning
- Service and Involvement
- Creativity and Innovation
- Academic Excellence
- Dignity and Respect
- Integrity

PHILOSOPHY AND PURPOSE STATEMENT
Through its campuses, centers and programs, Collin County Community College District fulfills community and industry needs and its statutory charge by providing:
- Academic courses in the arts and sciences to transfer to senior institutions.
- Programs leading to baccalaureate degrees, associate degrees or certificates, including technical programs, designed to develop marketable skills and promote economic development.
- Continuing adult education programs for academic, professional, occupational and cultural enhancement.
- Developmental education and literacy programs designed to improve the basic skills of students.
- A program of student support services, including counseling and learning resources designed to assist individuals in achieving their educational and career goals.
- Workforce, economic and community development initiatives designed to meet local and statewide needs.
- Other purposes as may be directed by the Board and/or the laws of the State of Texas.

EQUAL OPPORTUNITY STATEMENT
Collin College is an equal opportunity institution and provides educational and employment opportunities without discrimination on the basis of race, color, religion, sex, age, national origin, disability, veteran status or other legally protected class. In accordance with the Americans with Disabilities Act as amended in 2008 and Section 504 of the Vocational Rehabilitation Act of 1973, Collin College provides accommodations as required by law to afford equal educational opportunities to all people. The ADA/Title IX/504 Coordinator can be reached at 972.758.3856. For more information or to request accommodation services for students, contact ACCESS (Accommodations at Collin College for Equal Support Services) at 972.881.5898 (Voice). For persons who are deaf, hard of hearing, or have speech impairments, please contact the ACCESS office at 972.516.5056. The Collin College ACCESS Department Video Phone number is 214.299.8216. Upon request to the ACCESS Office, the college catalog can be converted to an accessible format for vision or print-oriented disabilities.

ACCREDITATION STATUS
Collin County Community College District is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate degrees and certificates. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Collin County Community College District.

ACCREDITING BODIES
Accreditation Commission on Programs in Hospitality Administration, American Culinary Federation Education Foundation, American Dental Association's Commission on Dental Accreditation, Commission on Accreditation of Allied Health Education Programs, (through the Accreditation Review Committee on Surgical Technology and Surgical Assisting [ARCTSA]), Commission of Accreditation of Allied Health Education Programs (through the Committee on Accreditation of Emergency Medical Service Professions [CoAEMSP]), Commission on Accreditation for Health Informatics and Information Management Education, Commission on Accreditation for Respiratory Care, National Association for the Education of Young Children, Committee on Accreditation for Respiratory Care, Accreditation Commission for Education in Nursing.

2018-19 Collin College Catalog
Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
CAMPUS AND WEBSITE INFORMATION

Online Catalog:  
www.Collin.edu/academics/catalog.html

Campuses and Locations  
To see map of campuses, visit  
http://www.collin.edu/campuses

Allen Center (AL)  
Allen High School  
300 Rivercrest Blvd.  
Allen, Texas 75002  
972.377.1060

McKinney Campus (CPC)  
2200 W. University Drive  
McKinney, Texas 75071  
972.548.6790

Collin Higher Education Center (CHEC)  
3452 Spur 399  
McKinney, Texas 75069  
972.599.3100

Courtyard Center (CYC)  
4800 Preston Park Blvd.  
Plano, Texas 75093  
972.985.3790

Frisco Campus (PRC)  
9700 Wade Blvd.  
Frisco, Texas 75035  
972.377.1790

Rockwall Center (RW)  
2610 Observation Trail  
Rockwall, TX 75032  
214.771.4573

Plano Campus (SCC)  
2800 E. Spring Creek Parkway  
Plano, Texas 75074  
972.881.5790
LEARNING OPPORTUNITIES

Collin College offers four unique types of learning opportunities for students.

**Non-credit Coursework**
Developmental Pre-college level foundational coursework in Mathematics, Integrated Reading/Writing, and English as a Second Language (ESL) designed to enable students to achieve college success.

Continuing Education (CEUs) provides opportunities for lifelong learning and workforce training when a college degree is not desired.

**Credit Programs**
Academic Programs prepare a student for transfer to a baccalaureate college or university.

Workforce Degrees and Certificates to prepare a student for immediate entry-level employment or advancement.

**NON-CREDIT COURSEWORK**

**DEVELOPMENTAL EDUCATION (DE)**

**What is Developmental Education?**
DE courses are designed to provide students with basic skills to achieve success in college-level courses and to pass the TSI (Texas Success Initiative) tests.

DE includes courses in English as a Second Language, Developmental Mathematics and Integrated Reading/Writing courses. The instructional formats of DE courses vary and include computer-based, lecture, online, express, weekend, self-paced, and non-course-based formats.

**Do DE credits apply to a degree?**
Although students receive grades for DE courses, those DE courses do not apply toward a degree or certificate. The DE credit does not transfer to other institutions, and DE grades are not calculated as part of the student’s grade point average (GPA) shown on transcripts. However, DE grades sometimes considered when applying for scholarships, financial aid, veteran benefits, etc.

**Who is required to take DE?**
If a student’s scores on the basic skills assessment indicate that a student would be better prepared by taking a DE course prior to enrolling in a college-level course in a related field, the student must enroll in the DE course and complete the sequence before enrolling in college-level courses in that field of study. Collin requires that students demonstrating a need for remediation in reading, writing, or mathematics complete the appropriate sequence of DE courses in consecutive semesters, although the student is not required to attend Collin College during summer semesters. For students who do not place at college-level courses in all three Texas Success Initiative (TSI) areas of reading, writing, and mathematics, a meeting with an Academic Advisor is required as well as mandatory course registration in EDUC 1300 Learning Frameworks.

**Learning to Learn**
EDUC 1300 Learning Frameworks is a college credit course that examines learning based on research and the theory of learning psychology. This course is available for all students who want to enrich their understanding of how to learn, enhance their study skills, and explore their own strengths and weaknesses as learners in order to develop effective personal learning strategies to increase their likely success in other college courses. For more information, see EDUC 1300 in the course description section.

**DE limits**
DE courses may be taken for a combined total of no more than 27 credit hours without incurring additional fees of $50 per credit hour. This additional fee is applied because the state of Texas will not pay a state subsidy for any DE credit hours in excess of 27 credit hours. In addition, students may attempt to successfully complete any DE course only twice before incurring additional fees. Dropping a course before census day does not count as an attempt. After two unsuccessful attempts, students must pay an additional $50 per credit hour (i.e., for a three hour course, additional fees are calculated as 3 X $50 = $150 additional tuition). Or the student may complete the course at another institution and provide proof of successful course completion upon returning to Collin College.

Home school and high school students are not permitted to enroll in DE courses. Call the DE office at 972.881.5720 for additional information.

**Developmental Education Departments**

**Developmental Mathematics**
Collin College offers pre-algebra and algebraic skills courses to enable students to acquire a solid foundation for successful performance in college level mathematics courses. Among the courses offered to promote success are:

- **MATH 0302** Pre-Algebra,
- **MATH 0305** Beginning Algebra,
- **MATH 0310** Intermediate Algebra, and
- **MATH 0406** Introductory Algebra.
Developmental Math Pathways
All Developmental Math students are required to visit with an Academic Advisor to help determine the most appropriate path to meet their education/career goals as well as consideration for the requirements of potential transfer college or university programs. Students who are placed into Developmental Mathematics at Collin have an option of two pathways to complete their Developmental Math sequence:

- **Algebra Intensive Path.** This path supports students who enroll in MATH 1314/1414 College Algebra or MATH 1324 Mathematics for Business and Social Sciences. Students who are seeking careers in Science, Technology, Engineering, and Mathematics (STEM) fields should follow this path.
  
  MATH 0314  Support for College Algebra
  
  MATH 0324  Support for Mathematics for Business and Social Sciences

- **Quantitative Literacy Path.** This path supports students enrolled in MATH 1342 Elementary Statistical Methods or MATH 1332 Contemporary Mathematics. Most developmental math students who follow the quantitative literacy path can expect to complete their developmental math sequence in one semester.
  
  MATH 0332  Support for Contemporary Mathematics
  
  MATH 0342  Support for Elementary Statistical Methods

Students must take an assessment (via the Testing Center) for placement purposes. Once placed in a course, many support services are provided to enable students to succeed. Among the services are the Math Lab, video tapes of lectures on specific topics, tutoring, study skills seminars, and scheduled review sessions.

**Integrated Reading and Writing (INRW)**
The ability to write clearly and accurately is critical to success in academic and professional pursuits. The Integrated Reading and Writing program provides instruction in all aspects of planning and producing academic prose in preparation for the TSI writing assessment and for ENGL1301. The rubric for this coursework is INRW.

  INRW 0300  Introduction to Integrated Reading/Writing,
  INRW 0405  Integrated Reading/Writing I, and
  INRW 0315  Integrated Reading/Writing II

**English as a Second Language (ESL) Courses**
New Student Information about testing and registration information
Collin College offers English for speakers of other languages to build their confidence and skills in listening/speaking, grammar, reading, writing, and vocabulary development. Classes are designed for various interests, personal needs, academic needs, and skill levels. New students wanting to take ESL classes must complete the ESL Student Assessment.

Information about the assessment process is available from the ESL Testing Coordinator at the Plano Campus. These scores are used for course placement only and do not affect the admission status of students. Students interested in taking ESL classes through Continuing Education should call 972.985.3750 for assessment instructions.

The ESL program includes the following courses:

  ESLC 0305 ESL Oral Communication, Intermediate
  ESLC 0310 ESL Oral Communication, Advanced
  ESLC 0320 ESL Oral Communication, Pronunciation/Accent Reduction
  ESLG 0305 ESL Grammar for Non-Native Speakers, Intermediate I
  ESLG 0310 ESL Grammar for Non-Native Speakers, Intermediate II
  ESLG 0315 Grammar for Non-Native Speakers, Advanced
  ESLR 0215 ESL Reading and Vocabulary, Advanced
  ESLR 0305 ESL Reading and Vocabulary, Intermediate I
  ESLR 0310 ESL Reading and Vocabulary, Intermediate II
  ESLV 0310 ESL Reading and Vocabulary, Idioms
  ESLW 0215 Writing for Non-Native Speakers, Advanced
  ESLW 0305 Writing for Non-Native Speakers, Intermediate I
  ESLW 0310 Writing for Non-Native Speakers, Intermediate II
  COSU 0301 Test Taking and Study Skills for Non-Native English Speakers

For more information, see the course listing in the course description section of the catalog.

**CONTINUING EDUCATION OPPORTUNITIES**
Collin’s Continuing Education program has its own home page and registration system, separate from academic, workforce and developmental learning. CE offerings vary from semester to semester in order to meet local training demands and to provide seasonal and current event offerings. The most current information is always available on-line at http://www.collin.edu/ce/
Quality Learning Opportunities
Collin College Continuing Education is the leading career skills training institution for adults who are not seeking a degree. More than 70 industry recognized certificate series and certification preparation training programs are offered in the information technology, management, administrative, finance, logistics, health care, education, creative, service and hospitality career fields.

If you have Financial Aid or a Third Party is paying for your tuition, do not enroll online. The online system cannot recognize the funds and will drop you from your courses. Please call 972.985.3711 for CE Registration staff to enroll you.

What is the difference between a credit course and a Continuing education course?
- Credit courses are generally taken as part of a degree program and provide college credits.
- Noncredit courses provide a purposeful and systematic process of acquiring and recording lifetime learning for individuals who are not enrolled in a formally structured curriculum.
- Noncredit courses provide Continuing Education Units (CEUs).
- Some courses may last only a couple of hours; others may meet over several weeks.

Why would I want to take Continuing Education courses?
- To increase your knowledge of skills, either to help you on the job or for your personal enrichment.
- Earn Continuing Education Units (CEUs), which are recorded on a Continuing Education transcript.
- Prepare to take an industry recognized certification exam

What are Continuing Education Units (CEUs)?
- CEUs are recognized nationally to record satisfactory completion of certain approved occupationally related programs.
- Courses are offered throughout the county at a variety of sites depending on the types of courses and availability of facilities.

How can I get more information about the contents of a course?
Visit the Syllabus Depot which has expanded information for the courses offered by Continuing Education (CE).

Are there any prerequisites for Continuing Education courses?
- Many courses specify prerequisite knowledge.
- These prerequisites are stated to ensure students have prior knowledge & skills required to get the best out of the course & to be successful in that course.
- We recommend that you take the time to talk to CE staff member for that area.

Will I receive a certificate once I complete my course?
- Continuing Education does not offer certificates* for individual courses.
- However, you may request an official school transcript.
- Continuing Education Units (CEUs) are awarded for successful course completion.
- One CEU is awarded for each ten (10) contact hours of instruction included in a specified Continuing education program or activity.
- Successful completion is attendance-based, unless otherwise noted with "Passed Competencies: under "CEUs Earned."
- Ninety percent attendance is required for successful completion.
- For transcript requests call, 972.985.3721.
*Certificates are awarded for a Certificate Series only.

Locations for Continuing Education classes
Continuing Education classes are located at the Courtyard Center as well as other various locations. See the CE: url: http://www.collin.edu/ce/ for a list of locations and maps.

Linked Enrollment
Some Collin College credit courses are offered each semester for "linked" enrollment by Continuing Education (CE) students. CE students enrolled in linked courses and credit students will be:
- taking these classes together in the same classroom;
- taking courses taught by credit instructors;
- expected to attend class regularly;
- expected to complete all assignments and take tests;

Space is limited for linked CE participants. Unlike credit students, CE students will complete a quick admission process. CE students enrolled in linked courses will earn Continuing Education Units (CEUs) not college credits. Refunds for CE students in linked courses will be based on the CE refund policy. For more information, call 972.881.5114; McKinney residents call, 972.548.6790 x5114.
CREDIT PROGRAMS

SMART PLANNING FOR A DEGREE PROGRAM OR AREA OF STUDY
Collin College offers a variety of plans designed to prepare students for a college or university degree. Some options include pursuing an associate degree of arts or science (AA or AS) or an associate of arts in teaching (AAT); completing the General Education Core; a Field of Study; or beginning coursework in a pre-professional program. Applied Associate of Science (AAS) workforce degrees and certificates prepare a student for immediate employment.

Choose A Program and Award
If you need help selecting a program that matches your skills and personality, go to Collin’s Career Services for help identifying your career goals. To obtain workforce details (such as projected earned wages) for programs offered at Collin College and other Texas schools, explore Career Coach and the Texas CREWS website. (www.thecb.state.tx.us/apps/txcrews/)

Before you register, choose an area of study or a degree/certificate. It is important to choose a degree and check your degree plan through CougarCompass. This plan will outline all of the courses needed and the sequence as well as the semester in which the courses can be taken. CougarCompass will allow you to check your progress toward graduation at any time. The degree plan will help you make the correct course choices so that you avoid taking courses that do not apply to your degree or certificate. You can change your major or access CougarCompass through CougarWeb.

If you are planning to earn a 4-year baccalaureate degree, choose the 4-year college(s) you want to attend and select a baccalaureate degree as soon as possible. It is important to consider the specific degree requirements of the colleges where you want to transfer. Make these choices early in the planning process; ideally, when you first start at Collin. If uncertain about a transfer institution, try picking one or two top choices. Work with a Collin College Academic Advisor to determine which courses from Collin will apply to the transfer institution.

Stay on Track
Plan ahead for registration each semester. It is important to meet with a Collin College Academic Advisor at least a few weeks before Priority Registration to ensure that you are taking courses that apply to your degree plan and keep you on track toward your ultimate goals. Advisors help ensure you are following your degree plan in the most efficient way possible.

Run your Personalized Degree Audit in CougarCompass
A CougarCompass Degree Audit shows all the coursework required for a degree or certificate. It identifies which courses you have completed, which courses are in-progress, which courses have been transferred, and which courses remain to be taken. This Degree Audit presents degree requirements from the official Collin College Catalog associated with each student's admission information. The Degree Audit is divided into sections and provides additional information, including Residency status, GPA, Core requirements, and Program requirements. The CougarCompass audit will assist you in the planning necessary for on-time completion, but it is not an official transcript and it does not replace the Collin College Catalog. CougarCompass can be accessed by logging onto CougarWeb and clicking on the Student tab.

Know before you go
Students who complete a Degree Program (AA, AS, AAS) or the Core Curriculum at Collin College are more likely to be successful (compared to those who do not complete an award) as they continue their education at other higher education institutions.

Meeting with a Collin College Academic Advisor helps to ensure that you take only the courses you need. This can save your time and money.

Choosing a Plan Year
Students who plan to transfer to a college or university have a choice to make regarding the requirements for graduation. Specifically, they may choose to graduate in accordance with the program requirements that are in effect during one of their terms of enrollment. If a degree or certificate is terminated during their enrollment, they will have three years in which to complete the terminated program under the old requirements. They should consult a Collin academic advisor or the program description for the year of their choice to learn about all requirements and limitations that may apply. Students are advised to keep a copy of the program requirements and transfer guide(s) in effect during their enrollment at Collin College. Students should also keep their course syllabi to assist with transfer.
ACADEMIC PROGRAMS

ASSOCIATE DEGREES AND CERTIFICATES

An Associate of Arts (AA), Associate of Arts in Teaching (AAT) or Associate of Science (AS) is awarded to students who earn a minimum of 60 college-level credit hours, which include 42 credit hours of General Education Core and 18 credit hours of degree requirements and general studies electives.

The AA, AAT and AS degrees are designed for students planning to transfer course credits to a baccalaureate degree program at a college or university. Students should visit with an academic advisor to select courses that apply to their AA, AAT, or AS degree.

DEGREE REQUIREMENTS

Associate of Arts Degree Requirements

The following requirements must be met for an AA:
1. Earn a minimum of 60 college-level credit hours.
2. Complete the General Education Core of 42 credit hours.
3. Earn a minimum cumulative grade point average (GPA) of 2.0.
4. Earn a minimum of 18 credit hours at Collin College.
5. Complete a minimum of 18 additional credit hours of degree requirements and general studies electives.
6. Complete the degree requirement for the AA degree.
7. At least one sophomore-level literature course (3 credit hours). This requirement may simultaneously meet the Language, Philosophy & Culture requirement.

Associate of Science Degree Requirements

The following requirements must be met for an AS:
1. Earn a minimum of 60 college-level credit hours.
2. Complete the General Education Core of 42 credit hours.
3. Earn a minimum cumulative grade point average (GPA) of 2.0.
4. Earn a minimum of 18 credit hours at Collin College.
5. Complete a minimum of 18 additional credit hours of degree requirements and general studies electives.
6. Complete the degree requirement for the AS degree:
   - Complete at least six credit hours of mathematics from the following list: MATH 1314 or 1414, 1316, 1342, 2303, 2318, 2320, 2412, 2413, 2414, 2415. Three credit hours of this mathematics requirement will also meet the Mathematics Core requirement.
   - Complete at least 8 credit hours of Life and Physical Sciences from the following list:
     - BIOL 1406, 1407, 1414, 1415, 2401, 2402, 2406, 2416, 2421
     - CHEM 1411, 1412, 2423, 2425;
     - ENVR 1401, 1402
     - GEOL 1403, 1404
     - PHYS 1401, 1402, 2425, 2426
   - A Science course sequence is recommended. Completion of two of these Science courses with a grade of D or better will meet the six-credit hour Life and Physical Sciences Core requirement and two credit hours from the lab portion will be applied to the 6-credit hour Component Area Option Core requirement.

Associate of Arts in Teaching Degree Requirements

Take your first steps toward becoming a teacher with an Associate of Arts in Teaching (AAT) degree from Collin College. The AAT will prepare you to transfer to a baccalaureate program that lead to initial Texas teacher certification. The requirements are:
1. Earn a minimum of 60 college-level credit hours.
2. Complete the General Education Core of 42 credit hours.
3. Earn a minimum cumulative grade point average (GPA) of 2.0. Students should be aware that most four-year colleges require a minimum cumulative GPA of 2.5 for admission to their teacher certification programs.
4. Earn a minimum of 18 credit hours at Collin College.
5. Complete all the courses listed for one of three AAT diplomas:
   - AAT-Early Childhood-Grade 6
   - AAT-Middle Grades (Grades 4-8)
   - AAT-High School (Grades 8-12)

AA and AS Fields of Study

AA and AS degrees may have state-recognized Fields of Study (FOS) Transfer Curricula, which are available in six (6) fields. The certificate of completion for a specific FOS is awarded to guarantee transfer of the courses contained in the FOS curriculum freely among Texas public colleges. The FOS courses are statutorily required to be accepted as the first two years of program coursework in a related bachelor’s degree.

Fields of Study are available in the following disciplines:
- Business
- Communication
- Computer Science
- Criminal Justice
- Engineering
- Music

**GENERAL EDUCATION CORE**
The Texas Education Code requires all public colleges and universities to have a General Education Core and every degree has a General Education Core requirement. General Education Core is defined as “the curriculum in the liberal arts, humanities, sciences, and political, social and cultural history that all undergraduate students of a particular Texas institution of higher education are required to complete before receiving an associate or baccalaureate degree. The General Education Core focuses on strengthening six basic competencies that help define the educated person: Communication skills, critical thinking, empirical and quantitative reasoning, teamwork, social responsibility, and personal responsibility.

**CORE CURRICULUM COMPLETION**
The designation “Core Complete” is placed on the transcript of all students completing Collin’s General Education Core. The State of Texas guarantees acceptance by a public four-year university of any complete General Education Core transferred from any other Texas public college.

The General Education Core at Collin College is the collection of 42 credit hours of general education courses selected by Collin faculty in eight areas that have been approved by the Texas Higher Education Coordinating Board to build a basic core of knowledge. Course options are displayed by area and discipline in the AA/AS/AAT General Education Core Table. Unless otherwise stated, all general education core course options shown in the General Education Core Table can be used to satisfy both core and degree requirements for the AA, AS or AAT degrees.

Students should visit with an academic advisor to ensure the best selection of courses to complete the General Education Core and/or an associate degree, and to transfer to their chosen major for a baccalaureate.

**Becoming Core Complete for Students Who Transfer**
All core courses in the 030 Life and Physical Sciences Component at Collin College earn four credit hours, which are distributed as three hours applied to the 6-credit hour requirement for the 030 Life and Physical Sciences Core Component, and one lab credit hour is applied to the 090 Collin Option Area 2 requirement. There are several transfer scenarios for becoming core complete for the student who transfers in 3, 6, or 7 credit hours of Life and Physical Sciences.

If you transfer to Collin with one 3-credit hour Life and Physical Science course with a grade of D or better, three credit hours will be applied toward the 6-credit hour Life and Physical Sciences Core requirement. You will need to take one additional Life and Physical Science Core course at Collin.

If you transfer in six or seven credit hours of Life and Physical Sciences with a grade of D or better, you will have met the 6-credit hour requirement for the 030 Life and Physical Sciences Core Component.

To meet the 6-credit hour requirement in the 090 Collin Option, all students who transfer to Collin with 3, 6 or 7 credit hours of Life and Physical Sciences Core coursework, will need to take or transfer in one 090 Collin Option Area 1 Speech course, and Area 2 PSYC 1300 in order to be Core complete in both the 030 Life and Physical Sciences Core Component and the 090 Collin Option.
### COLLIN AA/AS/AAT

#### GENERAL EDUCATION CORE

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Courses</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>010 Communication Component</strong></td>
<td>6 Credit Hours</td>
<td>English ENGL 1301 and either ENGL 1302 or 2311</td>
</tr>
<tr>
<td><strong>020 Mathematics Component</strong></td>
<td>3 Credit Hours</td>
<td>Mathematics MATH 1314 or 1414, 1316, 1342, 2305, 2318, 2320, 2412, 2413, 2414, 2415</td>
</tr>
<tr>
<td><strong>030 Life &amp; Physical Sciences Component</strong></td>
<td>6 Credit Hours</td>
<td>Biology BIOL 1406, 1407, 1414, 1415, 2401, 2402, 2406, 2416, 2421</td>
</tr>
<tr>
<td>Chemistry CHEM 1411, 1412, 2423, 2425</td>
<td>These courses satisfy the AS, AA, &amp; AAT Science requirement.</td>
<td></td>
</tr>
<tr>
<td>Environmenta l Sciences ENVR 1401, 1402</td>
<td>Geology GEOL 1403, 1404</td>
<td>Physics PHYS 1401, 1402, 2425, 2426</td>
</tr>
<tr>
<td><strong>040 Language, Philosophy &amp; Culture Component</strong></td>
<td>3 Credit Hours</td>
<td>English ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343</td>
</tr>
<tr>
<td>History HIST 2311, 2312, 2321, 2322</td>
<td>Humanities HUMA 1301</td>
<td>Philosophy PHIL 1301, 1304, 2303, 2306, 2307, 2321</td>
</tr>
<tr>
<td><strong>050 Creative Arts Component</strong></td>
<td>3 Credit Hours</td>
<td>Dance DANC 2303</td>
</tr>
<tr>
<td><strong>060 American History Component</strong></td>
<td>6 Credit Hours</td>
<td>Music MUSI 1306, 1307, 1310</td>
</tr>
<tr>
<td><strong>070 Government/Political Science Component</strong></td>
<td>6 Credit Hours</td>
<td>Theatre DRAM 1310, 2361, 2362, 2366</td>
</tr>
<tr>
<td><strong>080 Social and Behavioral Sciences Component</strong></td>
<td>3 Credit Hours</td>
<td>Visual Arts ARTS 1301, 1303, 1304, 1313</td>
</tr>
<tr>
<td><strong>090 Collin Options</strong></td>
<td>6 Credit Hours</td>
<td>Area 1 – Speech 3 credit hours SPCH 1311, 1315, 1321</td>
</tr>
<tr>
<td>Area 2 - 3 credit hours</td>
<td></td>
<td>EDUC 1300*, KINE 1164, 1304, 1338, PSYC 1100*, 1300*, Or Any core course not used to meet the requirement of another component.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Only one of these courses may be taken.</td>
</tr>
</tbody>
</table>

Note: Students who transfer to Collin with 3-7 credit hours of Life & Physical Science credits should see “Becoming Core Complete” on the previous page for more information.

**1 hour of each 4 hour Life & Physical Sciences course will be transcripted as 090 Collin Options, up to 2 credit hours.**

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2018-19 Collin College Catalog

Please refer to [http://www.collin.edu/academics/programs/index.html](http://www.collin.edu/academics/programs/index.html) for the most current information.
ASSOCIATE OF ARTS DEGREE (AA)

The Associate of Arts degree provides general academic courses and electives for students who plan to transfer to a college or university. Because of the various transfer requirements at colleges and universities, and to ensure enrollment in appropriate courses, students should verify course transferability and degree applicability with a Collin academic advisor and/or the college or university that they plan to attend.

AA FIELDS OF STUDY (FOS) AND GENERAL STUDIES ELECTIVES

Accounting

Students who are planning to major in Accounting as part of a bachelor’s degree at a four-year university should refer to the Business Field of Study. Students should complete the AA General Education Core and take ACCT 2301 and ACCT 2302.

Air Force and Army ROTC

Collin College students are given the opportunity to participate in the Air Force or Army ROTC program as crosstown students at the University of North Texas in Denton, Texas.

Students are required to attend an academic class, leadership laboratory and physical training at the University of North Texas once a week during the fall and spring academic semesters.

The ROTC mission is to develop quality leaders to serve our country as officers in the United States Air Force or Army. As a part of the program, you will prepare yourself to become an Air Force or Army Officer while completing your degree as a college student. Students may participate in four-year or three-year programs.

Students enroll in ROTC classes at the same time and in the same manner as other Collin courses. Collin’s Business and Computer Systems Division administers the offering of ROTC courses for Collin College; students register and pay via Collin College in accordance with published payment deadlines. For more information please visit www.afrotc.unt.edu or www.armyrotc.unt.edu.

American Sign Language

Also see AAS - Interpreter Education Program (IEP)

The Associate of Arts degree with coursework in American Sign Language provides general academic courses and electives that enable students who intend to major in Deaf Education or Deaf Studies to transfer to a college or university.

American Sign Language coursework is designed to provide students with essential, foundational ASL skills, familiarity with deaf culture and an introduction to the discipline of education.

To earn an associate degree, complete the 42 credit hour General Education Core, and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements.

Recommended Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGNL 1401</td>
<td>Beginning American Sign Language I</td>
</tr>
<tr>
<td>SGNL 1402</td>
<td>Beginning American Sign Language II</td>
</tr>
<tr>
<td>SGNL 2301</td>
<td>Intermediate American Sign Language I</td>
</tr>
<tr>
<td>SGNL 2302</td>
<td>Intermediate American Sign Language II</td>
</tr>
<tr>
<td>SLNG 1211</td>
<td>Fingerspelling and Numbers 1,*</td>
</tr>
<tr>
<td>SLNG 1347</td>
<td>Deaf Culture</td>
</tr>
<tr>
<td>EDUC 1301</td>
<td>Introduction to the Teaching Profession 2</td>
</tr>
<tr>
<td>EDUC 2301</td>
<td>Introduction to Special Populations 2</td>
</tr>
</tbody>
</table>

1. Recommended for students pursuing degrees in Deaf Studies.
2. Recommended for students pursuing degrees in Deaf Education.

* Students should verify course transferability with the Collin academic advisor and/or the college or university that they plan to attend.

Anthropology

Anthropology takes as its subject the unity and diversity of our single human species in its total history. Its intellectual origins are in both the natural sciences and the humanities. Anthropology concerns itself with real people living now and throughout history. Hence anthropology asks questions such as “What defines being human?” “Who are the ancestors of modern humans?” “What are our physical traits?” “How do we behave?” “Why are there variations and differences among different groups of humans?” “How has the evolutionary past of humans influenced social organization and culture?” Most importantly anthropologists seek to ask themselves the twin questions of “What in my world gives rise to my reaction to what other folks do?” and “What in their world makes it sensible for them to do what they do, even if it would never occur to me to do the same thing?”

Anthropology students will gain skills essential to better understand the complexity of the human world and the role of human beings within that complex world. Collin students who study anthropology will gain a foundation in the discipline sufficient for them to transfer to a university program.
To earn an associate degree, complete the 42 credit hour General Education Core, and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements.

**Recommended Electives**

- ANTH 2301 Physical Anthropology
- ANTH 2302 Introduction to Archeology
- ANTH 2346 General Anthropology
- ANTH 2351 Cultural Anthropology
- BIOL 2404 Human Anatomy and Physiology Basic
- BIOL 2416 Genetics
- ENGL 2332 World Literature I
- GEOG 1302 Human Geography
- PHIL 2306 Introduction to Ethics
- PSYC 2301 General Psychology
- SOCI 1301 Introduction to Sociology

**Art**

*Also see academic Photography courses*

The Visual Arts Program offers foundation-level courses in drawing, design, art appreciation and art history as well as courses focused on traditional studio disciplines such as painting, watercolor, ceramics, sculpture, printmaking, and jewelry/art metals. In addition to courses, exposure to seminars in professional practices helps students prepare to function as visual artists. Our spacious labs provide access to professional quality equipment, including printing presses, computers, printers, ceramic kilns, electric pottery wheels, and a metal-casting foundry. Our gallery space, THE ARTS Gallery, exposes students to the works of current professional artists and showcases student work in both open and juried student shows. Finally, our instructors are highly trained, practicing artists who are dedicated to helping each student explore and research the visual arts and, thereby, reach his or her highest level of skill and creativity.

To earn an associate degree, complete the 42 credit hour General Education Core, and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements.

**Recommended Electives**

- ARTS 2317 Painting II
- ARTS 2323 Figure Drawing I
- ARTS 2326 Sculpture I
- ARTS 2333 Printmaking I
- ARTS 2341 Jewelry/Art Metals I
- ARTS 2346 Ceramics I
- ARTS 2347 Ceramics II
- ARTS 2366 Watercolor I

**Business Field of Study**

*An Associate of Arts with a Business Field of Study requires 60 credit hours*

Students interested in careers in business or who are planning to major in accounting, business administration, finance, international business, management, or marketing for a baccalaureate degree should follow the Business Field of Study curriculum.

A Field of Study is a set of courses that will transfer and apply to a corresponding bachelor’s level degree at a Texas college or university. Both the Field of Study and the Core Curriculum courses are transferrable for full academic credit to any public college or university in Texas. Students who complete the Field of Study block of courses will earn a certificate in that Field of Study.

Did you know that you can also earn an AA or AS degree in addition to the Field of Study certificate? Contact an academic advisor today to learn more about how to develop an educational plan that is right for you.

**Certificate – Business Field of Study**

*21 credit hours*

**Required General Education Core Courses**

*9 credit hours*

- ECON 2301 Principles of Macroeconomics
- MATH 1325 Calculus for Business and Social Sciences
- SPCH 1321 Business and Professional Communication (preferred)
- OR-SPCH 1315 Public Speaking

**Other Required Courses**

*12 credit hours*

- ACCT 2301 Principles of Financial Accounting
- ACCT 2302 Principles of Managerial Accounting
- BCIS 1305 Business Computer Applications
- ECON 2302 Principles of Microeconomics

1. Collin Prerequisite: MATH 1314, 1414, or 1324. Please check with the receiving college or university for prerequisite requirements.
2. MATH 2413, 2414, or 2415 may also be used.

The Required General Education Core courses listed above satisfy the Component Area Option-Speech requirement; the Social and Behavioral Sciences component; and the Mathematics component.
Communication Field of Study

An Associate of Arts with a Communication Field of Study requires 60 credit hours.

Program Options:
Certificate – Communication Field of Study
- Advertising/Public Relations (Sub-Area)
- General Communication (Sub-Area)
- Journalism/Mass Communication (Sub-Area)
- Radio and Television Broadcasting/Broadcast Journalism (Sub-Area)

Collin offers four sub-areas (listed above) of the Communication Field of Study (FOS).

A Field of Study is a set of courses that will transfer and apply to a corresponding bachelor’s - level degree at a Texas college or university. Both the Field of Study and the Core Curriculum courses are transferrable for full academic credit to any public college or university in Texas. Students who complete the Field of Study block of courses will earn a certificate in that Field of Study.

Did you know that you can also earn an AA or AS degree in addition to the Field of Study certificate? Contact an academic advisor today to learn more about how to develop an educational plan that is right for you. Listed below are the requirements for each Communication Field of Study sub-area:

Certificate – Communication Field of Study - Advertising/Public Relations (Sub-Area)
12 credit hours

Required Courses

Competency Area 1
6 - 9 credit hours
- COMM 1307 Introduction to Mass Communication
- COMM 2300 Media Literacy
- COMM 2330 Introduction to Public Relations

Competency Area 2
3 - 6 credit hours
- COMM 2332 Radio/Television News
- COMM 2339 Writing for Radio, Television, and Film

Recommended Electives to complete AA
(If not used above)
6 credit hours
- COMM 2330 Introduction to Public Relations
- COMM 2332 Radio/Television News
- SPCH 1318 Interpersonal Communication

Certificate – Communication Field of Study - General Communication (Sub-Area)
12 credit hours

Required Courses

Competency Area 1
6 credit hours
- SPCH 1311 Introduction to Speech Communication
- SPCH 1318 Interpersonal Communication

Competency Area 2
6 credit hours
- SPCH 1315 Public Speaking
- SPCH 1321 Business and Professional Communication
- SPCH 2335 Argumentation and Debate
1. One of these courses will meet the Component Area Option - Speech Component of the General Education Core.

Recommended Electives to complete AA
(If not used above)
9 credit hours
- COMM 1307 Introduction to Mass Communication
- COMM 2300 Media Literacy
- COMM 2331 Radio/Television Announcing
- COMM 2332 Radio/Television News

Certificate – Communication Field of Study - Journalism / Mass Communication (Sub-Area)
12 credit hours

Required Courses

Competency Area 1
6-9 credit hours
- COMM 1307 Introduction to Mass Communication
- COMM 1335 Introduction to Electronic Media
- COMM 2300 Media Literacy
- COMM 2330 Introduction to Public Relations

Competency Area 2
3-6 credit hours
- COMM 2332 Radio / Television News
- COMM 2339 Writing for Radio, Television and Film

Recommended Electives to complete AA
(If not used above)
6 credit hours
- COMM 2330 Introduction to Public Relations
- COMM 2332 Radio / Television News
- SPCH 1318 Interpersonal Communication

Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
Certificate – Communication Field of Study
Radio and Television Broadcasting/Broadcast Journalism (Sub-Area)
12 credit hours

Required Courses

Competency Area 1
6-9 credit hours
COMM 1307  Introduction to Mass Communication
COMM 1335  Introduction to Electronic Media
COMM 2300  Media Literacy
COMM 2366  Introduction to Cinema

Competency Area 2
3-6 credit hours
COMM 2331  Radio / Television Announcing
COMM 2332  Radio / Television News
COMM 2339  Writing for Radio, Television and Film

Recommended Electives to complete AA
(If not used above)
6 credit hours
COMM 2330  Introduction to Public Relations
COMM 2332  Radio / Television News
SPCH 1318  Interpersonal Communication

Certificate – Criminal Justice Field of Study
15 credit hours

Required Courses

CRIJ 1301  Introduction to Criminal Justice
CRIJ 1306  Court Systems and Practices
CRIJ 1310  Fundamentals of Criminal Law
CRIJ 2313  Correctional Systems and Practices
CRIJ 2328  Police Systems and Practices

To complete the AA degree, in addition to the Field of Study Certificate, complete the remaining General Education Core requirements and recommended elective credit hours.

Criminal Justice Electives to complete AA
3 credit hours
CRIJ 1307  Crime in America
CRIJ 1313  Juvenile Justice System
CRIJ 2314  Criminal Investigation
CRIJ 2323  Legal Aspects of Law Enforcement

Dance
Collin’s Dance Department has a strong reputation for excellence in dance education, choreography and performance, propelling students into several prestigious university dance programs. The dance curriculum includes multiple levels of ballet, modern dance, jazz, tap, dance appreciation, improvisation, choreography and performance classes.

Dance courses focus on movement fundamentals, technique, performance and choreography. The curriculum provides a comprehensive approach to learning dance by integrating the aesthetics, historical, critical, cultural and fundamental aspects of dance as an art form.

Students interested in additional dance experience may audition for Collin’s student dance company. The mission of the company is to produce contemporary dance works at the highest level of artistic excellence. The dance company attends and performs at the American College Dance Festival annually and has received the Gala Award at that festival six times and has performed at the National festival, too. Dance auditions for the dance company are held prior to the fall semester.

To earn an associate degree, complete the 42 credit hour General Education Core, and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements.
**Recommended Electives**

DANC 1110  Tap Dance  
DANC 1112  Dance Practicum  
DANC 1128  Ballroom and Social Dance  
DANC 1151  Freshman Dance Performance  
DANC 1201  Dance Composition - Improvisation  
DANC 1241  Beginning Ballet  
DANC 1245  Beginning Modern Dance  
DANC 1247  Beginning Jazz Dance  
DANC 1301  Dance Composition - Choreography  
DANC 1305  World Dance  
DANC 2151  Sophomore Dance Performance  
DANC 2241  Intermediate Ballet  
DANC 2245  Intermediate Modern Dance  
DANC 2247  Intermediate Jazz Dance  
DANC 2303  Dance Appreciation  
DANC 2389  Academic Cooperative

**Economics**

Students who are planning to major in economics as part of a bachelor’s degree at a four-year university should refer to the Business Field of Study. Students should complete the AA [General Education Core](#) and take ECON 2301 and ECON 2302.

**Education**

*See Associate of Arts in Teaching (AAT) and Child Development (AAS) program.*

**English**

From the development of your own critical reading, thinking and writing skills to studies of genre-specific writing like novels, poetry, short stories and essays, Collin College’s English courses offer a choice for every student.

Composition and rhetoric courses focus on writing as a process requiring planning, analysis and research, allowing you to express your opinion about the material clearly and with conviction. You can take your writing a step further with electives in creative writing or technical writing.

Sophomore-level courses include surveys in global and national literatures and genre-specific courses focusing on novels or short stories.

Writing Centers, available on each campus, provide students with professional consultation in composing, writing and revising assignments in a variety of disciplines.

To earn an associate degree, complete the 42 credit hour General Education Core, and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements. Check with your transfer institution before registering for general studies electives to make sure your courses will be degree applicable to your bachelor degree at the transfer institution.

**Recommended Electives**

ENGL 2307  Creative Writing I  
ENGL 2308  Creative Writing II  
ENGL 2311  Technical and Business Writing  
ENGL 2322  British Literature I  
ENGL 2323  British Literature II  
ENGL 2327  American Literature I  
ENGL 2328  American Literature II  
ENGL 2332  World Literature I  
ENGL 2333  World Literature II  
ENGL 2342  Introduction to Literature I – Short Story and Novel  
ENGL 2343  Introduction to Literature II – Poetry and Drama  
X4XX  Foreign Language Sequence I  
X4XX  Foreign Language Sequence II

**Foreign Languages**

The ability to communicate effectively is important in our increasingly interconnected world. Would you like to learn Arabic, Chinese, French, German, Italian, Japanese, Russian or Spanish? Collin College offers foreign language electives in each.

Beginning and intermediate classes in foreign languages will provide you with an essential language background for advanced study of the language. Whether you are just starting out in a new language or you have some prior education in the language, Collin College has great foreign language courses to sharpen your skills.

**Arabic**

ARAB 1411  Beginning Arabic I  
ARAB 1412  Beginning Arabic II

**Chinese**

CHIN 1411  Beginning Chinese I  
CHIN 1412  Beginning Chinese II  
CHIN 2311  Intermediate Chinese I  
CHIN 2312  Intermediate Chinese II

**French**

FREN 1411  Beginning French I  
FREN 1412  Beginning French II  
FREN 2311  Intermediate French I  
FREN 2312  Intermediate French II

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Please refer to [http://www.collin.edu/academics/programs/index.html](http://www.collin.edu/academics/programs/index.html) for the most current information.
German
GERM 1411 Beginning German I
GERM 1412 Beginning German II
GERM 2311 Intermediate German I
GERM 2312 Intermediate German II

Italian
ITAL 1411 Beginning Italian I
ITAL 1412 Beginning Italian II

Japanese
JAPN 1411 Beginning Japanese I
JAPN 1412 Beginning Japanese II
JAPN 2311 Intermediate Japanese I
JAPN 2312 Intermediate Japanese II

Russian
RUSS 1411 Beginning Russian I
RUSS 1412 Beginning Russian II
RUSS 2311 Intermediate Russian I
RUSS 2312 Intermediate Russian II

Spanish
SPAN 1411 Beginning Spanish I
SPAN 1412 Beginning Spanish II
SPAN 2311 Intermediate Spanish I
SPAN 2312 Intermediate Spanish II
SPAN 2313 Spanish for Native/Heritage Speakers I
SPAN 2314 Spanish for Native/Heritage Speakers II

Government
Department Website: www.collin.edu/department/politicalscience/

Do you want to learn how federal state and local governments work? Are you interested in why, sometimes, they don’t? Collin College government coursework emphasizes historical context, contemporary political analysis and critical thinking to provide you with a greater understanding of the role of government in Texas and American politics.

An Associate of Arts degree with coursework in government is a stepping stone to a liberal arts education and can be the basis for a bachelor’s degree from a college or university.

To earn an associate degree, complete the 42 credit hour General Education Core, and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements. Check with your transfer institution before registering for general studies electives to make sure your courses will be degree applicable to your bachelor degree at the transfer institution.

Recommended Electives
GOVT 2304 Introduction to Political Science
GOVT 2311 Mexican-American Politics
CRJ 1301 Introduction to Criminal Justice
ECON 2301 Principles of Macroeconomics
ECON 2302 Principles of Microeconomics
PHIL 2303 Introduction to Formal Logic
PHIL 2306 Introduction to Ethics
PSYC 2301 General Psychology
X4XX Foreign Language Sequence I
X4XX Foreign Language Sequence II

History
History coursework offers foundational knowledge for students interested in completing an associate degree as well as students pursuing a bachelor’s degree. The American History survey courses meet the state’s requirement for six hours of American history. In addition to the survey courses, the History department also offers courses in Western Civilizations, Texas History, African-American History, World History and Mexican-American History.

To earn an associate degree, complete the 42 credit hour General Education Core, and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements.

Recommended Electives
HIST 2301 Texas History
HIST 2311 Western Civilization I
HIST 2312 Western Civilization II
HIST 2327 Mexican-American History I
HIST 2328 Mexican-American History II
HIST 2381 African-American History
ECON 2301 Principles of Macroeconomics
ECON 2302 Principles of Microeconomics
PHIL 1301 Introduction to Philosophy
PHIL 2303 Introduction to Formal Logic
PSYC 2301 General Psychology
SOCI 1301 Introduction to Sociology
X4XX Foreign Language Sequence I
X4XX Foreign Language Sequence II

Music Field of Study
An Associate of Arts with a Music Field of Study requires 60 credit hours. Music also has a workforce program.

Bring your talent for music to Collin College, where our instructors can help you hone your craft as you study in the field of your choice. Like jazz? How about classical? Are you an instrumentalist? Strictly a vocalist? Collin College has a place for you.
The Music field of study (FOS) provides approved courses for music majors who intend to transfer to a college or university and further their musical studies. The curriculum offers the required music theory, ear training, keyboard skills, music literature, private applied study and ensemble participation that all music majors must complete during their freshman and sophomore years. Upon completion of the field of study curriculum, a certificate will be awarded to acknowledge completion and readiness to transition from an associate level to a baccalaureate (BA/BS) level, at any Texas public institution.

The college is also home to several ensembles and musical groups, allowing you to explore your abilities with other like-minded musicians in a comfortable setting. College facilities even provide a venue to share your talent with the world.

A Field of Study is a set of courses that will transfer and apply to a corresponding bachelor’s-level degree at a Texas college or university. Both the Field of Study and the Core Curriculum courses are transferrable for full academic credit to any public college or university in Texas. Students who complete the Field of Study block of courses will earn a certificate in that Field of Study. Did you know that you can also earn an AA or AS degree in addition to the Field of Study certificate? Contact an academic advisor today to learn more about how to develop an educational plan that is right for you.

Certificate – Music Field of Study

31 credit hours

Ensemble
4 credit hours
MUEN X1XX Ensemble (4 semesters) ¹

Applied Study
8 credit hours
MUAP X2XX Applied Music (4 semesters) ²

Theory / Sight Singing & Ear Training
16 credit hours
MUSI 1116 Sight Singing & Ear Training I
MUSI 1117 Sight Singing & Ear Training II
MUSI 1311 Music Theory I
MUSI 1312 Music Theory II
MUSI 2116 Sight Singing & Ear Training III
MUSI 2117 Sight Singing & Ear Training IV
MUSI 2311 Music Theory III
MUSI 2312 Music Theory IV

Literature
3 credit hours
MUSI 1307 Music Literature ³

Recommended Courses for Piano Proficiency

Keyboard (Piano) Competency
4 credit hours
MUSI 1181 Piano Class I ⁴
MUSI 1182 Piano Class II ⁴
MUSI 2181 Piano Class III ⁴
MUSI 2182 Piano Class IV ⁴

Baccalaureate Music programs require piano proficiency although the piano skills courses are not part of the guaranteed transfer block. Students are encouraged to take the keyboard competency courses in addition to completion of the Music Field of Study prior to transfer. Students may take a barrier exam to identify the need to take the courses.

Philosophy

Before there was the scientific method, there was philosophy. Literally the “love of wisdom,” philosophy seeks to explain the world through examination. The study of philosophy is foundational if you are dedicated to the pursuit of knowledge.

When you study philosophy at Collin, you will become acquainted with the main problems of philosophy, examining those problems from multiple perspectives, so that a greater truth can be determined. You will come away with a greater understanding of philosophical thinking and a better understanding of the people around you.

To earn an associate degree, complete the 42 credit hour General Education Core, and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements. Check with your transfer institution before registering for general studies electives to make sure your courses will be degree applicable to your bachelor degree at the transfer institution.

Recommended Electives

PHIL 1301 Introduction to Philosophy
PHIL 1304 Introduction to World Religions
PHIL 2303 Introduction to Formal Logic
PHIL 2306 Introduction to Ethics
PHIL 2307 Introduction to Social and Political Philosophy
PHIL 2321 Philosophy of Religion
ANTH 2351 Cultural Anthropology
ENGL 2322 British Literature I
ENGL 2323 British Literature II
ENGL 2332 World Literature I
ENGL 2333 World Literature II
GOVT 2304 Introduction to Political Science
HIST 2311 Western Civilization I
HIST 2312 Western Civilization II
X4XX Foreign Language Sequence I
X4XX Foreign Language Sequence II

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Photography

Photography also has a workforce program.

The photography world is now the imaging universe. Contemporary photography balances technique and creativity to develop imagery that evokes emotion and human understanding. As a student in Collin College’s photography program, you will learn to use professional-level equipment and software to shape that narrative with imagination and a deeper understanding of process and impact.

Photography coursework will improve the visual literacy you will need to function in today’s image-obsessed environment. Technical skills with critical software / hardware applications, as well as creative and conceptual understanding are covered in great detail. From techniques to improve your candid photography to the best way to light for studio portraiture, Collin can teach and inspire you to do great work. Subjects include intensive artistic investigations into: traditional film-based photography techniques and approaches; advanced darkroom and alternative processes; studio lighting for portrait, fashion and product; comprehensive creative solutions; and contemporary digital workflow.

Our state-of-the-art photography facility is one of the best in the state. It houses a fully equipped 20 work-station MAC Lab with Epson printers and a digital media room with Nikon / Imacon / Epson scanners and multiple large-format Epson printers. We have a split studio with Profoto strobe set-ups and a continuous artificial lighting option for digital video. Our darkroom includes 20 4x5 enlargers with a film processing room and alternative processing room. Equipment check out for digital, 35mm, medium- and large-format film cameras, and portable strobe lighting available.

To earn an associate degree, complete the 42 credit hour General Education Core, and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements. Check with your transfer institution before registering for general studies electives to make sure your courses will be degree applicable to your bachelor degree at the transfer institution.

Recommended Electives

| ARTS | 1313 | Foundations of Art |
| ARTS | 2348 | Digital Photography I |
| ARTS | 2356 | Photography I / Darkroom |
| ARTS | 2357 | Photography II / Darkroom |
| PHTC | 1300 | Digital Photography II |
| PHTC | 1371 | Book, Design, and Presentation |
| PHTC | 2380 | Cooperative Education – Commercial Photography |

Psychology

Broaden your understanding of the human mind or lay the groundwork for a career in psychology with coursework at Collin College.

Collin psychology coursework features a variety of introductory courses exploring the principles of behavior and mental processes. Course offerings include general psychology, life-span psychology, human sexuality, psychology of personality and social psychology. These courses emphasize psychological theory and research, the historical context of the development of the field and the use of psychological concepts as a tool for better understanding what it means to be a human being.

An Associate of Arts degree with coursework in psychology serves as a foundation for continued studies in the discipline. Because most careers in psychology require an advanced degree, many students transfer to a college or university to complete the bachelor’s degree and apply for admission to a graduate program in psychology.

To earn an associate degree, complete the 42 credit hour General Education Core, and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements. Check with your transfer institution before registering for general studies electives to make sure your courses will be degree applicable to your bachelor degree at the transfer institution.

Recommended Electives

| PSYC | 1300 | Learning Framework |
| PSYC | 2301 | General Psychology |
| PSYC | 2306 | Human Sexuality |
| PSYC | 2314 | Life-Span Growth and Development |
| PSYC | 2315 | Psychology of Adjustment |
| PSYC | 2316 | Psychology of Personality |
| PSYC | 2319 | Social Psychology |
| SOCI | 1301 | Introduction to Sociology |
| SOCI | 1306 | Social Problems |
| SOCI | 2301 | Marriage and the Family |

Sociology

Department Website:

www.collin.edu/department/sociology

Sociology examines how social factors affect both behavior and the potential consequences of that behavior. It seeks to uncover the existence of social patterns, explain how social patterns come to be and explore the consequences of such patterns for different individuals, groups and society at large. Sociology coursework at Collin College is designed to provide you with essential life skills and a deeper understanding of yourself and others.
Critical thinking skills and a global perspective – attributes that will benefit you regardless of your major – are strongly emphasized.

To earn an associate degree, complete the 42 credit hour General Education Core, and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements. Check with your transfer institution before registering for general studies electives to make sure your courses will be degree applicable to your bachelor degree at the transfer institution.

**Recommended Electives**

- **SOCI 1301** Introduction to Sociology
- **SOCI 1306** Social Problems
- **SOCI 2301** Marriage and the Family
- **SOCI 2306** Human Sexuality
- **SOCI 2319** Minority Studies
- **ANTH 2351** Cultural Anthropology
- **PSYC 2301** General Psychology
- **PSYC 2314** Life-Span Growth and Development
- **PSYC 2319** Psychology of Personality

**Theatre**

Whether you are taking your first timid steps upon the stage or you are a veteran of high school musicals and plays, theatre coursework at Collin College can be your ticket to better performance and a fuller understanding of “the business of show.”

Theatre coursework introduces students to the aesthetic and analytical elements of theatrical productions. It offers a full curriculum of theatre study including work in beginning and advanced acting, musical theatre, voice and diction, stage and lighting design, costume design and stage makeup, theatre history and script analysis, and specialty courses in circus skills, stunt work, stage combat, stage management, and acting for the camera. The labs enable students to have hands-on experiences through performances, as well as shop and crew assignments. Studies include contemporary theories and classical aspects of theatrical productions.

Theatre coursework at Collin College has been nationally recognized and Collin students have been awarded the national championship of collegiate drama. What’s more, many Collin College alumni have worked on Broadway. Theatre faculty and students have diverse experience in professional stage and motion picture work.

The state-of-the-art theatre facility is comprised of three separate performance spaces including the 350-seat John Anthony Theatre, the 120-seat Black Box Theatre and the intimate ALT Lab Theatre. The multimillion-dollar complex also houses two dressing rooms, a theatre box office, a costume vault and construction shop, a scene and paint shop, in addition to numerous acting and directing classroom spaces.

To earn an associate degree, complete the 42 credit hour General Education Core, and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements. Check with your transfer institution before registering for general studies electives to make sure your courses will be degree applicable to your bachelor degree at the transfer institution.

**Recommended Electives**

- **DRAM 1120** Theatre Practicum I
- **DRAM 1121** Theatre Practicum II
- **DRAM 1161** Musical Theatre I
- **DRAM 1162** Musical Theatre II
- **DRAM 1310** Introduction to Theater
- **DRAM 1322** Stage Movement
- **DRAM 1323** Basic Theatre Practice
- **DRAM 1330** Stagecraft I
- **DRAM 1341** Makeup
- **DRAM 1342** Introduction to Costume
- **DRAM 1351** Acting I
- **DRAM 1352** Acting II
- **DRAM 2331** Stagecraft II
- **DRAM 2336** Voice for the Theater
- **DRAM 2351** Acting III
- **DRAM 2352** Acting IV
- **DRAM 2361** History of Theater I
- **DRAM 2362** History of Theater II
- **DRAM 2366** Introduction to Cinema
- **DRAM 2389** Academic Co-op – Drama
ASSOCIATE OF ARTS IN TEACHING (AAT)

Take your first steps toward becoming a teacher with an Associate of Arts in Teaching (AAT) degree from Collin College. Collin offers degree plans with three specializations in mind: early childhood through grade 6; middle grades (grades 4-8); and high school (grades 8-12). All will prepare you to transfer to a baccalaureate program that lead to initial Texas teacher certification.

Students should contact the teacher education program at the specific college or university to which they plan to transfer for detailed information prior to registering. Contact names and phone numbers are available from the Collin academic advisor, or go to http://transferu.collin.edu.

Please be aware that TECA courses have been removed from the AAT, but these courses are still transferable. Students who have previously taken, or have the ability to take, additional courses should check with the college or university to which they plan to transfer to see how TECA courses will apply to the degree.

AAT Degree Requirements
For an AAT degree, you must meet the following requirements:

1. Earn a minimum of 60 college-level credit hours.
2. Complete the General Education Core of 42 credit hours.
3. Earn a minimum cumulative grade point average (GPA) of 2.0. Students should be aware that most four-year colleges require a minimum cumulative GPA of 2.5 for admission to their teacher certification programs.
4. Earn a minimum of 18 credit hours at Collin College.
5. Complete all the courses listed for one of three AAT diplomas:
   - AAT - Early Childhood Grade 6
   - AAT - Middle Grades (Grades 4-8)
   - AAT - High School (Grades 8-12)

AAT – Early Childhood – Grade 6
The AAT – Early Childhood – Grade 6 is designed for the student pursuing a Certification for only the elementary grades. Areas are: Generalist; Bilingual Generalist; ESL Generalist; other content area teaching field/academic disciplines/interdisciplinary TBA.

Required Courses
16 credit hours
EDUC 1301 Introduction to the Teaching Profession
EDUC 2301 Introduction to Special Populations
MATH 1350 Mathematics for Teachers (Fundamentals of Mathematics I)
MATH 1351 Mathematics for Teachers II (Fundamentals of Mathematics II)
XXXX x4xx Additional Lab Science Course

1. Check with the Collin academic advisor and the receiving college or university for recommended courses in teaching field prior to registering.

Recommended Elective to complete an AAT
2 credit hour
CDEC 1270 Introduction to Teaching ESL

1. Prior to enrolling in this course, please meet with the Education Academic Advisor or the Education Discipline Lead.

AAT – Middle Grades (Grades 4-8)
The AAT – Middle Grades (Grades 4-8) is for grade 4-8 and Early Childhood-Grade 12 Special Education. The AAT is designed to satisfy the lower-division requirements for bachelor’s degrees leading to initial Texas teacher certification in all Grades 4-8 certification areas and EC-12 Special Education. The Grade 4-8 Certification areas are: Generalist; Bilingual Generalist; ESL Generalist; English Language Arts & Reading; English Language Arts & Reading and Social Studies; Mathematics; Science; Mathematics and Science; Social Studies; other content area teaching fields/academic disciplines/interdisciplinary TBA.

Early Childhood to Grade 12 Special Education Certification areas are: EC - 12 Special Education; other content area teaching fields/academic disciplines/interdisciplinary TBA. This degree is for students who want to teach grades EC-Grade 4 and higher.
**Required Courses**

**16 credit hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>EDUC 1301</td>
<td>Introduction to the Teaching Profession</td>
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<tr>
<td>EDUC 2301</td>
<td>Introduction to Special Populations</td>
</tr>
<tr>
<td>MATH 1350</td>
<td>Mathematics for Teachers I</td>
</tr>
<tr>
<td>MATH 1351</td>
<td>Mathematics for Teachers II</td>
</tr>
<tr>
<td>XXXX x4xx</td>
<td>Additional Lab Science course</td>
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</tbody>
</table>

1. Check with the Collin academic advisor and the receiving college or university for recommended courses in teaching field prior to registering.

**Recommended Electives to complete an AAT**

**2 credit hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>CDEC 1270</td>
<td>Introduction to Teaching ESL</td>
</tr>
</tbody>
</table>

1. Prior to enrolling in this course, please meet with the Education Academic Advisor or the Education Discipline Lead.

**AAT – High School (Grades 8-12)**

The AAT – High School (Grades 8-12) is for grades 8-12 and other Early Childhood-Grade 12. Licensure is designed to satisfy the lower-division requirements for bachelor’s degrees leading to initial Texas teacher certification in all grades 8-12 and specialized EC - 12 certification areas. The Grades 8 - 12 Certification areas are: History; Social Studies; Mathematics; Life Sciences; Physical Sciences; Science; English Language Arts & Reading; Computer Science; Technology Applications; Health Science Technology Education; Speech; Journalism; Business Education; Marketing Education; Mathematics & Physics; Agricultural Sciences & Technology; Technology Education; Languages other than English; Family and Consumer Sciences; Dance; Mathematics & Physical Science & Engineering; Human Development and Family Studies; Hospitality; Nutrition and Food Sciences; other content area teaching fields/academic disciplines/interdisciplinary TBA.

**Required Courses**

**18 credit hours**

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<th>Course</th>
<th>Title</th>
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<tr>
<td>EDUC 1301</td>
<td>Introduction to the Teaching Profession</td>
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<tr>
<td>EDUC 2301</td>
<td>Introduction to Special Populations</td>
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**Education Courses**

**6 credit hours**

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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>EDUC 1301</td>
<td>Introduction to the Teaching Profession</td>
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<tr>
<td>EDUC 2301</td>
<td>Introduction to Special Populations</td>
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</tbody>
</table>

**Additional Required Courses**

**12 credit hours**

Additional Twelve (12) credit hours of courses in academic disciplines or content area teaching fields

1. Check with the Collin academic advisor and the receiving college or university for recommended courses in teaching field prior to registering.
ASSOCIATE OF SCIENCE DEGREE (AS)

AS FIELDS OF STUDY (FOS) AND ELECTIVES
The Associate of Science degree provides general academic courses and electives for students who plan to transfer to a college or university. Because of the various transfer requirements at colleges and universities and to ensure enrollment in appropriate courses, students should verify course transferability with the Collin academic advisor and/or TransferU at: http://www.collin.edu/transferu/index.html

Biology
Today, more than ever, an understanding of biology is critical to human life and the future of the planet. Fast-paced developments in medicine, genetics and environmental issues can be bewildering without basic knowledge of biological science.

Biology coursework and an Associate of Science degree from Collin College will prepare you for university studies in a science-related field. Collin offers a personalized, high quality educational experience, with an excellent instructional staff, computer-aided instruction, state-of-the-art laboratory facilities and an emphasis on current research.

To earn an associate degree, complete the 42 credit hour General Education Core and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements. Check with your transfer institution before registering for general studies electives to make sure your courses will be degree applicable to your bachelor degree at the transfer institution.

Recommended Electives
BIOL 1322 General Nutrition
BIOL 2389 Academic Co-op Biology
BIOL 2401 Anatomy and Physiology I
BIOL 2402 Anatomy and Physiology II
BIOL 2406 Environmental Biology
BIOL 2416 Genetics
BIOL 2421 Microbiology for Science Majors
CHEM 1411 General Chemistry I
CHEM 1412 General Chemistry II
CHEM 2423 Organic Chemistry I
CHEM 2425 Organic Chemistry II
HITT 1305 Medical Terminology I
MATH 1342 Elementary Statistical Methods
PHYS 1401 College Physics I
PHYS 1402 College Physics II
PHYS 2425 University Physics I
PHYS 2426 University Physics II

Chemistry
Department Website: http://www.collin.edu/chemistry

Earn an Associate of Science degree with chemistry coursework and lay the academic foundation for further studies in the sciences. Courses include general chemistry and organic chemistry, as well as an introduction to chemistry designed for students who are novices in the science disciplines.

Solving problems in chemistry requires creativity and curiosity, as well as logic and reasoning. An excellent instructional staff, stocked laboratory facilities and current scientific literature make chemistry courses at Collin a personalized, high quality educational experience.

To earn an associate degree, complete the 42 credit hour General Education Core and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements. Check with your transfer institution before registering for general studies electives to make sure your courses will be degree applicable to your bachelor degree at the transfer institution.

Recommended Electives
CHEM 2389 Academic Co-op Chemistry
CHEM 2423 Organic Chemistry I
CHEM 2425 Organic Chemistry II
MATH 2320 Differential Equations
MATH 2415 Calculus III
PHYS 2425 University Physics I
PHYS 2426 University Physics II

Computer Science Field of Study

Collin College's computer science courses will prepare you for a bachelor's degree program in computer science or computer software engineering. Learn the fundamentals of programming with specialization in C++ or Java and make the future your own.

There are two tracks offered in the Field of Study (C++ Track and Java Track). Both tracks cover the same fundamental theory and material but use different languages. A Field of Study is a set of courses that will transfer and apply to a corresponding bachelor’s - level degree at a Texas college or university. The Computer Science Field of Study curriculum is designed to apply to a bachelor’s degree in Computer Science. You should meet
with an academic advisor about transferring Core Curriculum and Fields of Study courses to a specific university or college.

**Computer Science Field of Study (FOS)**
A Field of Study is a set of courses that will transfer and apply to a corresponding bachelor’s - level degree at a Texas college or university. Both the Field of Study and the Core Curriculum courses are transferrable for full academic credit to any public college or university in Texas. Students who complete the Field of Study block of courses will earn a certificate in that Field of Study.

Did you know that you can also earn an AA or AS degree in addition to the Field of Study certificate? Contact an academic advisor today to learn more about how to develop an educational plan that is right for you.

Within the Computer Science FOS there are courses listed which will satisfy requirements for both the AS General Education Core and the FOS. There are two tracks offered in the FOS (C++ Track and Java Track). Both tracks cover the same fundamental theory and material but use different languages.

**Certificate – Computer Science Field of Study**
30 credit hours

**Required General Education Core Courses**
12 credit hours
MATH 2413 Calculus I
PHYS 2425 University Physics I
PHYS 2426 University Physics II

**Other Required Courses**
18 credit hours
COSC 1436 Programming Fundamentals I (C++)
COSC 2325 Computer Organization
MATH 2414 Calculus II

**Complete one of the following tracks:**

**C++ Track Content Courses**
COSC 1437 Programming Fundamentals II (C++)
COSC 2336 Programming Fundamentals III (C++)

**Java Track Content Courses**
COSC 1337 Programming Fundamentals II (Java)
COSC 2436 Programming Fundamentals III (Java)

An Associate of Science may also be earned with the Computer Science Field of Study. To earn the AS degree, in addition to the Field of Study Certificate, complete the remaining General Education Core requirements:

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

2. COSC 1436 and COSC 1337/1437 are preparatory and sequential in nature; however, not all courses are required for the Computer Science major at all universities but may apply to general degree requirements.
   a) COSC 1436 is not part of the Computer Science major requirements at The University of Texas at Austin, the University of Texas at Arlington, The University of Texas at Dallas, and Texas A&M University.
   b) COSC 1337 and COSC 1437 are not part of the Computer Science major requirements at The University of Texas at Austin. Preparatory courses such as COSC 1436 and COSC 1337/1437 will assist students who need additional background but do not apply toward the computer science major requirements.

3. COSC 2325/2425 is not part of the Computer Science major requirements at The University of Texas at Austin, Texas A&M University but may be applied to general degree requirements.

**Engineering Field of Study**
Build a foundation in the mathematics and sciences which are the basis of all engineering. Collin College’s engineering field of study (FOS) programs are great preparation for a bachelor of science program in several disciplines within the school of engineering at a college or university.

Collin College offers three engineering tracks: civil engineering, electrical engineering and mechanical engineering. While they share much of the foundational material, each discipline has its own specialty. Explore the disciplines below and determine which suits your goals best.

A Field of Study is a set of courses that will transfer and apply to a corresponding bachelor’s - level degree at a Texas college or university. Both the Field of Study and the Core Curriculum courses are transferrable for full academic credit to any public college or university in Texas. Students who complete the Field of Study block of courses will earn a certificate in that Field of Study.

Did you know that you can also earn an AA or AS degree in addition to the Field of Study certificate? Contact an academic advisor today to learn more about how to develop an educational plan that is right for you.

**Civil Engineering – Field of Study**

**Prerequisites**
7 Credit Hours
MATH 2412 Pre-Calculus Math (or equivalent /higher)
MATH 1314 College Algebra ( or equivalent/ higher)
Certificate – Civil Engineering Field of Study  
39 Credit Hours  

CHEM 1409 General Chemistry for Engineering Majors  
ENGR 1304 Engineering Graphics  
ENGR 2301 Engineering Mechanics I  
ENGR 2302 Engineering Mechanics II  
ENGR 2332 Mechanics of Materials  
MATH 2320 Differential Equations  
MATH 2413 Calculus I  
MATH 2414 Calculus II  
MATH 2415 Calculus III  
PHYS 2425 University Physics I  
PHYS 2426 University Physics II  

Electrical Engineering - Field of Study  
Prerequisites  
7 Credit Hours  

MATH 2412 Pre-Calculus Math  
(or equivalent/higher)  
MATH 1314 College Algebra  
(or equivalent/higher)  

Certificate – Electrical Engineering Field of Study  
31 Credit Hours  

COSC 1420 C Programming  
ENGR 2105 Electrical Circuits I Laboratory  
ENGR 2305 Electrical Circuits I  
MATH 2320 Differential Equations  
MATH 2413 Calculus I  
MATH 2414 Calculus II  
MATH 2415 Calculus III  
PHYS 2425 University Physics I  
PHYS 2426 University Physics II  

Mechanical Engineering – Field of Study  
Prerequisites  
10 Credit Hours  

MATH 2412 Pre-Calculus Math  
(or equivalent/higher)  
MATH 1314 College Algebra  
(or equivalent/higher)  
MATH 2320 Differential Equations  
prerequisite/concurrent  

Certificate – Mechanical Engineering Field of Study  
36 Credit Hours  

CHEM 1409 General Chemistry for Engineering Majors  
ENGR 2301 Engineering Mechanics I  
ENGR 2302 Engineering Mechanics II  
ENGR 2305 Electrical Circuits I  
ENGR 2332 Mechanics of Materials  
MATH 2413 Calculus I  
MATH 2414 Calculus II  
MATH 2415 Calculus III  
PHYS 2425 University Physics I  
PHYS 2426 University Physics II  

Environmental Science  
Department Website:  
http://www.collin.edu/department/environmental/  

Gain a greater understanding of the world and our natural environment with environmental science courses at Collin College. Environmental science is a multidisciplinary field concerned with the interaction of processes that shape the environment, understanding the potential causes of environmental problems and exploring possible solutions to them.  

Coursework in environmental science involves a number of disciplines, including the biological, chemical and physical sciences; occupational health and safety; engineering; economics; and law.  

To earn an associate degree, complete the 42 credit hour General Education Core, and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements. Check with your transfer institution before registering for general studies electives to make sure your courses will be degree applicable to your bachelor degree at the transfer institution.  

Recommended Electives  
ENVR 1401 Environmental Science I  
ENVR 1402 Environmental Science II  
BIOL 1406 Biology for Science Majors I  
BIOL 1407 Biology for Science Majors II  
BIOL 2406 Environmental Biology  
CHEM 1411 General Chemistry I  
GEOL 1403 Physical Geology  
GEOL 1445 Oceanography  
GEOL 1447 Introduction to Meteorology  
MATH 1342 Elementary Statistical Methods  
MATH 2413 Calculus I  
PHYS 1401 College Physics I  

Geology  
Department Website:  
http://www.collin.edu/geology  

Learn the about the physical processes that have shaped the earth over billions of years with coursework in geology. This coursework will provide you with a background for
careers in natural resources, meteorology, energy, engineering, geophysics, environmental studies and education.

More than that, an Associate of Science degree with coursework in geology can prepare you for a Bachelor of Science degree at a university.

To earn an associate degree, complete the 42 credit hour General Education Core, and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements. Check with your transfer institution before registering for general studies electives to make sure your courses will be degree applicable to your bachelor degree at the transfer institution.

**Recommended Electives**

- **GEOL 1305** Environmental Science – Natural Disasters
- **GEOL 1403** Physical Geology
- **GEOL 1404** Historical Geology
- **GEOL 1445** Oceanography
- **GEOL 1447** Introduction to Meteorology
- **GEOL 2389** Academic Co-op Geology
- **BIOL 2406** Environmental Biology
- **CHEM 1411** General Chemistry I
- **CHEM 1412** General Chemistry II
- **ENGL 2311** Technical and Business Writing
- **ENVR 1401** Environmental Science I
- **MATH 1342** Elementary Statistical Methods
- **PHYS 2413** Calculus I
- **PHYS 2414** Calculus II
- **PHYS 2425** University Physics I
- **PHYS 2426** University Physics II
- **KINE 1142** Varsity Conditioning I
- **KINE 1144** Varsity Sports I
- **KINE 1304** Personal/Community Health
- **KINE 1306** First Aid
- **KINE 1338** Concepts of Physical Fitness
- **KINE 2142** Varsity Conditioning II
- **KINE 2144** Varsity Sports II
- **KINE 2156** Taping and Bandaging
- **KINE 2356** Care and Prevention of Athletic Injuries

**Exercise Science**

In these courses, you will gain a greater understanding of the scientific principles needed to optimize sports performance and to improve the functionality and quality of human life.

**Recommended Electives**

- **KINE 1301** Foundations of Kinesiology
- **KINE 1304** Personal/Community Health
- **KINE 1306** First Aid
- **KINE 1336** Introduction to Sports Management
- **KINE 1338** Concepts of Physical Fitness

**Sports Management**

“Sports Management” refers to the business and operations side of the sports industry. In college athletics or professional sports organizations, for example, sports management professionals may be found performing a wide variety of tasks, including marketing, advertising, ticket sales, ordering and maintaining equipment and supplies, public relations, team travel coordination and ensuring compliance with league rules.

**Recommended Electives**

- **KINE 1301** Foundations of Kinesiology
- **KINE 1336** Introduction to Sports Management
- **ACCT 2301** Principles of Financial Accounting
- **ECON 2301** Principles of Macroeconomics
- **ECON 2302** Principles of Microeconomics

**Mathematics**

Department Website: [http://www.collin.edu/math](http://www.collin.edu/math)

Collin College’s mathematics department offers the courses you need to prepare for an associate degree or for advanced math, science or engineering studies at a four-year college or university. From basic college algebra to advanced calculus, the Math Department provides the guidance you need, no matter your skill level.

Most courses include graphing calculator or computer use and lab components that emphasize applications of mathematical concepts. Collin features a mathematics laboratory providing personal, computer and audio-visual tutorial assistance.
To earn an associate degree, complete the 42 credit hour General Education Core, and 18 credit hours of general studies electives and the Associate of Arts (AA) or Associate of Science (AS) degree requirements. Check with your transfer institution before registering for general studies electives to make sure your courses will be degree applicable to your bachelor degree at the transfer institution.

**Recommended Electives**

MATH 1314¹ College Algebra
MATH 1316 Plane Trigonometry
MATH 1342 Elementary Statistical Methods
MATH 1414¹ College Algebra
MATH 2305 Discrete Mathematics
MATH 2318 Linear Algebra
MATH 2320 Differential Equations
MATH 2412 Pre-Calculus Math
MATH 2413 Calculus I
MATH 2414 Calculus II
MATH 2415 Calculus III
ENGL 2311 Technical and Business Writing
ENGL 23XX Any Literature course
PHIL 2303 Introduction to Formal Logic

¹Students may take either MATH 1314 or MATH 1414, but not both.

**Physics**

Department Website: [http://faculty.collin.edu/mbrooks/physics/](http://faculty.collin.edu/mbrooks/physics/)

The science of physics seeks to understand the physical universe and deals with the behavior of matter and energy at their most fundamental levels. By observation, physicists search for the basic principles that explain natural phenomena.

Expand your understanding of physics with courses at Collin College. Knowledge of physics provides a strong background for careers in science, engineering, computer technology or education, and the concepts of physics overlap many disciplines.

**Recommended Electives**

PHYS 1403 Stars and Galaxies
CHEM 1411 General Chemistry I
CHEM 1412 General Chemistry II
ENGL 2311 Technical and Business Writing
MATH 2318 Linear Algebra
MATH 2320 Differential Equations
MATH 2412 Pre-Calculus Math
MATH 2415 Calculus III

**General Physics Level**

Students seeking baccalaureate degrees in biology or pre-medicine should select general physics courses.

**University Physics Level**

Students seeking advanced degrees in science and engineering fields should select advanced levels of physics and mathematics courses (such as the courses listed below) for the AS degree.

PHYS 2425 University Physics I
PHYS 2426 University Physics II
MATH 2413 Calculus I
MATH 2414 Calculus II
WORKFORCE EDUCATION PROGRAMS

Associate of Applied Science Degree (AAS)
The Associate of Applied Science degree (AAS) is awarded upon completion of a prescribed program of study designed to prepare students to enter and compete in the job market. Eighteen credit hours must be earned in residency at Collin College. AAS curricula enable the graduate to enter an occupation with marketable skills, an acceptable level of technical competency, and the ability to communicate effectively. In addition, an AAS degree helps prepare students for life-long learning.

AAS Degree Plan Requirements
AAS degrees require 60–68 credit hours with at least half of the coursework in a technical specialty area of the degree. All AAS degrees require a minimum of 15 credit hours of general education.

General Education Component
The 15 credit hours of general education coursework must be distributed as follows:

- At least three semester credit hours from humanities/fine arts;
- At least three semester credit hours from social/behavioral sciences; and,
- At least three semester credit hours from natural sciences/mathematics.

Faculty select the general education courses in each workforce degree to complement the technical courses in the area of study. Some AAS degree plans allow students to choose from a selection of specified courses to meet their general education requirements.

See the specific degree plan for general education requirements. If options are listed in the degree plan, refer to the table of AAS General Education Courses to view the available course choices.

(See the table of AAS General Education Courses on the left.)

AAS GENERAL EDUCATION COURSES
See specific degree plan for required courses or any options. Refer to this table only if the degree plan indicates options are available or that students may select an alternative to the course listed.

<table>
<thead>
<tr>
<th>Natural Sciences/Mathematics Area</th>
<th>Mathematics</th>
<th>Biology</th>
<th>Chemistry</th>
<th>Environmental Science</th>
<th>Geology</th>
<th>Physics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MATH 1314 or 1414, 1316, 1324, 1325, 1332*, 1342, 1350, 1351, 2305, 2318, 2320, 2412, 2413, 2414, 2415</td>
<td>BIOL 1406, 1407, 1408, 1409, 1414, 1415, 2401, 2402, 2404, 2406, 2416, 2420, 2421</td>
<td>CHEM 1405, 1411, 1412, 2423, 2425</td>
<td>ENVR 1401, 1402</td>
<td>GEOL 1401, 1402, 1403, 1404, 1445, 1447</td>
<td>PHYS 1401, 1402, 1403, 1404, 1405, 1410, 1415, 1417, 2425, 2426</td>
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<table>
<thead>
<tr>
<th>Humanities/Fine Arts Area</th>
<th>Dance</th>
<th>English</th>
<th>History</th>
<th>Humanities</th>
<th>Music</th>
<th>Philosophy</th>
<th>Theatre</th>
<th>Visual Arts</th>
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<tr>
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<td>DANC 2303</td>
<td>ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343</td>
<td>HIST 2311, 2312, 2321, 2322</td>
<td>HUMA 1301</td>
<td>MUSI 1306, 1307, 1310</td>
<td>PHIL 1301, 1304, 2303, 2306, 2307, 2321</td>
<td>DRAM 1310, 2361, 2362, 2366</td>
<td>ARTS 1301, 1303, 1304, 1313</td>
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<tr>
<th>Social/Behavioral Sciences Area</th>
<th>Anthropology</th>
<th>Economics</th>
<th>Government</th>
<th>History</th>
<th>Psychology</th>
<th>Sociology</th>
<th>Speech</th>
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<td>ANTH 2302, 2346, 2351</td>
<td>ECON 1301, 2301, 2302</td>
<td>GOVT 2305, 2306</td>
<td>HIST 1301, 2302</td>
<td>PSYC 2301</td>
<td>SOCI 1301, 1306</td>
<td>SPCH 1311, 1315, 1321</td>
</tr>
</tbody>
</table>

* Check with academic advising regarding transferability. Some majors or institutions may require a higher level mathematics course.
**Workforce Certificate Programs**

In addition to the Associate of Applied Science workforce degrees, Collin College offers a variety of certificates in applied science fields.

Collin offers certificate programs designed to meet specific employment needs of the community. Students who enroll in certificate programs are generally interested in re-entering the job market after an absence, changing careers, or upgrading job-related skills in order to enhance employment specialization. Although certificates are normally one year in length, the specific number of credit hours varies by program area.

A Level One Certificate consists of 15-42 credit hours. Students in Level One Certificates are not required to meet the Texas Success Initiative (TSI) requirements. Level One Certificates do not have a general education requirement.

Level Two Certificate programs consist of 30-51 credit hours. Students in all Level Two Certificates must meet the requirements of the Texas Success Initiative (TSI). An Occupational Skills Award (OSA) is a sequence of credit courses totaling 9-14 credit hours. An Enhanced Skills Certificate (ESC) requires the completion of an AAS or higher degree prior to completing 6-12 additional credit hours in a specific program area.
WORKFORCE DEGREE PLANS BY PROGRAM

Animation & Game Art

Program Options:
AAS – Animation & Game Art
Certificate Level 1 – Animation & Game Art
Certificate Level 3 – ESC – Advanced Animation & Game Art Production

Design a career that you will love as a 3-D animator or game artist.

Collin College’s 3-D Animation track provides you with the tools and training you need to take a project from concept to reality, while encouraging your creativity. Learn how to execute 3-D animation and still imagery for advertising, industrial visualization, entertainment and corporate communication in an environment designed to emphasize creative concepts.

The college’s Game Art track focuses on 2-D and 3-D art and animation skills for gaming. Learn level design and high-end 3-D graphics integration in a group project environment.

Learn from professors who know the industry firsthand. Collin’s Communication Design Department is staffed by full-time faculty with up-to-date industry experience and associate professors who still work in their field.

AAS – Animation & Game Art
60 credit hours

FIRST YEAR
First Semester
ARTC 1305 Basic Graphic Design
ARTC 1325 Introduction to Computer Graphics
ARTV 1345 3-D Modeling and Rendering I
ARTV 1371 Storyboard and Concept Development
ENGL 1301 Composition I
FLMC 1301 History of Animation Techniques

Second Semester
ARTC 1302 Digital Imaging I
ARTV 1303 Basic Animation
ARTV 1341 3-D Animation I
FLMC 1331 Video Graphics and Visual Effects I
GAME 1303 Introduction to Game Design and Development

SECOND YEAR
First Semester
ARTV 1303 Basic Animation
ARTV 2345 3-D Modeling and Rendering II
GAME 2325 3-D Animation II – Character Set-Up
GEN ED Humanities/Fine Arts course
ARTV 1351 Digital Video
or
GAME 2359 Game and Simulation Group Project

Second Semester
ARTV 2335 Portfolio Development for Animation (Capstone)
ARTV 2351 3-D Animation II
GEN ED Social/Behavioral Sciences course
SPCH 1311 Introduction to Speech Communication
(See Speech Options)

Certificate Level 1 – Animation & Game Art
42 credit hours

FIRST YEAR
First Semester
ARTC 1325 Introduction to Computer Graphics
ARTV 1345 3-D Modeling and Rendering I
ARTV 1371 Storyboard and Concept Development
FLMC 1301 History of Animation Techniques

Second Semester
ARTV 2345 3-D Modeling and Rendering II
GAME 2325 3-D Animation II – Character Set-Up
ARTV 1351 Digital Video
or
GAME 2359 Game and Simulation Group Project

SECOND YEAR
First Semester
ARTV 2335 Portfolio Development for Animation (Capstone)
ARTV 2351 3-D Animation II

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Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
Certificate Level 3: ESC – Advanced Animation & Game Art Production

12 credit hours

ARTV 2371 Advanced Skill Development for Animation and Games
FLMC 2331 Video Graphics and Visual Effects II
ELECTIVE *
ELECTIVE *

1. Prior to being admitted into this award, the student must have earned an AAS in Animation & Game Art, Graphic Design, or Video Production. Please contact the Associate Dean for additional information.

* Elective (6 credit hours): ARTC 2305, GAME 2309, GAME 2336, GAME 2341, MUSC 1327

Biotechnology

Program Option:
Certificate Level 2 – Biotechnology

Learn how to apply the biological sciences toward a career in biological or industrial research with the Biotechnology program at Collin College. Biotechnologists improve crops, help create life-saving medical procedures and search for alternative fuels in addition to hundreds of other scientific endeavors.

If you want to learn how to improve others’ lives through biotechnology, Collin College’s program is a great way to start. Study biology, biotechnology and genetics en route to a certificate preparing you for a career in biological research or industrial laboratory work.

Are you a returning student? You can also benefit from the new methods and technologies related to agriculture, medicine, pharmaceuticals and other applications.

Planning to transfer to a college or university? Be sure to consult an advisor about which biotechnology coursework is applicable to your intended college path before beginning the program.

Certificate Level 1 – Biotechnology

15 credit hours

BIOL 1414 and BIOL 1415 will transfer to a specific 2+2 baccalaureate program. Please check with your advisor to learn whether these courses will apply to the four-year program of your choice.

First Semester
BIOL 1414 Introduction to Biotechnology I
BIOL 1415 Introduction to Biotechnology II
BITC 1340 Quality Assurance for the Biosciences
BITC 2486 Internship – Biology Technician/Biotechnology Laboratory Technician (Capstone) 1

1 May substitute BIOL 2389 or BITC 2441

Certificate Level 2 – Advanced Biotechnology

34 credit hours

Students must be TSI complete.

BIOL 1414 and BIOL 1415 will transfer to a specific 2+2 baccalaureate program. Please check with your advisor to learn whether these courses will apply to the four-year program of your choice.

First Semester
BIOL 1406 Biology for Science Majors I
BIOL 1414 Introduction to Biotechnology I
BIOL 1415 Introduction to Biotechnology II
MATH 1314 College Algebra

Summer Semester
BITC 1340 Quality Assurance for the Biosciences

Second Semester
BIOL 2416 Genetics
BITC 2486 Internship – Biology Technician/Biotechnology Laboratory Technician (Capstone) 1
BITC 2431 Cell Culture Techniques
CHEM 1411 General Chemistry I (moved from 1st semester)

1 May substitute BIOL 2389 or BITC 2441

Business Management

Department Website:
http://www.collin.edu/department/business/

Program Options:
AAS – Business Management
  Business Management Track
  Human Resources Management Track
Certificate Level 1 – Business Management
Certificate Level 1 – Human Resources Management
Make the most out of a career in business with a business management certificate or degree from Collin College. Learn how to work in teams, solve problems, initiate change and relate to your coworkers.

In our Business Management program, you will study basic management philosophies and theories, organizational psychology, as well as business strategy development, implementation and evaluation skills. This degree is also excellent for people who wish to major in another field but need business and management skills. The program also offers a Human Resources concentration and certificate which is built on the Society of Human Resources Management (SHRM) learning outcomes. A certificate or degree in business management will put you in a great position to climb the corporate ladder, no matter the organization.

Plan to transfer to a bachelor’s degree program? Transfer agreements allow you to earn an Associate of Applied Science (AAS) degree in Business Management from Collin and transfer to numerous universities in Texas where Collin courses may be applied toward Bachelor of Applied Arts and Sciences (BAAS) and Bachelor of Applied Technology (BAT) degrees.

**AAS – Business Management**

**Business Management Track**

60 credit hours

**FIRST YEAR**

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>BMGT 1307</td>
<td>Team Building</td>
</tr>
<tr>
<td>BMGT 1327</td>
<td>Principles of Management</td>
</tr>
<tr>
<td>BMGT 1341</td>
<td>Business Ethics</td>
</tr>
<tr>
<td>BMGT 2303</td>
<td>Problem Solving and Decision Making</td>
</tr>
<tr>
<td>MATH 1342</td>
<td>Elementary Statistical Methods</td>
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</table>

(See Mathematics options)

**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>BMGT 1305</td>
<td>Communications in Management</td>
</tr>
<tr>
<td>BMGT 1344</td>
<td>Negotiations and Conflict Management</td>
</tr>
<tr>
<td>BMGT 2309</td>
<td>Leadership</td>
</tr>
<tr>
<td>HRPO 2307</td>
<td>Organizational Behavior</td>
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<tr>
<td>MRKG 1311</td>
<td>Principles of Marketing</td>
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</table>

**SECOND YEAR**

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BUSG 2309</td>
<td>Small Business Management/Entrepreneurship</td>
</tr>
<tr>
<td>ENGL 1301</td>
<td>Composition I</td>
</tr>
<tr>
<td>HRPO 2301</td>
<td>Human Resources Management</td>
</tr>
<tr>
<td>IBUS 2341</td>
<td>Intercultural Management</td>
</tr>
<tr>
<td>SPCH 1321</td>
<td>Business and Professional Communication</td>
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(See Speech options)

**Second Semester**

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<tr>
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<tbody>
<tr>
<td>ACNT 1303</td>
<td>Introduction to Accounting I</td>
</tr>
<tr>
<td>BMGT 2311</td>
<td>Change Management</td>
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<tr>
<td>BMGT 2341</td>
<td>Strategic Management (Capstone)</td>
</tr>
<tr>
<td>ECON 1301</td>
<td>Introduction to Economics</td>
</tr>
<tr>
<td>GEN ED</td>
<td>Humanities/Fine Arts course</td>
</tr>
</tbody>
</table>

1. May substitute ACCT 2301
2. May substitute BMGT 2382 with written approval of the Associate Dean
3. May substitute ECON 2301, ECON 2302 or PSYC 2301

**AAS – Business Management**

**Human Resources Management Track**

60 credit hours

**FIRST YEAR**

**First Semester**

<table>
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<tbody>
<tr>
<td>BMGT 1341</td>
<td>Business Ethics</td>
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<tr>
<td>BMGT 2303</td>
<td>Problem Solving and Decision Making</td>
</tr>
<tr>
<td>HRPO 2303</td>
<td>Employment Practices</td>
</tr>
<tr>
<td>HRPO 2304</td>
<td>Employee Relations</td>
</tr>
<tr>
<td>MATH 1342</td>
<td>Elementary Statistical Methods</td>
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**Second Semester**

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</tr>
<tr>
<td>BMGT 1344</td>
<td>Negotiations and Conflict Management</td>
</tr>
<tr>
<td>HRPO 2306</td>
<td>Benefits and Compensation</td>
</tr>
<tr>
<td>HRPO 2307</td>
<td>Organizational Behavior</td>
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**SECOND YEAR**

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</table>

(See Speech options)

**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACNT 1303</td>
<td>Introduction to Accounting I</td>
</tr>
<tr>
<td>BMGT 2311</td>
<td>Change Management</td>
</tr>
<tr>
<td>BMGT 2341</td>
<td>Strategic Management (Capstone)</td>
</tr>
<tr>
<td>ECON 1301</td>
<td>Introduction to Economics</td>
</tr>
<tr>
<td>GEN ED</td>
<td>Humanities/Fine Arts course</td>
</tr>
</tbody>
</table>

1. May substitute ACCT 2301
2. May substitute BMGT 2382 with written approval of the Associate Dean
3. May substitute ECON 2301, ECON 2302 or PSYC 2301
Certificate Level 1 – Business Management
18 credit hours

First Semester
BMGT 1307 Team Building
BMGT 1327 Principles of Management
BMGT 1341 Business Ethics

Second Semester
BMGT 2303 Problem Solving and Decision Making
BMGT 2309 Leadership
HRPO 2307 Organizational Behavior (Capstone)

Certificate Level 1 – Human Resources Management
18 credit hours

FIRST YEAR
First Semester
BMGT 1344 Negotiation and Conflict Management
HRPO 2301 Human Resources Management
HRPO 2304 Employee Relations

Second Semester
HRPO 2303 Employment Practices
HRPO 2306 Benefits and Compensation
HRPO 2307 Organizational Behavior (Capstone)

Business Office Support Systems

Department Website:
www.collin.edu/department/boss

Program Options:
AAS – Business Office Support Systems
OSA – Accounting Support
OSA – Business Office Support Systems
Certificate Level 1 – Business Office Support Systems
Certificate Level 1 – Medical Office Support

Learn the skills you need to thrive in an office environment with Collin College’s Business Office Support Systems (BOSS) program. BOSS students learn skills like: keyboarding by touch and improved speed and accuracy; workplace document formatting; word processing with Word; desktop publishing; proofreading and editing; records and information management; business correspondence and communications; database management using Access; presentation and spreadsheet software using PowerPoint and Excel; office management; and manual and computerized office accounting.

You can apply those skills to careers like receptionist, bookkeeper, office manager, data entry clerk, administrative assistant, medical office assistant and more. Some of the courses required for this Associate of Applied Science (AAS) degree are also excellent preparation for the experienced secretary who plans to take the Certified Professional Secretary exam. The secretary who has already passed the CPS exam may apply for academic credit from Collin to be applied toward the AAS degree in Business Office Support Systems.

AAS – Business Office Support Systems
60 credit hours

FIRST YEAR
First Semester
ACNT 1303 Introduction to Accounting I
POFT 1307 Proofreading and Editing
POFT 1319 Records and Information Management I
POFT 1329 Beginning Keyboarding

Second Semester
COSC 1301 Introduction to Computing 1
ENGL 1301 Composition I
POFI 2301 Word Processing – MS Word
POFT 2301 Intermediate Keyboarding

Summer Semester
HUMA 1301 Introduction to Humanities I
(See Humanities/Fine Arts options)
SPCH 1311 Introduction to Speech Communication
(See Speech options)

SECOND YEAR
First Semester
ACNT 1311 Introduction to Computerized Accounting
ITSC 1309 Integrated Software Applications I – MS Office
POFI 2331 Desktop Publishing for the Office – MS Office
POFT 2303 Speed and Accuracy Building

Second Semester
ECON 1301 Introduction to Economics
(See Social/Behavioral Sciences options)
ITSC 1304 Introduction to Spreadsheets – Excel
ITSC 1310 Introduction to Presentation Graphics Software 2
MATH 1332 Contemporary Mathematics
(Quantitative Reasoning) 3

Summer Semester
POFT 1349 Administrative Office Procedures II
(Capstone)
POFT 2312 Business Correspondence and Communication

1. May substitute BCIS 1305
2. May substitute HITT 1305 or HITT 1353
3. May substitute MATH 1324 or MATH 1314

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Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
OSA – Accounting Support
12 credit hours

First Semester
ACNT 1303 Introduction to Accounting I
ACNT 1311 Introduction to Computerized Accounting
ITSC 1309 Integrated Software Applications I – MS Office
POFT 1329 Beginning Keyboarding

OSA – Business Office Support Systems
12 credit hours

ITSC 1309 Integrated Software Applications MS Office
POFI 2301 Word Processing
POFT 1319 Records and Information Management I
POFT 1329 Beginning Keyboarding

Certificate Level 1 – Business Office Support Systems
30 credit hours

First Semester
ACNT 1303 Introduction to Accounting I
POFT 1307 Proofreading and Editing
POFT 1319 Records and Information Management I
POFT 1329 Beginning Keyboarding

Second Semester
ITSC 1309 Integrated Software Applications I – MS Office
POFI 2301 Word Processing – MS Word
POFT 2301 Intermediate Keyboarding
POFT 2303 Speed and Accuracy Building

Summer Semester
POFT 1349 Administrative Office Procedures II (Capstone)

Certificate Level 1 – Medical Office Support
30 credit hours

First Semester
HITT 1305 Medical Terminology I
POFT 1307 Proofreading and Editing
POFT 1319 Records and Information Management I
POFT 1329 Beginning Keyboarding

Second Semester
HITT 1353 Legal and Ethical Aspects of Health Information
ITSC 1309 Integrated Software Applications I – MS Office
POFI 2301 Word Processing – MS Word
POFT 2301 Intermediate Keyboarding

Summer Semester
POFT 1349 Administrative Office Procedures II (Capstone)
POFT 2312 Business Correspondence and Communication

Computer Networking

Program Options:
AAS – Computer Networking
• Integrated Networking Technologies Track
• Infrastructure Track
• Systems Track
• Wireless Track

Occupational Skills Award (OSA) – Entry-Level Network Support (Shared by all tracks)

Integrated Networking Technologies Track
Certificate Level 1 – Integrated Networking Cloud Technician
Certificate Level 1 – Integrated Networking Virtualization and Storage Technician
Certificate Level 2 – Integrated Networking Administrator
Certificate Level 3 – Networking Systems Professional (CCNP)
(Shared by Integrated Networking Technologies and Systems Tracks)

Infrastructure Track (Cisco focus)
Certificate Level 1 – Infrastructure Technician (CCNA)
Certificate Level 1 – Wireless Infrastructure Technician
Certificate Level 2 – Infrastructure Administrator

Systems Track (Microsoft focus)
Certificate Level 1 – Systems Software Technician (MCSA)
Certificate Level 1 – Systems Technician
Certificate Level 2 – Systems Administrator
Certificate Level 3 – Networking Systems Professional (CCNP)
(Shared by Integrated Networking Technologies and Systems Tracks)

Wireless Track
Certificate Level 1 – Wireless Designer

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Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
Digital communication is one of the backbones of modern society. You can be one of the professionals who makes sure information is accessible and secure with a degree or certificate in computer networking from Collin College.

Collin’s computer networking program prepares graduates to design and install secure network systems based on customer requirements, monitor and maintain network traffic and security, and maintain network hardware and software. Courses and hands-on labs will prepare you for a variety of Cisco, Microsoft and CompTIA certification examinations.

The computer networking program offers three study tracks: infrastructure, systems and integrated networking technologies. The infrastructure track will prepare you to design and install secure network systems with a focus on managing network devices. The systems track shifts the focus to managing servers. The integrated network technologies track focuses on networking in cloud, storage and virtualization networking technologies.

The Computer Networking – Infrastructure track prepares graduates to design and install secure network systems with a focus on managing network devices. Courses and hands-on labs in this track specifically prepare students for the Cisco Certified Network Associate (CCNA) the Cisco Certified Network Professional (CCNP) professional certification exams.

The Computer Networking – Systems track prepares graduates to design and secure network systems with a focus on managing servers. Courses and hands-on labs in this track prepare students for the Microsoft Certified Solutions Associate – Server 2016, and the Cisco Certified Entry-level Technician (CCENT).

The Computer Networking – Integrated Networking Technologies track prepares graduates to design and secure network systems with a focus on cloud computing, storage and virtualization networking technologies. Courses and hands-on labs in this track prepare students for the broad spectrum of networking technologies and help ready them for the Cisco Certified Entry-level Technician (CCENT), as well as Information Storage Management (EMC), and VmWare vSphere certification among others.

Students planning to transfer to a college or university should check with a Collin academic advisor prior to beginning the program.

### AAS – Computer Networking

**Integrated Networking Technologies Track**
60 Credit Hours

*Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.*

**FIRST YEAR**

**First Semester**
- ITNW 1358 Network+
- ITCC 1314 CCNA 1: Introduction to Networks
- ITCC 1340 CCNA 2: Routing and Switching Essentials
- ITNW 1370 Cloud+ Computing Essentials
- GEN ED Mathematics course

**Second Semester**
- ITNW 1351 Fundamentals of Wireless LANS
- ITCC* 2312 CCNA 3: Scaling Networks
  - Preferred elective; see other options*
- ITSC 1316 Linux Installation and Configuration
- ITCC* 2313 CCNA 4: Connecting Networks
  - Preferred elective; see other options*
- ITCC 2341 CCNA Security
- Or
- ITSY 1300 Fundamentals of Information Security (Security+)

**SECOND YEAR**

**First Semester**
- ITSY 2300 Operating System Security
- ENGL 1301 Composition I
- ITMT 1372 Installation, Storage and Computing with Windows Server 2016
- SPCH 1321 Business and Professional Communication
  - (See Speech Options)
- ITMT 1373 Networking with Windows Server 2016

**Second Semester**
- ITNW 2373 Information Storage Management (EMC)
- ITNW 2375 VmWare vSphere: Installation, Configuration and Management
- ITNW 2376 Advanced Topics in Computer Systems Networking and Collaborative Technologies (Capstone)
- GEN ED Humanities/Fine Arts Course
- GEN ED Social/Behavioral Sciences Course

* Electives (6 credit hours)
- CPMT 1305 IT Essentials I: PC Hardware and Software Recommended for students with limited IT
- ITCC 2312 CCNA 3: Scaling Networks Recommended with ITCC 2313
ITCC 2313 CCNA 4: Connecting Networks
Recommended with ITCC 2312
ITSC 1342 Shell Programming – Scripting
New option to meet industry demand

Any ITCC, ITMT, ITNW, or ITSY course not listed above.

Note: ITCC 2312 (CCNA 3) and ITCC 2313 (CCNA 4) – or the CCNA professional certification – are prerequisites for the CCNP courses in the concurrent or postgraduate Enhanced Skills Certificate, but are not part of the Integrated Technologies degree track unless they are selected as electives.

AAS – Computer Networking
Infrastructure Track (Cisco focus)
60 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (expect ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

FIRST YEAR
First Semester
ITNW 1358 Network+
ITCC 1314 CCNA 1: Introduction to Networks
ITCC 1340 CCNA 2: Routing and Switching Essentials
ITNW 1351 Fundamentals of Wireless LANS
GEN ED Mathematics course

Second Semester
ENGL 1301 Composition I
ITCC 2341 CCNA Security
ITCC 2312 CCNA 3: Scaling Networks
ITCC 2313 CCNA 4: Connecting Networks
ELECTIVE *

Summer Semester
GEN ED Social/Behavioral Sciences Course
GEN ED Humanities/Fine Arts Course

SECOND YEAR
First Semester
ITCC 2354 CCNP R&S ROUTE
ITCC 2355 CCNP R&S SWITCH
ITMT 1372 Installation, Storage and Computing with Windows Server 2016
ITSY 2300 Operating System Security

Second Semester
ITCC 2356 CCNP R&S TSHOOT
(Capstone)
SPCH 1321 Business and Professional Communication (See Speech Options)
ITMT 1373 Networking with Windows Server 2016
ELECTIVE *

* Electives (6 credit hours)

CPMT 1305 IT Essentials I: PC Hardware and Software
Recommended for students with limited IT

ITCC 2312 CCNA 3: Scaling Networks
Recommended with ITCC 2313
ITCC 2313 CCNA 4: Connecting Networks
Recommended with ITCC 2312
ITSC 1342 Shell Programming – Scripting
New option to meet industry demand

Any ITCC, ITMT, ITNW, or ITSY course not listed above.

Note: ITCC 2312 (CCNA 3) and ITCC 2313 (CCNA 4) – or the CCNA or any ITCC, ITMT, ITNW, or ITSY courses not listed in the degree plan.

AAS – Computer Networking
Systems Track (Microsoft focus)
60 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (expect ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

FIRST YEAR
First Semester
ITNW 1358 Network+
ITMT 1371 Configuring and Supporting Microsoft Windows 10 (70-698)
ITMT 1372 Installation, Storage and Computing with Windows Server 2016
ITCC 2312 CCNA 3: Scaling Networks
Preferred elective; see other options*
ITSY 1300 Fundamentals of Information Security (Security +)
ITCC 2313 CCNA 4: Connecting Networks
Preferred elective; see other options*

Second Semester
GEN ED Social/Behavioral Sciences course
ENGL 1301 Composition I

SECOND YEAR
First Semester
GEN ED Mathematics course
ITSC 1316 Linux Installation and Configuration
ITSY 2300 Operating System Security
SPCH 1321 Business and Professional Communication (See Speech Options)

Second Semester
ITMT 2305 Designing and Implementing a Server Infrastructure
ITMT 2304 Implementing and Advanced Server Infrastructure (Capstone)
### GEN ED - Humanities/Fine Arts Course

**ELECTIVE** *

* **Electives** (9 credit hours)
  - **CPMT** 1305 IT Essentials I: PC Hardware and Software Recommended for students with limited IT
  - **ITCC** 2312 CCNA 3: Scaling Networks Recommended with ITCC 2313
  - **ITCC** 2313 CCNA 4: Connecting Networks Recommended with ITCC 2312
  - **ITSC** 1342 Shell Programming – Scripting New course to meet industry demand
  - **ITNW** 1351 Fundamentals of Wireless LANS Highly Recommended
  - **ITCC** 2341 CCNA Security Highly Recommended

Any ITCC, ITMT, ITNW, or ITSY course not listed above.

**Note:** ITCC 2312 (CCNA 3) and ITCC 2313 (CCNA 4) -- or the CCNA professional certification -- are prerequisites for the CCNP.

### AAS – Computer Networking

#### Wireless Track

60 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

**FIRST YEAR**

**First Semester**
- **ITNW** 1358 Network+
- **ITCC** 1314 CCNA 1: Introduction to Networks
- **ITCC** 1340 CCNA 2: Routing and Switching Essentials
- **ITNW** 1351 Fundamentals of Wireless LANs
- **ITNW** 1358 Network+
- **GEN ED** Mathematics course

**Second Semester**
- **ENGL** 1301 Composition I
- **ITCC** 2312 CCNA 3:Scaling Networks
- **ITCC** 2313 CCNA 4: Connecting Networks
- **ITCC** 2341 CCNA Security
- **ITNW** 1378 Wireless Network Administration

**SECOND YEAR**

**First Semester**
- **ENGL** 2311 Technical and Business Writing
- **ITNW** 1370 Cloud+ Computing Essentials
- **ITNW** 2371 Wireless Network Security
- **ITSC** 1342 Shell Programming - Scripting
- **SPCH** 1321 Business and Professional Communication

**Second Semester**
- **ITNW** 2372 Wireless Network Design
- **ITNW** 2374 Emerging Wireless Technology (Capstone)
- **ITNW** 2378 Fundamentals of IoT

### OSA – Shared by all tracks - Entry-Level Network Support

9 credit hours

Many CPMT, ITCC, ITMT, ITNW (expect ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

**FIRST YEAR**

**First Semester**
- **ITNW** 1358 Network+
- **ITCC** 1314 CCNA 1: Introduction to Networks
- **ITCC** 1340 CCNA 2: Routing and Switching Essentials
- **ITNW** 1351 Fundamentals of Wireless LANS (Capstone)
- **ITNW** 1370 Cloud+ Computing Essentials

**Certificate Level 1 – Integrated NetworkingTechnologies Track Integrated Networking Virtualization and Storage Technician**

18 Credit Hours

**FIRST YEAR**

**First Semester**
- **ITNW** 1358 Network+
- **ITCC** 1314 CCNA 1: Introduction to Networks
- **ITCC** 1340 CCNA 2: Routing and Switching Essentials
- **ITNW** 1351 Fundamentals of Wireless LANS (Capstone)
- **ITNW** 1370 Cloud+ Computing Essentials

**Certificate Level 1 – Integrated NetworkingTechnologies Track Integrated Networking Virtualization and Storage Technician**

18 Credit Hours

**FIRST YEAR**

**First Semester**
- **ITNW** 1358 Network+
- **ITNW** 1370 Cloud+ Computing Essentials
- **ITMT** 1372 Installation, Storage and Computing with Windows Server 2016

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Please refer to [http://www.collin.edu/academics/programs/index.html](http://www.collin.edu/academics/programs/index.html) for the most current information.
### Certificate Level 2 – Integrated Networking

* Technologies Track – Integrated Networking Administrator

45 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (expect ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

**FIRST YEAR**

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITNW 1358</td>
<td>Network+</td>
</tr>
<tr>
<td>ITCC 1314</td>
<td>CCNA 1: Introduction to Networks</td>
</tr>
<tr>
<td>ITCC 1340</td>
<td>CCNA 2: Routing and Switching Essentials</td>
</tr>
<tr>
<td>ITNW 1370</td>
<td>Cloud+ Computing Essentials</td>
</tr>
</tbody>
</table>

Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>ITSY 2500</td>
<td>Operating System Security</td>
</tr>
<tr>
<td>ITMT 1372</td>
<td>Installation, Storage and Computing with Windows Server 2016</td>
</tr>
<tr>
<td>ITCC* 2312</td>
<td>CCNA 3: Scaling Networks Preferred elective; see other options*</td>
</tr>
<tr>
<td>ITCC* 2313</td>
<td>CCNA 4: Connecting Networks Preferred elective; see other options*</td>
</tr>
</tbody>
</table>

### SECOND YEAR

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>ITNW 1351</td>
<td>Fundamentals of Wireless LANS</td>
</tr>
<tr>
<td>ITSC 1316</td>
<td>Linux Installation and Configuration</td>
</tr>
<tr>
<td>ITMT 1373</td>
<td>Networking with Windows Server 2016</td>
</tr>
<tr>
<td>ITCC 2341</td>
<td>CCNA Security</td>
</tr>
<tr>
<td>or ITSY 1300</td>
<td>Fundamentals of Information Security (Security +)</td>
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</table>

Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITNW 2373</td>
<td>Information Storage Management (EMC)</td>
</tr>
<tr>
<td>ITNW 2375</td>
<td>VmWare vSphere: Installation, Configuration and Management (Capstone)</td>
</tr>
<tr>
<td>ITNW 2376</td>
<td>Advanced Topics in Computer Systems Networking and Collaborative Technologies (Capstone)</td>
</tr>
</tbody>
</table>

* Electives (6 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPMT 1305</td>
<td>IT Essentials I: PC Hardware and Software Recommended for students with limited IT</td>
</tr>
<tr>
<td>ITCC 2312</td>
<td>CCNA 3: Scaling Networks Recommended with ITCC 2313</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITCC 2313</td>
<td>CCNA 4: Connecting Networks Recommended with ITCC 2313</td>
</tr>
</tbody>
</table>

### Certificate Level 3 – Shared by Integrated Technologies Track and Systems Track – Networking Systems Professional (CCNP)

9 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (expect ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

**FIRST YEAR**

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITCC 2312</td>
<td>CCNA 3: Scaling Networks (Capstone)</td>
</tr>
<tr>
<td>ITCC 2313</td>
<td>CCNA 4: Connecting Networks</td>
</tr>
</tbody>
</table>

Note: CCNA 3 and CCNA 4 – or the professional certification – are prerequisites for the CCNP courses but are not part of the degree tracks unless they are selected as electives.

### Infrastructure Track

**Certificate Level 1 – Infrastructure Track**

**Infrastructure Technician (CCNA)**

18 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (expect ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

**FIRST YEAR**

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITNW 1358</td>
<td>Network+</td>
</tr>
<tr>
<td>ITCC 1314</td>
<td>CCNA 1: Introduction to Networks</td>
</tr>
<tr>
<td>ITCC 1340</td>
<td>CCNA 2: Routing and Switching Essentials</td>
</tr>
</tbody>
</table>

Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITCC 2341</td>
<td>CCNA Security</td>
</tr>
<tr>
<td>ITCC 2312</td>
<td>CCNA 3: Scaling Networks (Capstone)</td>
</tr>
<tr>
<td>ITCC 2313</td>
<td>CCNA 4: Connecting Networks</td>
</tr>
</tbody>
</table>

Note: CCNA 3 and CCNA 4 – or the professional certification – are prerequisites for the CCNP courses but are not part of the degree tracks unless they are selected as electives.
Certificate Level 1 – Infrastructure Track – Wireless Infrastructure Technician
18 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

FIRST YEAR
First Semester
ITNW 1358 Network+
ITCC 1314 CCNA 1: Introduction to Networks
ITCC 1340 CCNA 2: Routing and Switching Essentials

Second Semester
ITNW 1351 Fundamentals of Wireless LANS
ITCC 2341 CCNA Security (Capstone)
ITSY 2300 Operating System Security

Certificate Level 2 – Infrastructure Track – Infrastructure Administrator
45 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

FIRST YEAR
First Semester
ITNW 1358 Network+
ITCC 1314 CCNA 1: Introduction to Networks
ITCC 1340 CCNA 2: Routing and Switching Essentials
ITNW 1351 Fundamentals of Wireless LANS

Second Semester
ITCC 2341 CCNA Security
ITCC 2312 CCNA 3: Scaling Networks
ITCC 2313 CCNA 4: Connecting Networks
ELECTIVE *

SECOND YEAR
First Semester
ITCC 2354 CCNP R&S ROUTE
ITCC 2355 CCNP R&S SWITCH
ITMT 1372 Installation, Storage and Computing with Windows Server 2016
ITSY 2300 Operating Systems Security

Second Semester
ITCC 2356 CCNP R&S TSHOOT (Capstone)
ITMT 1373 Networking with Windows Server 2016
ELECTIVE *

* Electives (6 credit hours)

Certificate Level 1 – Systems Track-Systems Software Technician (MCSA)
18 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

FIRST YEAR
First Semester
ITNW 1358 Network+
ITMT 1371 Configuring and Supporting Microsoft Windows 10 (70-698)
ITMT 1372 Installation, Storage and Computing with Windows Server 2016

Second Semester
ITMT 1373 Networking with Windows Server 2016
ITMT 1374 Identity with Windows Server 2016
ITSY 1300 Fundamentals of Information Security (Security +)

Certificate Level 1 – Systems Track - Systems Technician
24 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

FIRST YEAR
First Semester
ITNW 1358 Network+
ITMT 1371 Configuring and Supporting Microsoft Windows 10 (70-698)
ITMT 1372 Installation, Storage and Computing with Windows Server 2016

Second Semester
ITMT 1373 Networking with Windows Server 2016
ITMT 1374 Identity with Windows Server 2016
ITCC 1314 CCNA 1: Introduction to Networks
Second Semester
ITCC  1340  CCNA 2: Routing and Switching Essentials
ITMT  1373  Networking with Windows Server 2016
ITMT  1374  Identity with Windows Server 2016
ITSY  1300  Fundamentals of Information Security (Security+)

Certificate Level 2 – Systems Track-Systems Administrator
45 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (expect ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

FIRST YEAR
First Semester
ITNW  1358  Network+
ITMT  1371  Configuring and Supporting Microsoft Windows 10 (70-698)
ITMT  1372  Installation, Storage and Computing with Windows Server 2016
ITCC  1314  CCNA 1: Introduction to Networks

Second Semester
ITCC  1340  CCNA 2: Routing and Switching Essentials
ITCC*  2312  CCNA 3: Scaling Networks Preferred elective; see other options*
ITMT  1373  Networking with Windows Server 2016
ITSY  1300  Fundamentals of Information Security (Security+)

SECOND YEAR
First Semester
ITCC*  2313  CCNA 4: Connecting Networks Preferred elective; see other options*
ITMT  1374  Identity with Windows Server 2016
ITSC  1316  Linux Installation and Configuration

Second Semester
ITSY  2300  Operating System Security
ITMT  2305  Designing and Implementing a Server Infrastructure
ITMT  2304  Implementing and Advanced Server Infrastructure (Capstone)

ELECTIVE *

* Electives (6 credit hours)
CPMT  1305  IT Essentials I: PC Hardware and Software Recommended for students with limited IT
ITCC  2312  CCNA 3: Scaling Networks Recommended with ITCC 2313
ITCC  2313  CCNA 4: Connecting Networks Recommended with ITCC 2312

ITSC  1342  Shell Programming – Scripting New option to meet industry demand
ITNW  1351  Fundamentals of Wireless LANS Highly Recommended
ITCC  2341  CCNA Security Highly Recommended

Any ITCC, ITMT, ITNW, or ITSY course not listed above.

Note: ITCC 2312 (CCNA 3) and ITCC 2313 (CCNA 4) – or the CCNA professional certification – are prerequisites for the CCNP.

Certificate Level 3 – Networking Systems Professional (CCNP)
Shared by Integrated Networking Technologies Track and Systems Track
9 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (expect ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

First Semester
ITCC  2354  CCNP R&S ROUTE
ITCC  2355  CCNP R&S SWITCH
ITCC  2356  CCNP R&S TSHOOT

Note: CCNA 3 and CCNA 4 – or the professional certification – are prerequisites for the CCNP courses but are not part of the Systems degree track unless they are selected as

Certificate Level 1 – Wireless Track – Wireless Designer
42 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (expect ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

FIRST YEAR
First Semester
ITCC  1314  CCNA 1: Introduction to Networks
ITCC  1340  CCNA 2: Routing and Switching Essentials
ITNW  1351  Fundamentals of Wireless LANs
ITNW  1358  Network+

Second Semester
ITCC  2312  CCNA 3: Scaling Networks
ITCC  2313  CCNA 4: Connecting Networks
ITCC  2341  CCNA Security
ITNW  1378  Wireless Network Administration

SECOND YEAR
First Semester
ITNW  1370  Cloud+ Computing Essentials
ITNW  2371  Wireless Network Security
ITSC  1342  Shell Programming – Scripting

2018-19 Collin College Catalog
Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
Second Semester
ITNW 2372 Wireless Network Design
ITNW 2374 Emerging Wireless Technology (Capstone)
ITNW 2378 Fundamentals of IoT

Computer Systems

Program Options:
AAS – Computer Systems
  - Computer Support Track
  - Information System Track
  - Database Development Track
OSA – Computer Applications
OSA – Help Desk Support
Certificate Level 1 – Computer Support
Certificate Level 2 – Computer Applications for Data Forensics Informatics
Certificate Level 2 – Information System
Certificate Level 2 – Database Development

Learn to design and develop information systems for the ever-growing world of computers with a degree or certificate in computer systems.

The rapid spread of computers and information technology has created a need for highly-trained workers to work in applications, support and/or database development. With Collin College's Computer Systems program, you will learn to design and build computer systems, and to solve problems in this ever-changing and growing field.

The degree program offers tracks in information systems, computer support and database development. Areas of study include business applications, business programming, management skills, database programming, computer applications and technical skills. The degree can provide a broad business background and professional skills needed to succeed in a career in computer information systems.

Computer support specialists troubleshoot and resolve various computer and software issues. They may work in a help-desk environment or provide technical support in an organization's IT department. Professionals might work in a variety of fields, including computer systems, telecommunications, finance, and educational services. Some professionals may be able to work from home, while others travel to clients' homes to provide computer support.

Information Systems technicians troubleshoot computer systems and develop safeguards to prevent future problems. These experts design and repair an organization's computer networks and systems. Coursework in programming, computer concepts and application, and systems analysis and design prepares you for entry-level positions in Information Technology.

Database administration technology prepares graduates to plan, design and run computer database systems for a variety of organizations. This 2-year degree program or technical certificate includes courses in database fundamentals, SQL programming and database management software.

Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

If your program requires a criminal background check, your placement in a required clinical site, cooperative, practicum, internship, and/or licensure/certification opportunity may be impacted. If you have any questions or concerns, please contact your program director and check with your licensing/certifying entity, if any, to determine your status.

AAS – Computer Systems – Computer Support Track
60 credit hours

FIRST YEAR
First Semester
BCIS 1305 Business Computer Applications
ECON 1301 Introduction to Economics
ENGL 1301 Composition I
ITSC 1305 Introduction to PC Operating Systems
GEN ED Mathematics course

Second Semester
CPMT 1305 IT Essentials I: PC Hardware and Software
ITSE 1311 Beginning Web Programming
ITSW 1304 Introduction to Spreadsheets – Excel
GEN ED Humanities/Fine Arts course
GEN ED Speech course

SECOND YEAR
First Semester
ENGL 2311 Technical and Business Writing
ITNW 1358 Network+
ITSW 1307 Introduction to Database – Access
ITSW 1310 Introduction to Presentation Graphics Software
MRKG 1301 Customer Relationship Management

Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
Second Semester
COSC 1315 Introduction to Computer Programming
ITSC 2339 Personal Computer Help Desk Support
ITSC 2380 Cooperative Education – Computer and Information Sciences, General (Capstone) 3
ITSE 1301 Web Design Tools – Graphics
ITSY 1300 Fundamentals of Information Security (Security+)

1. May substitute BMGT 1307 or BMGT 1344
2. May substitute COSC 1436
3. May substitute INEW 2330

AAS – Computer Systems - Information System Track
60 credit hours

FIRST YEAR
First Semester
BCIS 1305 Business Computer Applications
ECON 1301 Introduction to Economics (See Social/Behavioral Sciences Options)
ENGL 1301 Composition I
ITSW 1304 Introduction to Presentation Graphics Software
GEN ED Mathematics course

Second Semester
COSC 1315 Introduction to Computer Programming 1
ITSE 1311 Beginning Web Programming
ITSW 1307 Introduction to Database – Access
GEN ED Speech course

SECOND YEAR
First Semester
BMGT 1307 Team Building
ENGL 2311 Technical and Business Writing
IMED 2309 Internet Commerce 2
ITNW 1358 Network+
ITSW 1307 Introduction to Database – Access

Second Semester
ITSC 2380 Cooperative Education – Computer and Information Sciences, General (Capstone) 3
ITSE 2309 Database Programming – SQL
ITSY 1300 Fundamentals of Information Security (Security+)
BUSINESS ELECTIVE 4
TECHNICAL ELECTIVE 5

1. May substitute COSC 1436
2. May substitute BMGT 1307 or BMGT 1344
3. May substitute INEW 2330 or ITSW 2472 (for students pursuing Data Forensics and Informatics) with consent of Discipline Lead
4. Any BMGT, BUSG, BUSI, IBUS course not listed above, excluding any Cooperative Education or Software Project course
5. Any COSC, GISC, IMED, ITCC, ITMT, ITNW, ITSC, or ITSE course not listed above, excluding any Cooperative Education or Software Project course

AAS – Computer Systems – Database Development Track
60 credit hours

FIRST YEAR
First Semester
COSC 1315 Introduction to Computer Programming 1
ECON 1301 Introduction to Economics (See Social/Behavioral Sciences Options)
ENGL 1301 Composition I
ITSW 1304 Introduction to Spreadsheets – Excel
ITNW 1358 Network+
MATH 1324 Mathematics for Business and Social Sciences (See Mathematics options)

Second Semester
COSC 1337 Programming Fundamentals II (Java) 2
ENGL 1301 Composition I
ITNW 1358 Network+
ITSE 2309 Database Programming – SQL
MATH 1342 Elementary Statistical Methods

SECOND YEAR
First Semester
ENGL 2311 Technical and Business Writing
ITSE 1311 Beginning Web Programming
ITSE 2370 Descriptive Analytics
ITSW 2370 SAS Programming
GEN ED Speech course

Second Semester
ITSC 2380 Cooperative Education – Computer and Information Sciences, General (Capstone) 3
ITSE 2347 Advanced Database Programming
ITSE 2354 Advanced Oracle PL/SQL
ITSY 1300 Fundamentals of Information Security (Security+)
GEN ED Humanities/Fine Arts course

1. May substitute COSC 1436
2. May substitute BMGT 1307 or BMGT 1344
3. May substitute INEW 2330 or ITSW 2472 (for students pursuing Data Reporting and Informatics) with consent of Discipline Lead

Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
**OSA – Computer Applications**
9 credit hours

- IITSW 1304 Introduction to Spreadsheets – Excel
- IITSW 1307 Introduction to Database – Access
- IITSW 1310 Introduction to Presentation Graphics Software

**OSA – Help Desk Support**
12 credit hours

- CPMT 1305 IT Essentials I: PC Hardware and Software
- IITNW 1358 Network+
- IITSC 1305 Introduction to PC Operating Systems
- IITSC 2339 Personal Computer Help Desk Support

*Note: IITNW 1358 and IITSC 1305 are prerequisites for IITSC 2339, or consent of instructor.*

**Certificate Level 1 – Computer Support**
30 credit hours

- **Summer Semester**
  - IITSE 1311 Beginning Web Programming
  - IITSW 1304 Introduction to Spreadsheets – Excel

- **First Semester**
  - CPMT 1305 IT Essentials I: PC Hardware and Software
  - IITNW 1358 Network+
  - IITSC 1305 Introduction to PC Operating Systems
  - IITSW 1310 Introduction to Presentation Graphics Software

- **Second Semester**
  - IITSC 2339 Personal Computer Help Desk Support
  - IITSC 2380 Cooperative Education – Computer and Information Sciences, General (Capstone) 
  - IITSY 1300 Fundamentals of Information Security (Security+)
  - BMGT 1307 Team Building

1. May substitute GISC 1411
2. May substitute BMGT 1344 or BUSI 1301
3. May substitute INEW 2330

**Certificate Level 2 – Information System**
30 credit hours

*Students must be TSI complete.*

- **Summer Semester**
  - BCIS 1305 Business Computer Applications
  - COSC 1315 Introduction to Computer Programming

- **First Semester**
  - IMED 2309 Internet Commerce
  - IITNW 1358 Network+
  - IITSW 1304 Introduction to Spreadsheets – Excel
  - IITSW 1310 Introduction to Presentation Graphics Software

- **Second Semester**
  - BMGT 1307 Team Building
  - IITSC 2380 Cooperative Education – Computer and Information Sciences, General (Capstone)
  - IITSY 1300 Fundamentals of Information Security (Security+)

1. May substitute GISC 1411
2. May substitute BMGT 1344 or BUSI 1301
3. May substitute INEW 2330

**Certificate Level 2 – Computer Applications for Data Forensics and Informatics**
16 credit hours

(Designed for the Health Information Management person and others interested in developing skills to assist with database management, queries and reporting)
(Shares the 3 courses in the computer systems OSA-computer Application)
Certificate Level 2 – Database Development
30 credit hours

Students must be TSI complete.

Summer Semester
ITSW 1304 Introduction to Spreadsheets – Excel
ITSW 1307 Introduction to Database – Access

First Semester
COSC 1315 Introduction to Computer Programming
ITNW 1358 Network+
ITSE 2309 Database Programming – SQL
ITSW 2370 SAS Programming
MATH 1342 Elementary Statistical Methods

Second Semester
ITSE 2347 Advanced Database Programming (Capstone)
ITSE 2354 Advanced Oracle PL/SQL
ITSY 1300 Fundamentals of Information Security (Security+)

1. May substitute COSC-1436

AAS – Computer-Aided Drafting and Design
60 credit hours

FIRST YEAR
First Semester
DFTG 1305 Technical Drafting
DFTG 1309 Basic Computer-Aided Drafting
ENGL 1301 Composition I
MATH 1314 College Algebra
(See Mathematics/Natural Sciences options)
SPCH 1321 Business and Professional Communication
(See Speech options)

Second Semester
DFTG 1372 SOLIDWORKS Essentials
DFTG 2319 Intermediate Computer-Aided Drafting
DFTG 2328 Architectural Drafting – Commercial
MATH 1316 Plane Trigonometry

Summer
GEN ED Humanities/Fine Arts course
ELECTIVE *

SECOND YEAR
First Semester
DFTG 1317 Architectural Drafting – Residential
DFTG 1333 Mechanical Drafting
DFTG 2373 Advanced SOLIDWORKS
PHYS 1401 College Physics I

Second Semester
DFTG 2350 Geometric Dimensioning and Tolerancing (Capstone) 1
DFTG 2432 Advanced Computer-Aided Drafting 2
PHYS 1402 College Physics II
GEN ED Social/Behavioral Sciences Course

1. May substitute DFTG 2381
2. May substitute COSC 1436

* Elective Pathways (3 credit hours),
Architectural Options: ARCE 1352 or ARCE 2352
Civil Options: DFTG 2321 or GIS 1411
Mechanical Options: RBTC 1405
General Options: DFTG 1371, COSC 1315, DFTG 1345,
ENGL 2311 or ENTC 1323

Computer-Aided Drafting and Design
Program Options:
AAS – Computer-Aided Drafting and Design
OSA – AutoCAD
Certificate Level 1 – Computer-Aided Drafting and Design
Certificate Level 1 – Advanced Computer-Aided Drafting and Design

High-tech industries are constantly creating new career opportunities in exciting, highly-specialized fields. A degree in Computer-Aided Drafting and Design (CADD) can provide you with both an educational foundation in computer-aided design and insight into current industry practices.

Get hands-on training in Collin’s intensive CADD program. Learn the skills a designer, CADD operator, architect or engineer needs for a successful career.

Students planning to transfer to a college or university should check with the Collin academic advisor. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.
OSA – AutoCAD
9 credit hours

This program prepares students to design and draft in 2 dimensions and 3 dimensions. Also, students will be taught how to customize AutoCAD to enhance productivity.

Prerequisite: Basic computer skills. Having working knowledge of geometry will be a plus for students.

FIRST YEAR
First Semester
DFTG 1305 Technical Drafting
DFTG 1309 Basic Computer-Aided Drafting

Second Semester
DFTG 2319 Intermediate Computer-Aided Drafting

SECOND YEAR
First Semester
DFTG 1317 Architectural Drafting – Residential
DFTG 2373 Advanced SOLIDWORKS

Second Semester
DFTG 2350 Geometric Dimensioning and Tolerancing (Capstone)

1. May substitute DFTG 2381

* Elective Pathways (3 credit hours):
Architectural Options: ARCE 1352, ARCE 2352
Civil Options: DFTG 2321, GISC 1411
Mechanical Options: DFTG 1333, RBTC 1405
General Options: COSC 1315, ENTC 1323

Construction Management

Program Options:
AAS – Construction Management
Certificate Level 1 – Residential or Commercial Construction Management
Certificate Level 2 – Construction Manger
OSA- Construction Management

Industry experts describe construction management as a combination of various disciplines: architecture, business and engineering. Learn how to manage that process from a business perspective. With this degree you will be prepared to manage people and each part of the construction process: budgeting, scheduling, quality assurance and safety.

AAS - Construction Management
60 credit hours

FIRST YEAR
First Semester
CNBT 1301 Introduction to the Construction Industry
CNBT 1311 Construction Methods and Materials I
ECON 1301 Introduction to Economics
(See Social/Behavioral Sciences options)
MATH 1324 Mathematics for Business and Social Sciences (See Mathematics options)
OSHT 1305 OSHA Regulations – Construction Industry

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Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
**Certificate Level 1 - Residential or Commercial Construction Management**
30 credit hours

**First Year**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNBT 1301</td>
<td>Introduction to the Construction Industry</td>
</tr>
<tr>
<td>CNBT 1311</td>
<td>Construction to Methods and Materials I</td>
</tr>
<tr>
<td>CNBT 2342</td>
<td>Construction Management I</td>
</tr>
<tr>
<td>OSHT 1305</td>
<td>OSHA Regulations – Construction Industry</td>
</tr>
<tr>
<td>CNBT 1300</td>
<td>Residential and Light Commercial Blueprint Reading</td>
</tr>
<tr>
<td>OR</td>
<td>Commercial/Industrial Blueprint Reading</td>
</tr>
<tr>
<td>CNBT 2310</td>
<td>Commercial/Industrial Blueprint Reading</td>
</tr>
</tbody>
</table>

**Certificate Level 2 – Construction Manager**
45 credit hours

**FIRST YEAR**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNBT 1301</td>
<td>Introduction to the Construction Industry</td>
</tr>
<tr>
<td>CNBT 1311</td>
<td>Construction Methods and Materials I</td>
</tr>
<tr>
<td>OSHT 1305</td>
<td>OSHA Regulations – Construction Industry</td>
</tr>
<tr>
<td>CNBT 2304</td>
<td>Construction Methods and Materials II</td>
</tr>
<tr>
<td>CNBT 2342</td>
<td>Construction Management I</td>
</tr>
<tr>
<td>CNBT 1330</td>
<td>Residential and Light Commercial Blueprint Reading</td>
</tr>
<tr>
<td>OR</td>
<td>Commercial/Industrial Blueprint Reading</td>
</tr>
<tr>
<td>CNBT 2310</td>
<td>Commercial/Industrial Blueprint Reading</td>
</tr>
</tbody>
</table>

**SECOND YEAR**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNBT 1315</td>
<td>Field Engineering I</td>
</tr>
<tr>
<td>CNBT 1346</td>
<td>Construction Estimating I</td>
</tr>
<tr>
<td>CNBT 2344</td>
<td>Construction Management II</td>
</tr>
<tr>
<td>CNBT 1302</td>
<td>Mechanical, Plumbing &amp; Electrical Systems in Construction I (Residential)</td>
</tr>
<tr>
<td>OR</td>
<td>Mechanical, Plumbing &amp; Electrical Systems in Construction II (Commercial)</td>
</tr>
</tbody>
</table>

Please refer to [http://www.collin.edu/academics/programs/index.html](http://www.collin.edu/academics/programs/index.html) for the most current information.
## Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCE 1342</td>
<td>Codes, Specifications, and Contract Documents</td>
</tr>
<tr>
<td>CNBT 1359</td>
<td>Project Scheduling</td>
</tr>
<tr>
<td>CNBT 2337</td>
<td>Construction Estimating II</td>
</tr>
<tr>
<td>CNBT 2346</td>
<td>Construction Management III (Capstone)</td>
</tr>
</tbody>
</table>

**OSA- Construction Management**

- **12 credit hours**
  - CNBT 1301 Introduction to the Construction
  - CNBT 1311 Construction Methods and Materials I
  - CNBT 2342 Construction Management I
  - OSHT 1305 OSHA Regulations – Construction Industry

## Culinary Arts

*Also see Pastry Arts*

**Department Website:**
http://www.collin.edu/department/ihce/index.html

**Program Options:**

- **AAS – Culinary Arts**
- **Certificate Level 1 – Culinary Arts**
- **Certificate Level 1 – Advanced Culinary Arts**

Food is life, and you can learn to make life even more enjoyable with a certificate or degree from Collin College’s Culinary Arts program.

A part of the college's Institute of Hospitality and Culinary Education (IHCE), Collin’s Culinary Arts program will prepare you for a variety of food preparation positions and for career advancement in the food service industry. The program curriculum emphasizes a broad selection of hands-on food preparation courses, building on culinary foundation skills that will allow you to be effective in a commercial kitchen environment.

The curriculum is designed by industry experts and taught by experienced food service management professionals, and the program is fully accredited by the American Culinary Federation Education Foundation.

**TRANSFER**

Students planning to transfer to a college or university should check with a Collin academic advisor. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

**ADMISSION REQUIREMENTS**

Students are required to attend mandatory Culinary Arts Orientation. Please visit the program website (http://www.collin.edu/department/ihce/) for dates and times.

Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

If your program requires a criminal background check, your placement in a required clinical site, cooperative, practicum, internship, and/or licensure/certification opportunity may be impacted. If you have any questions or concerns, please contact your program director and check with your licensing/certifying entity, if any, to determine your status.

**AAS – Culinary Arts**

- **60 credit hours**

*An American Culinary Federation (ACF) accredited program. Students will be eligible for Certified Culinarian (CC) upon graduation.*

**FIRST YEAR**

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEF 1301</td>
<td>Basic Food Preparation ~</td>
</tr>
<tr>
<td>CHEF 1305</td>
<td>Sanitation and Safety 1, 2 ~</td>
</tr>
<tr>
<td>CHEF 2331</td>
<td>Advanced Food Preparation ~</td>
</tr>
<tr>
<td>ENGL 1301</td>
<td>Composition I</td>
</tr>
<tr>
<td>HAMG 1321</td>
<td>Introduction to Hospitality Industry ~</td>
</tr>
</tbody>
</table>

**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEF 1341</td>
<td>American Regional Cuisine ~</td>
</tr>
<tr>
<td>CHEF 1345</td>
<td>International Cuisine ~</td>
</tr>
<tr>
<td>IFWA 1310</td>
<td>Nutrition and Menu Planning ~</td>
</tr>
<tr>
<td>RSTO 1325</td>
<td>Purchasing for Hospitality Operations ~</td>
</tr>
<tr>
<td>GEN ED</td>
<td>Humanities/Fine Arts Course</td>
</tr>
</tbody>
</table>

**Third Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1332</td>
<td>Contemporary Mathematics (Quantitative Reasoning)</td>
</tr>
<tr>
<td></td>
<td>(See Mathematics options)</td>
</tr>
<tr>
<td>PSTR 1301</td>
<td>Fundamentals of Baking ~</td>
</tr>
</tbody>
</table>

**ACCREDITATION**

The Culinary Arts Program is fully accredited by the American Culinary Federation Education Foundation. They may be contacted at:

180 Center Place Way  
St. Augustine, Fl. 32095  
800.624.9458  
http://www.acfchefs.org
SECOND YEAR

First Semester
CHEF 1310 Garde Manger ~
HAMG 1324 Hospitality Human Resources Management ~
GEN ED Social/Behavioral Sciences Course
ELECTIVE *

Second Semester
CHEF 1314 A La Carte Cooking (Capstone)
CHEF 2380 Cooperative Education – Culinary Arts/Chef Training ~
RSTO 1304 Dining Room Service
SPCH 1321 Business and Professional Communication
(See Speech Options)

~Taught in eight-week format

1. Certification in ServSafe
2. Certification in Food Protection Management

* Elective (3 credit hours): CHEF 1302~, CHEF 2302~, CHEF 2336~, HAMG 1313~, HAMG 1340~, HAMG 2301~, HAMG 2332~, HAMG 2337~, IFWA 1319~, PSTR 1305~, PSTR 1306~, PSTR 2301~, RSTO 2307~ or TRVM 2301

Certificate Level 1 – Culinary Arts
24 credit hours

FIRST YEAR

First Semester
CHEF 1301 Basic Food Preparation ~
CHEF 1305 Sanitation and Safety 1, 2 ~
CHEF 2331 Advanced Food Preparation ~
PSTR 1301 Fundamentals of Baking ~

Second Semester
CHEF 1310 Garde Manger (Capstone) ~
CHEF 1341 American Regional Cuisine ~
CHEF 1345 International Cuisine ~
IFWA 1310 Nutrition and Menu Planning ~

~Taught in eight-week format

1. Certification in ServSafe
2. Certification in Food Protection Management

Certificate Level 3 – Advanced Culinary Arts
12 credit hours

Prior to being admitted to this program, students must provide official documentation showing they have earned a Certificate or AAS in Culinary Arts

FIRST YEAR

First Semester
CHEF 2302 Saucier ~
IFWA 1319 Meat Identifying and Processing ~

Second Semester
CHEF 1302 Principles of Healthy Cuisine ~
CHEF 2336 Charcuterie (Capstone) ~

~Taught in eight-week format

Dental Hygiene

Department Website:
http://www.collin.edu/dentalhygiene/

Program Options:
AAS – Dental Hygiene

Dental hygienists do more than clean patients’ teeth. Collin College’s two-year dental hygiene program can teach you to perform clinical procedures, oral cancer screenings, dental nutritional counseling and identify potential health problems, as well as understand the physical and clinical aspects of treatment, so you can treat the whole patient.

The Dental Hygiene program is designed to prepare you to become a licensed health care professional who specializes in non-surgical periodontal therapy and oral health education. Use advanced technology like intraoral cameras and digital radiography, and gain hands-on training in the college’s dental clinic, working with community members in search of low-cost dental care. The mix of the newest clinical technologies with a broad-based education in biological sciences, humanities and the dental sciences means you will be ready for work in private practice and community settings as a member of the dental health team.

Enrollment is limited and admission is competitive.

Licensure Notice: Students who have been involved with the criminal system, please be advised that your background could keep you from being licensed by the State of Texas. If you have a question about your background and licensure, please speak with your faculty member or the department chair. You also have the right to request a criminal history evaluation letter from the applicable licensing agency.
Dental Hygiene students must meet eligibility requirements for licensure as established by the State Board of Dental Examiners (http://www.tsbde.texas.gov/) in the State of Texas. If a student has reason to believe he/she is ineligible for licensure, he/she should contact the Board regarding their specific concerns prior to entrance into the program.

A drug scan, background check and CPR with AED certification for health professionals will be required upon acceptance into the program. Requirements for dental hygiene licensure as set by the Texas State Board of Dental Examiners (TSBDE) defines that individuals be “of good moral character.” All individuals accepted into the program must meet licensure eligibility requirements. Information received from the background check or drug scan may result in dismissal from the program.

The applicant must be in good health and emotionally stable and must furnish physical, dental and eye examination records. Forms will be provided by the dental hygiene department. In addition, the state of Texas requires the applicant to provide proof of all immunizations required by the state as defined in the Texas Administrative Code. *Other requirements include Hepatitis B vaccination and titer and annual TB testing, annual Flu vaccine, Varicella titer and Tetanus vaccine. A letter of declination must be signed if the candidate is unable to receive the Hepatitis B series.

Applicants who believe they are at an increased risk of contracting an infectious disease should seek testing and counseling prior to making application to the Dental Hygiene Program. All students accepted into the program are expected to follow standard precautions and are financially responsible for any necessary testing/treatment resulting from an occupational incident and/or communicable disease exposure. No student is allowed to deliver patient care in any setting until he/she has mastered material on safety/standard precautions with satisfactory accuracy.

The student is awarded an AAS degree upon successful completion of the program. The graduate is eligible for national and regional examinations.

Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

**FUNCTIONAL ABILITIES/CORE PERFORMANCE STANDARDS STATEMENT**

After initial acceptance to this program, all students are required to meet specific functional abilities with or without accommodations for successful completion of the program and to function safely and effectively in the variety of the profession’s settings. The specific functional requirements are found in “Functional Abilities/Core Performance Standards” documents provided in the program information and application packets. Students who think they may not be able to meet the functional standards and need accommodation are encouraged to contact the college ACCESS department as soon as this program is of interest.

**ACCREDITATION**

Collin’s Dental Hygiene Program is accredited by the American Dental Association’s Commission on Dental Accreditation (CODA) and has been granted the accreditation status of approval without reporting requirements. The council is a specialized accrediting body recognized by the Department of Education.

**SPECIAL ADMISSION REQUIREMENTS**

Admission to this program is selective. Admission to the college does not guarantee admission to the Dental Hygiene Program. Registration is by permission only. Information and applications may be obtained from the Dental Hygiene Program Director or dental hygiene website at http://www.collin.edu/dentalhygiene/. *It is important to note that one of the required vaccinations, Hepatitis B, consists of a three dose series, which can take up to 7 months to complete. Individuals unable to receive the HBV must inform the Program Director. In such cases the applicant must sign a declination form. All immunizations must be complete before the first clinical visit.

- Provide proof of high school graduation or GED
- Complete pre-entrance course requirements with a minimum 2.5 GPA
- Earn a grade of “C” or better in all courses applicable to the Dental Hygiene program
- Submit official copies of all college transcripts
- Complete the PSB exam with a satisfactory result
- Completion of immunizations required by the Texas Department of State Health Services (TDSHS) *
- Submit a typed, one-page essay that discusses why dental hygiene has been selected as a profession
- Submit two reference forms: one from an employer and one from an educator
- Completion of an Observation Form: Observing of a dental office/Registered Dental Hygienist
- Completion of a personal interview with the Program Director and faculty
AAS – Dental Hygiene
68 credit hours

Note: All science and mathematics courses that are part of the curriculum, but completed at a regionally accredited institution, must have been completed within five years of the fall semester of the admission year in order to receive transfer credit.

PRE-ENTRANCE REQUIREMENTS
BIOL 2401 Anatomy and Physiology I 1
BIOL 2402 Anatomy and Physiology II
BIOL 2420 Microbiology for Non-Science Majors
CHEM 1405 Introduction to Chemistry I

FIRST YEAR
First Semester
DHYG 1201 Orofacial Anatomy, Histology and Embryology
DHYG 1304 Dental Radiology
DHYG 1431 Preclinical Dental Hygiene
ENGL 1301 Composition I
SPCH 1311 Introduction to Speech Communication (See Speech options)

Second Semester
DHYG 1207 General and Dental Nutrition
DHYG 1219 Dental Materials
DHYG 1227 Preventive Dental Hygiene Care
DHYG 1235 Pharmacology for the Dental Hygienist
DHYG 1261 Clinical I – Dental Hygienist
PSYC 2301 General Psychology 1

SECOND YEAR
First Semester
DHYG 1211 Periodontology
DHYG 1215 Community Dentistry
DHYG 1239 General and Oral Pathology
DHYG 2153 Dental Hygiene Practice
DHYG 2201 Dental Hygiene Care I
DHYG 2361 Clinical II – Dental Hygienist

Second Semester
DHYG 2102 Applied Community Dentistry
DHYG 2231 Dental Hygiene Care II (Capstone)
DHYG 2363 Clinical III – Dental Hygienist
GEN ED Humanities/Fine Arts course
SOCI 1301 Introduction to Sociology

1. No course substitutions

Diagnostic Medical Sonography

Program Option:
AAS – Diagnostic Medical Sonography

NOTE: This program is pending SACSCOC approval. It is anticipated to start in Fall 2018.

The Diagnostic Medical Sonography program is designed to prepare graduates for employment in the health industry in the sonography profession. An Associate Degree in Applied Science is awarded at completion of the program of study. The student is also eligible to take the American Registry of Diagnostic Medical Sonographers licensing examination for Registered Sonographers (ARDMS). The Sonography program consists of classroom, laboratory and clinical learning experiences.

FUNCTIONAL ABILITIES/CORE PERFORMANCE STANDARDS STATEMENT
After initial acceptance to this program, all students are required to meet specific functional abilities with or without accommodations for successful completion of the program and to function safely and effectively in the variety of the profession’s settings. The specific functional requirements are found in “Functional Abilities/Core Performance Standards” documents provided in the program information and application packets. Students who think they may not be able to meet the functional standards and need accommodation are encouraged to contact the college ACCESS department as soon as this program is of interest.

ACCREDITATION
Collin College Diagnostic Medical Sonography is seeking accreditation from the Commission on Accreditation of Allied Health Education Programs (25400 U.S. Highway 19 North, Suite 158, Clearwater, FL 33768; 727.210.2350; www.caabep.org/) with the recommendation of the Joint Review Committee on Education in Diagnostic Medical Sonography (6021 University Boulevard, Suite 500, Ellicott City, MD 21043; 443-973-3251; www.jrcdms.org).

SPECIAL ADMISSION REQUIREMENTS
Admission to this program is selective. Admission to the college does not guarantee admission to the Diagnostic Medical Sonography Program. Registration is by permission only. Information and applications may be obtained online or from the Health Sciences and Emergency Services division office.

To apply, students must:
• Submit the required application form by the designated deadline.
• Application and acceptance into Collin College.
• Submit official copies of all college transcripts.
• Complete Collin College reading, writing and mathematics assessments.

2018-19 Collin College Catalog
Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
• Complete Psychological Services Bureau (PSB) Health Occupations Aptitude Exam.
• Document acceptable findings on drug screens, background checks and physical/mental competencies.
• Complete program admission criteria (see Admission Packet).
• Complete immunizations required by the Texas Department of State Health Services (TDSHS)*

* It is important to note that one of the required vaccinations, Hepatitis B, consists of a three dose series, which can take up to 7 months to complete. Individuals unable to receive the HBV must inform the Program Coordinator. In such cases, the applicant must sign a declination form. All immunizations must be complete before assignment to clinical training.

Health Insurance — All Sonography students are required to show proof of health insurance prior to starting clinical rotations each semester.

If your program requires a criminal background check, your placement in a required clinical site, cooperative, practicum, internship, and/or licensure/certification opportunity may be impacted. If you have any questions or concerns, please contact your program director and check with your licensing/certifying entity, if any, to determine your status.

Students planning to transfer to a college or university should check with the Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

**AAS – Diagnostic Medical Sonography**

65 credit hours

**PREREQUISITES (Fall)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1406</td>
<td>Biology for Science Majors</td>
</tr>
<tr>
<td>BIOL 2401</td>
<td>Anatomy and Physiology I</td>
</tr>
<tr>
<td>BIOL 2402</td>
<td>Anatomy and Physiology II</td>
</tr>
<tr>
<td>ENGL 1301</td>
<td>Composition I</td>
</tr>
<tr>
<td>MATH 1314</td>
<td>College Algebra</td>
</tr>
<tr>
<td>PHYS 1405</td>
<td>Conceptual Physics</td>
</tr>
</tbody>
</table>

**FIRST YEAR**

First Semester (Spring)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>DMSO 1110</td>
<td>Introduction to Sonography</td>
</tr>
<tr>
<td>DMSO 1266</td>
<td>Practicum 1 – Diagnostic Medical Sonography/Sonographer and Ultrasound Technician</td>
</tr>
<tr>
<td>DMSO 1341</td>
<td>Abdominopelvic Sonography</td>
</tr>
<tr>
<td>DMSO 1355</td>
<td>Sonographic Pathophysiology</td>
</tr>
<tr>
<td>PSYC 2301</td>
<td>General Psychology (See Social/Behavioral Sciences options)</td>
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Second Semester (Summer)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>DMSO 1166</td>
<td>Practicum 2 – Diagnostic Medical Sonography/Sonographer and Ultrasound Technician</td>
</tr>
<tr>
<td>DMSO 2253</td>
<td>Sonography of Superficial Structures</td>
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**SECOND YEAR (Fall)**

First Semester

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>DMSO 1202</td>
<td>Basic Ultrasound Physics</td>
</tr>
<tr>
<td>DMSO 1366</td>
<td>Practicum 3 – Diagnostic Medical Sonography/Sonographer and Ultrasound Technician</td>
</tr>
<tr>
<td>DMSO 2405</td>
<td>Sonography of Obstetrics/Gynecology</td>
</tr>
<tr>
<td>DVST 1300</td>
<td>Principles of Vascular Technology</td>
</tr>
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</table>

Second Semester (Spring)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>DMSO 2243</td>
<td>Advanced Ultrasound and Physics</td>
</tr>
<tr>
<td>DMSO 2342</td>
<td>Sonography of High Risk Obstetrics</td>
</tr>
<tr>
<td>DMSO 2367</td>
<td>Practicum 4 – Diagnostic Medical Sonography/Sonographer and Ultrasound Technician</td>
</tr>
<tr>
<td>DVST 2200</td>
<td>Vascular Technology Applications</td>
</tr>
<tr>
<td>GEN ED</td>
<td>Humanities/Fine Arts course</td>
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Third Semester (Summer)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>DMSO 2130</td>
<td>Advanced Ultrasound and Review (Capstone)</td>
</tr>
<tr>
<td>DMSO 2267</td>
<td>Practicum 5 – Diagnostic Medical Sonography/Sonographer and Ultrasound Technician</td>
</tr>
</tbody>
</table>

1. May substitute MATH 1324, MATH 1342, MATH 1414, or MATH 2412

**Early Childhood Educator**

Also see Associate of Arts in Teaching (AAT)

Program Options:

- AAS – Early Childhood Educator (0-8 years)
- OSA – Early Childhood Administrator
- OSA – Child Development Associate
- OSA – Special Educator (0-8 years)

Certificate Level 1 – Early Childhood Educator (0-8 years)

Certificate Level 1 – Child Development Associate

Whether you want to be a teacher or just enjoy working with young children, the child development program at Collin College could be the perfect starting point for you. Early Childhood Educator certificate and degree programs are designed to prepare you to study at a four-year university and for entry-level positions working with young children and their families.

The program emphasizes a developmental approach to promote the physical, social, emotional and cognitive growth of the children you will work with. Students acquire knowledge and skills that prepare them to create
developmentally appropriate, nurturing environments. The Child Development Associate (CDA) program provides performance-based training of childcare professionals who work with children from birth through age 8.

Collin’s child development program is accredited by the National Association for the Education of Young Children (NAEYC) and is the only program in Texas to have NAEYC accreditation while holding exemplary status with the Texas Higher Education Coordinating Board. Coursework is applicable as in-service training for teachers, administrators, nannies and family day home providers.

If you plan to transfer to a college or university, be sure to check with Collin academic advisors and the degree requirement of the intended transfer college before beginning this program to verify course degree applicability. If you plan to obtain a bachelor’s degree in Child Development, Texas Woman’s University (TWU) accepts Collin College’s AAS-Early Childhood Educator. Check with an advisor at TWU for more information. Additional colleges also accept Collin College courses in Child Development; check with individual colleges for their requirements.

Program Requirements
1. Enroll in a Collin child development course.
2. Within the first two weeks of their child development course, students must complete required paperwork to begin lab observations. A copy of a negative tuberculosis test result may be required. Continuing students may need to re-submit tuberculosis results every year.
3. Complete and sign a student record form as a contract to ensure the following:
   • Verification that the student has read and agrees to abide by the Texas Minimum Standards for child care centers
   • Verification that the student has read and agrees to follow the laboratory student guidelines
   • Students must undergo and pass a criminal background history check by the Texas Department of Protective and Regulatory Services
   • Provide a notarized affidavit that confidentiality and professional discretion will be observed at all times
   • Personal release for videotaping for instructional purposes
   • Complete a Degree Plan (two-part document found on Collin’s website under Getting Started/Admissions/Forms or in the Admissions Office) and submit to an advisor

It is the student's responsibility to keep all information current.

If your program requires a criminal background check, your placement in a required clinical site, cooperative, practicum, internship, and/or licensure/certification opportunity may be impacted. If you have any questions or concerns, please contact your program director and check with your licensing/certifying entity, if any, to determine your status.

AAS – Early Childhood Educator (0-8) years
60 credit hours

FIRST YEAR
First Semester
CDEC 1319 Child Guidance
CDEC 1323 Observation and Assessment
ENGL 1301 Composition I
TECA 1311 Educating Young Children
TECA 1354 Child Growth and Development

Second Semester
CDEC 1321 The Infant and Toddler
CDEC 1370 Introduction to Teaching ESL
EDUC 1300 Learning Frameworks
TECA 1303 Families, School, and Community
ELECTIVE 1*

SECOND YEAR
First Semester
CDEC 1313 Curriculum Resources for Early Childhood Programs
CDEC 1359 Children with Special Needs
CDEC 2304 Child Abuse and Neglect
CDEC 2371 Using Technology in the Classroom
ELECTIVE 2 *

Second Semester
TECA 1318 Wellness of the Young Child
CDEC 2166 Practicum - Child Care Provider/Assistant (Capstone)
GEN ED Humanities/Fine Arts course
GEN ED Mathematics/Natural Sciences course
GEN ED Social/Behavioral Sciences course
ELECTIVE 3*

*Elective Sequence 1-3
There are three focus options. You must select ONE focus and complete the three-course sequence.

CDA Training Focus
Elective 1
CDEC 1317 Child Development Associate Training I

Elective 2
CDEC 2322 Child Development Associate Training II

Elective 3
CDEC 2324 Child Development Associate Training III
### Administration Focus

| Elective 1 | CDEC 2326 Administration of Programs for Children I |
| Elective 2 | CDEC 2328 Administration of Programs for Children II |
| Elective 3 | CDEC 2336 Administration of Programs for Children III |

### Early Childhood Educator Focus

| Elective 1 | CDEC 2340 Instructional Technique For Children with Special Needs |
| Elective 2 | CDEC 2307 Math and Science for Early Childhood OR CDEC 1358 Creative Arts for Early Childhood |
| Elective 3 | CDEC 1385 Cooperative Education-Child Development |

### OSA – Program Administrator

<table>
<thead>
<tr>
<th>9 credit hours</th>
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</thead>
<tbody>
<tr>
<td>CDEC 2326 Administration of Programs for Children I</td>
</tr>
<tr>
<td>CDEC 2328 Administration of Programs for Children II</td>
</tr>
<tr>
<td>CDEC 2336 Administration of Programs for Children III</td>
</tr>
</tbody>
</table>

### OSA – Child Development Associate (CDA)

<table>
<thead>
<tr>
<th>9 credit hours</th>
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</thead>
<tbody>
<tr>
<td>CDEC 1317 Child Development Associate Training I</td>
</tr>
<tr>
<td>CDEC 2322 Child Development Associate Training II</td>
</tr>
<tr>
<td>CDEC 2324 Child Development Associate Training III</td>
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</table>

### OSA- Special Educator (0-8 Years)

<table>
<thead>
<tr>
<th>9 credit hours</th>
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</thead>
<tbody>
<tr>
<td>TECA 1354 Child Growth and Development</td>
</tr>
<tr>
<td>CDEC 1359 Children with Special Needs</td>
</tr>
<tr>
<td>CDEC 2340 Instructional Techniques for Children with Special Needs</td>
</tr>
</tbody>
</table>

### Certificate Level 1 – Child Development Associate

<table>
<thead>
<tr>
<th>16 credit hours</th>
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</thead>
<tbody>
<tr>
<td>CDEC 1317 Child Development Associate Training I</td>
</tr>
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</table>

### Certificate Level 1 – Early Childhood Educator (0-8 Years)

<table>
<thead>
<tr>
<th>39 credit hours</th>
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</thead>
<tbody>
<tr>
<td>CDEC 2322 Child Development Associate Training II</td>
</tr>
<tr>
<td>CDEC 2324 Child Development Associate Training III</td>
</tr>
<tr>
<td>TECA 1318 Wellness of the Young Child</td>
</tr>
<tr>
<td>TECA 1354 Child Growth and Development</td>
</tr>
<tr>
<td>CDEC 2166 Practicum – Child Care/Assistant (Capstone)</td>
</tr>
</tbody>
</table>

### Certificate Level 1 – Early Childhood Educator (0-8 Years)

First Year

**First Semester**

| CDEC 1319 Child Guidance |
| CDEC 1321 The Infant and Toddler |
| CDEC 1323 Observation and Assessment |
| CDEC 1359 Children with Special Needs |
| TECA 1311 Educating Young Children |

**Second Semester**

| CDEC 1270 Introduction to Teaching ESL |
| TECA 1303 Families, School, and Community |
| TECA 1354 Child Growth and Development |
| CDEC 1313 Curriculum Resources for Early Childhood Programs |
| TECA 1318 Wellness of the Young Child |

**Third Semester**

| CDEC 2166 Practicum – Child Care Provider/Assistant (Capstone) |
| CDEC 2304 Child Abuse and Neglect |
| CDEC 2340 Instructional Techniques for Children with Special Needs |
| CDEC 2371 Using Technology in the Classroom |

### Electronic Engineering Technology

#### Program Options:

**AAS – Electronic Engineering Technology**

**Certificate Level 1 – Electronic Engineering Technology**

Take your knowledge of electronics to a deeper level in the Electronic Engineering Technology program at Collin College. This program emphasizes the application of mathematical theorems and applied physics in the design and analysis of electronic circuits. You will learn classroom theory and perform hands-on laboratory design and analysis experiments.
The program curriculum and laboratory equipment have been formally evaluated and endorsed by an advisory committee consisting of members of the electronics industry, so you can be sure you are learning the skills you will need to earn a job once you graduate college.

Collin College offers an Associate of Applied Science and a level 1 certificate in electronic engineering technology. Students may also transfer their completed program toward a bachelor’s degree into several colleges and universities.

**AAS – Electronic Engineering Technology**  
60 credit hours

<table>
<thead>
<tr>
<th><strong>FIRST YEAR</strong></th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
</tr>
<tr>
<td>CETT 1407</td>
<td>Fundamentals of Electronics</td>
</tr>
<tr>
<td>CETT 1425</td>
<td>Digital Fundamentals</td>
</tr>
<tr>
<td>ENGL 1301</td>
<td>Composition I</td>
</tr>
<tr>
<td>TECM 1343</td>
<td>Technical Algebra and Trigonometry ¹</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
<td></td>
</tr>
<tr>
<td>CETT 1409</td>
<td>DC-AC Circuits</td>
</tr>
<tr>
<td>CETT 1445</td>
<td>Microprocessor</td>
</tr>
<tr>
<td>RBTC 1405</td>
<td>Robotic Fundamentals</td>
</tr>
<tr>
<td>GEN ED</td>
<td>Humanities/Fine Arts course</td>
</tr>
<tr>
<td><strong>Summer</strong></td>
<td></td>
</tr>
<tr>
<td>SPCH 1321</td>
<td>Business and Professional Communication</td>
</tr>
<tr>
<td>(See Speech options)</td>
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<table>
<thead>
<tr>
<th><strong>SECOND YEAR</strong></th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
</tr>
<tr>
<td>CETT 2471</td>
<td>Emerging Topics in Engineering Technology</td>
</tr>
<tr>
<td>INTC 1307</td>
<td>Instrumentation Test Equipment</td>
</tr>
<tr>
<td>PHYS 1405</td>
<td>Conceptual Physics ²</td>
</tr>
<tr>
<td>ELECTIVE *</td>
<td></td>
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<tr>
<td><strong>Second Semester</strong></td>
<td></td>
</tr>
<tr>
<td>CETT 1457</td>
<td>Linear Integrated Circuits</td>
</tr>
<tr>
<td>ECON 1301</td>
<td>Introduction to Economics ³</td>
</tr>
<tr>
<td>EECT 2439</td>
<td>Communications Circuits (Capstone)</td>
</tr>
<tr>
<td>ELECTIVE *</td>
<td></td>
</tr>
</tbody>
</table>

1. May substitute MATH 1316 or higher level Math (recommended for transfer students)  
2. May substitute PHYS 1401  
3. May substitute ECON 2301 or ECON 2302 (recommended for transfer students)  
* Electives (6 credit hours): DFTG 1372, EECT 2380, or RBTC 2345

**Certificate Level 1 – Electronic Engineering Technology**  
34 credit hours

<table>
<thead>
<tr>
<th><strong>FIRST YEAR</strong></th>
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<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
</tr>
<tr>
<td>CETT 1407</td>
<td>Fundamentals of Electronics</td>
</tr>
<tr>
<td>CETT 1425</td>
<td>Digital Fundamentals</td>
</tr>
<tr>
<td>TECM 1343</td>
<td>Technical Algebra and Trigonometry ¹</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
<td></td>
</tr>
<tr>
<td>CETT 1409</td>
<td>DC-AC Circuits</td>
</tr>
<tr>
<td>CETT 1445</td>
<td>Microprocessor</td>
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<tr>
<th><strong>SECOND YEAR</strong></th>
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<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
</tr>
<tr>
<td>CETT 2471</td>
<td>Emerging Topics in Engineering Technology</td>
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<tr>
<td>INTC 1307</td>
<td>Instrumentation Test Equipment</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
<td></td>
</tr>
<tr>
<td>CETT 1457</td>
<td>Linear Integrated Circuits</td>
</tr>
<tr>
<td>EECT 2439</td>
<td>Communications Circuits (Capstone)</td>
</tr>
</tbody>
</table>

1. May substitute MATH 1316 or higher level Math.
Emergency Medical Services Professions

Department Website:
http://www.collin.edu/ems

Program Options:
AAS – Emergency Medical Services Professions
OSA – Services Professions
Certificate Level 1 – Advanced EMT
Certificate Level 1 – Paramedic

Emergency medical personnel are on the front lines of medicine, providing patients in need with life-saving care. Be a part of that mission with a degree, certificate or award in Emergency Medical Services Professions. Collin’s Emergency Medical Services Professions program will provide you with a foundation for careers in emergency medicine and other related health care fields.

This program has three options: The OSA – Emergency Medical Services Professions prepares students for entry-level positions. Students completing the Certificate – EMS Paramedic are well positioned for higher paying jobs. Completion of the AAS – Emergency Medical Services Professions degree will benefit students seeking promotion in the EMS field.

This program prepares students for skills proficiency verification by the training program medical director; and written and practical exam administered by National Registry. A licensed paramedic has an associate degree (or higher) and tests on the same skills for EMT-Paramedic.

Learn more at the webpage above or contact the EMS office at 972.548.6530.

Licensure Notice: Students who have been involved with the criminal system, please be advised that your background could keep you from being licensed by the State of Texas. If you have a question about your background and licensure, please speak with your faculty member or the department chair. You also have the right to request a criminal history evaluation letter from the applicable licensing agency.

Once a student successfully completes requirements for the National Registry, he or she may become certified by the Texas Department of State Health Services EMS Division. Both levels of certification require periodic and specific recertification hours and activities to continue to practice as an emergency medical technician.

Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

ACCREDITATION
The Collin College Emergency Medical Technician – Paramedic program is accredited by the Commission on Accreditation of Allied Health Education Programs (http://www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). They may be contacted at:
1361 Park Street
Clearwater, FL 33756
727.210.2350
http://www.caahep.org

FUNCTIONAL ABILITIES/CORE PERFORMANCE STANDARDS STATEMENT
Regulations governing this program require all applicants to meet specific functional abilities – some are without accommodations – for admission and/or successful completion of the program. The specific functional requirements are found in Functional Abilities/Core Performance Standards documents provided in the program information and application packets. Students who think they may not be able to meet the functional standards and need accommodations are encouraged to contact the ACCESS department or Program Director as soon as this program is of interest.

ADMISSION REQUIREMENTS
Admission to this program is selective. Admission to the college does not guarantee admission to the Emergency Medical Services Program. Registration is by permission only. Information and applications may be obtained from the Program Director, the EMS Office, or the EMS website at http://www.collin.edu/EMS .

- Provide proof of high school graduation or GED
- 18 years of age
- Complete program application
- Complete ACCUPLACER Reading Comprehension test (Minimum score 78);
  Complete ACCUPLACER Arithmetic test (Minimum score 78);
  Complete WritePlacer test (Minimum score 4)
- Be certified as American Heart Association CPR Basic Life Support (BLS) or Red Cross CPR for the Healthcare Provider.
- Personal interview
- Drug test
- Criminal history check
- Complete immunizations required by the Texas Department of State Health Services (TDSHS). *
- Applicant must be in academic good standing with a 2.0 or higher GPA

* It is important to note that one of the required vaccinations, Hepatitis B, consists of a three dose series, which can take up to 7 months to complete. Individuals unable to receive the HBV must
inform the Program Director. In such cases, the applicant must sign
a declination form. All immunizations must be complete before the
first clinical visit.

Health Insurance – All Emergency Medical Services students
are required to show proof of health insurance prior to starting
clinical rotations each semester.

AAS – Emergency Medical Services Professions or
Certificate – EMS Paramedic (Paramedic Students)
Additional Admission Requirements:
- Texas Department of State Health Services or
  National Registry EMT – Basic Certification
- Successful completion of designated career
  aptitude test (offered at specific times throughout
  the year)
- Completion of local college assessments in
  reading, writing and mathematics (must place at
  or above college-level in all assessments)

AAS – Emergency Medical Services Professions
60 credit hours
A student who has the EMT – Basic certification has met the first
three EMSP course requirements. ¹

PREREQUISITES
EMSP 1160  Clinical – Emergency Medical
Technician (EMT Paramedic) – Basic ¹
EMSP 1371  Introduction to Emergency Medical
Technician (EMT) ¹
EMSP 1501  Emergency Medical Technician ¹
ENGL 1301  Composition I

FIRST YEAR
First Semester
BIOL 2401  Anatomy and Physiology I ²
EMSP 1438  Introduction to Advanced Practice
EMSP 2206  Emergency Pharmacology
EMSP 1356  Patient Assessment and Airway
Management
KINE 1100  Beginning Weight Training
  (See Kinesiology Options)

Second Semester
BIOL 2402  Anatomy and Physiology II ²
EMSP 1161  Clinical – Emergency Medical
  Technician (EMT Paramedic) – Advanced I
EMSP 2444  Cardiology
EMSP 2534  Medical Emergencies

Summer
EMSP 1162  Clinical – Emergency Medical
  Technician (EMT Paramedic) – Advanced II
EMSP 1355  Trauma Management

SECOND YEAR
First Semester
EMSP 2160  Clinical – Emergency Medical
Technician (EMT Paramedic) – Advanced III
EMSP 2305  EMS Operations
EMSP 2330  Special Populations
GEN ED  Humanities/Fine Arts course
GEN ED  Social/Behavioral Sciences course

Second Semester
EMSP 2143  Assessment Based Management
  (Capstone)
EMSP 2267  Practicum – Emergency Medical
  Technician (EMT Paramedic)

¹ A Student that has the EMT – Basic certification has met this
requirement
² No substitutions

OSA – Emergency Medical Services Professions
9 credit hours
A student who has the EMT – Basic certification has met these
EMSP requirements.

EMSP 1160  Clinical – Emergency Medical
Technician (EMT Paramedic) – Basic ¹
EMSP 1371  Introduction to Emergency Medical
Technician (EMT)
EMSP 1501  Emergency Medical Technician

Certificate Level 1 – Advanced EMT
25 credit hours

PREREQUISITES
A student who has the EMT – Basic certification has met the first
three EMSP course requirements. ¹

EMSP 1160  Clinical – Emergency Medical
Technician (EMT Paramedic) – Basic ¹
EMSP 1371  Introduction to Emergency Medical
Technician (EMT) ¹
EMSP 1501  Emergency Medical Technician ¹

FIRST YEAR
First Semester
EMSP 1356  Patient Assessment and Airway
Management
EMSP 2305  EMS Operations

Second Semester
EMSP 1161  Clinical – Emergency Medical
  Technician (EMT Paramedic) – Advanced I
EMSP 1355  Trauma Management
EMSP 2305  EMS Operations

2018-19 Collin College Catalog
Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
Certificate Level 1 – Paramedic

42 credit hours

This certificate contains all the coursework in the Advanced EMT certificate plus seven (7) additional courses which will qualify the student for career advancement as a Paramedic.

PREREQUISITES
A student who has the EMT – Basic certification has met the first three EMSP course requirements.¹

EMSP 1160 Clinical - Emergency Medical Technician (EMT Paramedic) – Basic
EMSP 1371 Introduction to Emergency Medical Technician (EMT)¹
EMSP 1501 Emergency Medical Technician ¹

FIRST YEAR
First Semester
EMSP 1356 Patient Assessment and Airway Management
EMSP 1438 Introduction to Advanced Practice
EMSP 2206 Emergency Pharmacology

Second Semester
EMSP 1161 Clinical – Emergency Medical Technician (EMT Paramedic) – Advanced I
EMSP 1355 Trauma Management
EMSP 2305 EMS Operations

Summer Semester
EMSP 2444 Cardiology

SECOND YEAR
First Semester
EMSP 1162 Clinical – Emergency Medical Technician (EMT Paramedic) – Advanced II

Second Semester
EMSP 2534 Medical Emergencies
EMSP 2330 Special Populations
EMSP 2160 Clinical – Emergency Medical Technician (EMT Paramedic) – Advanced III

Summer Semester
EMSP 2143 Assessment Based Management (Capstone)
EMSP 2267 Practicum – Emergency Medical Technician (EMT Paramedic)

¹ A student that has the EMT – Basic certification has met this requirement.

Fire Academy

Also see Fire Science

Program Options:
AAS – Basic Firefighter Certification
Certificate Level 1 – Basic Firefighter

Collin College's Fire Academy is one of the most highly-regarded programs in the state. Fire Academy graduates from Collin College can be found throughout Texas – all of them making a difference in their communities.

This certification program was developed to prepare you for a career as a professional firefighter and includes Emergency Medical Technician (EMT) training for state certification. Many fire departments require applicants to complete basic firefighter training before they take a fire department entrance exam.

Licensure Notice: Students who have been involved with the criminal system, please be advised that your background could keep you from being licensed by the State of Texas. If you have a question about your background and licensure, please speak with your faculty member or the department chair. You also have the right to request a criminal history evaluation letter from the applicable licensing agency.

Students are accepted into the Fire Academy on a competitive basis. Students interested in enrolling in the Fire Academy should contact the Fire Science Office at 972.548.6836. Fire Academy application packets may be printed from the Fire Science website: http://www.collin.edu/firescience or students may pick-up an application at either the Fire Science or Advising Office. Students may request to receive an application by mail.

Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.
FUNCTIONAL ABILITIES/CORE PERFORMANCE STANDARDS STATEMENT
Regulations governing this program require all applicants to meet specific functional abilities – some are without accommodations – for admission and/or successful completion of the program. The specific functional requirements are found in the Functional Abilities/Core Performance Standards documents provided in the program information and application packets. Students who think they may not be able to meet the functional standards and need accommodation are encouraged to contact the ACCESS department or Program Director as soon as this program is of interest.

ADDITIONAL ADMISSIONS REQUIREMENTS FOR FIREFIGHTER CERTIFICATION COURSES:
- 18 years of age
- Provide proof of high school graduation or GED
- Complete Collin College application
- Complete program application
- Complete ACCUPLACER Reading Comprehension test (Minimum score 78)
- Complete ACCUPLACER Arithmetic test (Minimum score 78)
- Complete WritePlacer test (Minimum score 4)
- Complete the physical ability exam and personal interview scheduled through the Program Director
- Criminal history check
- Applicant must be in academic good standing with a 2.0 or higher GPA

Registration is by permission only. Additional information may be obtained from the Fire Science/EMS Office, the Health Sciences, Biology and Chemistry Office or at the Fire Science website: http://www.collin.edu/firescience.

AAS – Basic Firefighter Certification
60 credit hours

FIRST YEAR
First Semester
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1405</td>
<td>Introduction to Chemistry I ¹</td>
</tr>
<tr>
<td>ENGL 1301</td>
<td>Composition I</td>
</tr>
<tr>
<td>FIRT 1301</td>
<td>Fundamentals of Fire Protection</td>
</tr>
<tr>
<td>MATH 1332</td>
<td>Contemporary Mathematics (Quantitative Reasoning) (See Mathematics options)</td>
</tr>
</tbody>
</table>

Second Semester
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMSP 1160</td>
<td>Clinical – Emergency Medical Technician (EMT Paramedic) – Basic ²</td>
</tr>
<tr>
<td>EMSP 1371</td>
<td>Introduction to Emergency Medical Technician (EMT) ²</td>
</tr>
<tr>
<td>EMSP 1501</td>
<td>Emergency Medical Technician ²</td>
</tr>
<tr>
<td>FIRT 1315</td>
<td>Hazardous Materials I</td>
</tr>
<tr>
<td>GOVT 2306</td>
<td>Texas Government (Texas constitution and topics) ³</td>
</tr>
</tbody>
</table>

GEN ED Humanities/Fine Arts course

SECOND YEAR
First Semester
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRS 1301</td>
<td>Firefighter Certification I</td>
</tr>
<tr>
<td>FIRS 1407</td>
<td>Firefighter Certification II</td>
</tr>
<tr>
<td>FIRS 1313</td>
<td>Firefighter Certification III</td>
</tr>
<tr>
<td>FIRS 1319</td>
<td>Firefighter Certification IV</td>
</tr>
<tr>
<td>FIRT 1327</td>
<td>Building Construction in the Fire Service</td>
</tr>
</tbody>
</table>

Second Semester
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRS 1323</td>
<td>Firefighter Certification V</td>
</tr>
<tr>
<td>FIRS 1329</td>
<td>Firefighter Certification VI</td>
</tr>
<tr>
<td>FIRS 1433</td>
<td>Firefighter Certification VII (Capstone)</td>
</tr>
<tr>
<td>FIRT 1338</td>
<td>Fire Protection Systems</td>
</tr>
</tbody>
</table>

1. May substitute BIOL 1408
2. A student that has the EMT – Basic certification has met this requirement.
3. No substitutions

Certificate Level 1 – Basic Firefighter
32 credit hours

First Semester
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMSP 1160</td>
<td>Clinical – Emergency Medical Technician (EMT Paramedic) – Basic ¹</td>
</tr>
<tr>
<td>EMSP 1371</td>
<td>Introduction to Emergency Medical Technician (EMT) ¹</td>
</tr>
<tr>
<td>EMSP 1501</td>
<td>Emergency Medical Technician ¹</td>
</tr>
<tr>
<td>FIRS 1301</td>
<td>Firefighter Certification I</td>
</tr>
<tr>
<td>FIRS 1313</td>
<td>Firefighter Certification III</td>
</tr>
<tr>
<td>FIRS 1407</td>
<td>Firefighter Certification II</td>
</tr>
</tbody>
</table>

Second Semester
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRS 1319</td>
<td>Firefighter Certification IV</td>
</tr>
<tr>
<td>FIRS 1323</td>
<td>Firefighter Certification V</td>
</tr>
<tr>
<td>FIRS 1329</td>
<td>Firefighter Certification VI</td>
</tr>
<tr>
<td>FIRS 1433</td>
<td>Firefighter Certification VII (Capstone)</td>
</tr>
</tbody>
</table>

1. A student that has the EMT – Basic certificate has met this requirement.

Certificate Level 2 – Basic Firefighter
32 credit hours

First Semester
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMSP 1160</td>
<td>Clinical – Emergency Medical Technician (EMT Paramedic) – Basic ¹</td>
</tr>
<tr>
<td>EMSP 1371</td>
<td>Introduction to Emergency Medical Technician (EMT) ¹</td>
</tr>
<tr>
<td>EMSP 1501</td>
<td>Emergency Medical Technician ¹</td>
</tr>
<tr>
<td>FIRS 1301</td>
<td>Firefighter Certification I</td>
</tr>
<tr>
<td>FIRS 1313</td>
<td>Firefighter Certification III</td>
</tr>
<tr>
<td>FIRS 1407</td>
<td>Firefighter Certification II</td>
</tr>
</tbody>
</table>

Second Semester
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRS 1319</td>
<td>Firefighter Certification IV</td>
</tr>
<tr>
<td>FIRS 1323</td>
<td>Firefighter Certification V</td>
</tr>
<tr>
<td>FIRS 1329</td>
<td>Firefighter Certification VI</td>
</tr>
<tr>
<td>FIRS 1433</td>
<td>Firefighter Certification VII (Capstone)</td>
</tr>
</tbody>
</table>

1. A student that has the EMT – Basic certificate has met this requirement.
Fire Science
Also see Fire Academy

Department Website:
http://www.collin.edu/firescience

Program Options:
AAS – Fire Officer Certification
OSA – Fire Officer Candidate
Certificate Level 1 – Fire Officer

Firefighters with a well-balanced educational background will be better prepared to serve their communities. Collin College’s Fire Science program is designed to give you the certifications and experience necessary for effective decision-making and leadership skills in the fire department. You will receive the technical knowledge needed to combat the fire problems created by modern living and develop leadership skills required of a Fire Officer.

The program meets the requirements of the Texas Commission on Fire Protection (TCFP). Students certified in Texas as a Basic Firefighter are eligible to take the State Certification Exams for Fire Instructor I, II; and Fire Officer I, II after successfully completing selected courses in the Fire Officer Certificate program.

If your program requires a criminal background check, your placement in a required clinical site, cooperative, practicum, internship, and/or licensure/certification opportunity may be impacted. If you have any questions or concerns, please contact your program director and check with your licensing/certifying entity, if any, to determine your status.

Full-time, full-paid firefighters employed by any political subdivision or active volunteer firefighters meeting the firefighter exemption criteria enrolled in the Fire Science courses within Collin’s Fire Science program may be exempt from paying tuition and laboratory fees for select credit courses.

Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

FUNCTIONAL ABILITIES/CORE PERFORMANCE STANDARDS STATEMENT
Regulations governing this program require all applicants to meet specific functional abilities – some are without accommodations – for admission and/or successful completion of the program. The specific functional requirements are found in the Functional Abilities/Core Performance Standards documents provided in the program information and application packets. Students who think they may not be able to meet the functional standards and need accommodation are encouraged to contact the ACCESS department or Program Director as soon as this program is of interest.

Registration is by permission only. Additional information may be obtained from the Fire Science/EMS Office, the Health Sciences, Biology and Chemistry Office or at the Fire Science website: http://www.collin.edu/firescience.

AAS – Fire Officer Certification
60 credit hours

FIRST YEAR
First Semester
ECON 1301 Introduction to Economics
ENGL 1301 Composition I
MATH 1332 Contemporary Mathematics (Quantitative Reasoning)
(See Mathematics options)
PSYC 2301 General Psychology
SECOND YEAR
First Semester
ENGL 2311 Technical and Business Writing
FIRT 1327 Building Construction in the Fire Service
FIRT 1442 Fire Officer I
FIRT 2305 Fire Instructor I
FIRT 2309 Firefighting Strategies and Tactics I
Second Semester
FIRT 1338 Fire Protection Systems
FIRT 1349 Fire Administration II (Capstone)
FIRT 1443 Fire Officer II
FIRT 2307 Fire Instructor II
FIRT 2351 Company Fire Officer

1. May substitute ECON 2301 or ECON 2302
2. May substitute ANTH 2302, ANTH 2346, ANTH 2351, GOVT 2305, HIST 1301, HIST 1302, HIST 2301, SOCI 1301 or SOCI 1306
3. May substitute BIOL 1408
OSA – Fire Officer Candidate
10 credit hours
FIRT 1442 Fire Officer I
FIRT 2305 Fire Instructor I
FIRT 2309 Firefighting Strategies and Tactics I

Certificate Level 1 – Fire Officer
17 credit hours
First Semester
FIRT 1442 Fire Officer I
FIRT 2305 Fire Instructor I

Second Semester
FIRT 1443 Fire Officer II
FIRT 2307 Fire Instructor II
FIRT 2309 Firefighting Strategies and Tactics I
(Capstone)

Geospatial Information Science (GIS)

Program Options:
AAS – Geospatial Information Science (GIS)
Certificate Level 1 – Geospatial Information Science (GIS)

Every moment of every day, information is being logged about how we live and the world around us. Geospatial Information Science (GIS) uses hardware, software and data to analyze and display location-based information. Learn how to harness that data to solve spatial problems in business, government, environmental studies and geological studies, etc., and present the information in a way that is easy to understand and interpret. GIS specialties include remote sensing, geospatial intelligence and image analysis.

AAS – Geospatial Information Science (GIS)
60 credit hours

FIRST YEAR
First Semester
ENGL 1301 Composition I
GISC 1411 Introduction to Geographic Information Systems (GIS)
GISC 1421 Introduction to Raster-Based Geographic Information Systems (GIS)
ITSW 1307 Introduction to Database – Access

Second Semester
COSC 1315 Introduction to Computer Programming
GISC 1301 Cartography and Geography in Geographical Information Systems (GIS) and Global Positioning Systems (GPS)
GISC 2420 Intermediate Geographic Information Systems (GIS)
ITSW 1304 Introduction to Spreadsheets – Excel
GEN ED Mathematics/Natural Sciences course

SECOND YEAR
First Semester
ENGL 2311 Technical and Business Writing
GISC 2335 Programming for Geographic Information Systems (GIS)
GISC 2402 Geographic Information Systems (GIS) Design with Raster Analysis
GEN ED Humanities/Fine Arts course
ITSE 1311 Beginning Web Programming

Second Semester
DFTG 1309 Basic Computer-Aided Drafting
GEN ED Social/Behavioral Sciences course
GISC 2231 Advanced Problems in Geographic Information Systems (GIS) (Capstone)
GEN ED ELECTIVE *

* Elective (3 credit hours): BIOL 2406, ENVR 1401, GEOG 1301, GEOG 1302, GEOG 1303, GEOL 1305, GEOL 1401, or GEOL 1402

Certificate Level 1 – Geospatial Information Science (GIS)
18 credit hours

First Semester
GISC 1411 Introduction to Geographic Information Systems (GIS)
GISC 1421 Introduction to Raster-Based Geographic Information Systems (GIS)

Second Semester
GISC 2402 Geographic Information Systems (GIS) Design with Raster Analysis
GISC 2420 Intermediate Geographic Information Systems (GIS)

Third Semester
GISC 2231 Advanced Problems in Geographic Information Systems (GIS) (Capstone)
Graphic Design
Program Options:
AAS – Graphic Design
Certificate Level 1 – Graphic Design
Certificate Level 3 – ESC – Advanced Design Illustration
Certificate Level 3 – ESC – Motion Graphics
Certificate Level 3 – ESC – User Experience Design

Want to see what is possible with a career in graphic design? Just look around. Graphic designers provide the visual landscape of our lives, from the art that hangs on our walls to commercial packaging and advertising materials.

Your career in graphic design starts in Collin College's Communication Design department, where you will learn traditional graphic design and art direction concepts that can be molded to meet your career needs. You will learn graphic design for print and/or web work, with an emphasis on strong concept development and production techniques, while exploring areas including website development, animation and interactive media.

In addition to the Associate of Applied Science degree program, the college offers multiple certificates in including advanced design illustration, motion graphics and user experience design.

AAS – Graphic Design
60 credit hours

FIRST YEAR
First Semester
ARTC 1305 Basic Graphic Design
ARTC 1325 Introduction to Computer Graphics
ARTS 1316 Drawing I
ARTV 1371 Storyboard and Concept Development
GEN ED Mathematics/Natural Sciences course

Second Semester
ARTC 1302 Digital Imaging I
ARTC 1317 Design Communication I
ARTC 1327 Typography
ARTC 1353 Computer Illustration I
ENGL 1301 Composition I

SECOND YEAR
First Semester
ARTC 1313 Digital Publishing I
ARTC 1349 Art Direction I
ARTC 2311 History of Communication Graphics
IMED 1316 Web Design I

Second Semester
ARTS 1301 Art Appreciation (see Humanities/Fine Arts options)
ARTC 2335 Portfolio Development for Graphic Design (Capstone)
GEN ED Social/Behavioral Sciences course
ARTC 2347 Design Communication II
or IMED 2315 Web Design II

Certificate Level 1 – Graphic Design
42 credit hours

FIRST YEAR
First Semester
ARTC 1305 Basic Graphic Design
ARTC 1325 Introduction to Computer Graphics
ARTS 1316 Drawing I
ARTV 1371 Storyboard and Concept Development

Second Semester
ARTC 1302 Digital Imaging I
ARTC 1317 Design Communication I
ARTC 1327 Typography
ARTC 1353 Computer Illustration I

SECOND YEAR
First Semester
ARTC 1313 Digital Publishing I
ARTC 1349 Art Direction I
ARTC 2311 History of Communication Graphics
IMED 1316 Web Design I

Second Semester
ARTC 2335 Portfolio Development for Graphic Design (Capstone)
ARTC 2347 Design Communication II
or IMED 2315 Web Design II

Enhanced Skills Certificates
Prior to being admitted into any of the awards listed below, the student must have earned an AAS in Graphic Design, Animation or Digital Video. Please contact the Department Chair for additional information.

2018-19 Collin College Catalog
Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
Certificate Level 3 – ESC – Advanced Design Illustration
12 credit hours

ARTC 1321 Illustration Techniques I
ARTC 2305 Digital Imaging II
ARTC 2340 Computer Illustration II
ELECTIVE *

* Elective (3 credit hours): ARTS 1317, ARTS 2323, ARTS 2348

1. Prior to being admitted into any of these awards, the student must have earned an AAS in Graphic Design, Animation, or Digital Video. Please contact the Associate Dean for Additional information.

Certificate Level 3 – ESC – Motion Graphics
12 credit hours

MUSC 1327 Audio Engineering I
ARTV 1345 3-D Modeling and Rendering I
ARTV 1351 Digital Video
FLMC 2331 Video Graphics and Visual Effects II

1. Prior to being admitted into any of these awards, the student must have earned an AAS in Graphic Design, Animation, or Digital Video. Please contact the Associate Dean for Additional information.

Certificate Level 3 – ESC – User Experience Design
9 credit hours

ARTC 2349 Art Direction II
ARTC 2371 User Experience Design
ELECTIVE *

* Elective (3 credit hours): ARTC 2305 or ARTC 2340

1. Prior to being admitted into any of these awards, the student must have earned an AAS in Graphic Design, Animation, or Digital Video. Please contact the Associate Dean for Additional information.

Health Information Management

Also see Health Information Management/Medical Coding and Billing

Department Website:
http://www.collin.edu/him

Program Option:
AAS – Health Information Management
Certificate Level 2 – Health Information Foundations for Data Forensics and Informatics

A career in Health Information Management (HIM) will put you at the center of a rapidly-growing field that thrives on data. As an HIM professional, you will collect and protect medical information, including patient records and health data. You can help researchers track disease outbreaks, monitor potential health trends and provide up-to-the-minute health information to doctors, hospitals, insurance companies and patients.

All HIM classes are conducted online. A clinical component must also be completed in a Texas health care facility.

Licensure Notice: Students who have been involved with the criminal system, please be advised that your background could keep you from being licensed by the State of Texas. If you have a question about your background and licensure, please speak with your faculty member or the department chair. You also have the right to request a criminal history evaluation letter from the applicable licensing agency.

The Associate of Applied Science (AAS) in Health Information Management (HIM) at Collin College is a 60 credit hour (two academic years) degree program preparing students for a career in health information management, as a health information professional. The program has been accredited by the Commission on Accreditation for Health Informatics and Information Management (CAHIIM) education. Upon successful completion of the coursework and the credential exam (facilitated by the American Health Information Management Association (AHIMA)), the graduate may use the designation RHIT behind the professional signature. Curriculum is based on the AHIMA Foundation’s curricular competencies for the-Registered Health Information Technician (RHIT) credential and is approved by the Texas Higher Education. The program requires selective admission.

The Collin College Health Information Management program has a partnership with the College of St. Scholastica, the nation’s oldest health information management program. Collin College HIM graduates have the opportunity to continue their HIM Bachelor of Science (BS) studies online with St. Scholastica and sit for the
RHIA certification. This academic agreement maximizes the transfer of Collin credit and allows Collin students to complete some BS courses at Collin with Collin’s lower tuition costs. For more information, see your Collin Advisor.

ACCREDITATION
The AAS in Health Information Management is accredited through the CAHIIM. They may be contacted at:
233 N. Michigan Ave., 21st floor
Chicago, IL 60601-5800
312.233.1100
www.cahiim.org

SPECIAL ADMISSION REQUIREMENTS
Admission to the AAS – HIM program is selective and based on a point system. Admission is limited to 25 students per semester. Application deadlines are the 2nd Friday in November and 2nd Friday in May. The application is found on the HIM program website: www.collin.edu/him under “Forms” and should be submitted to the department office via email, fax, or mail by the appropriate deadline.

Eligibility requirements for application to AAS-HIM program:
- Complete Collin College Admission requirements
- Complete Collin College reading, writing and mathematics assessments, placing at the College-Level (TSI Testing).
- Overall GPA of 2.5. Please note that a grade of “C” or better must be earned in all HIM specific courses including HITT 1305, HITT 2471 and BIOL 2404.
- Completion of the Test of Essential Academic Skills (TEAS), prior to Application Deadline, with satisfactory results. Registration details on the department webpage www.collin.edu/him
- Complete HIM packet.
- A complete HIM packet includes:
  - Completed HIM Application:
  - Consent for background check
  - Consent for drug screening
  - Immunization documentation – List of required immunizations are on the HIM webpage Note: Hepatitis B is typically a 7 month process. The TB screen and flu vaccine have a 12 month expiration.
  - Signed Functional Abilities/Core Performance Standards for Health Information Management Program - Clinical Expectations. Students who think they may not be able to meet the functional standards and need accommodation are encouraged to contact the college ACCESS department as soon as this program is of interest.
- A 500 word essay explaining why you have chosen to become a Health Information professional.
- Two letters of reference from employers or teachers (not family or friends) that can attest to your professionalism. Letters should be emailed to Michelle Millen, Program Director: MMillen@collin.edu
- TEAS test scores – Applicants must score a 60% or better on three of the four tested areas.

After Admission
- Earn a grade of “C” or better in all major course work and maintain a 2.5 GPA to continue in the HIM program.
- All Clinical requirements may be found on the webpage at www.collin.edu/him . Submit all necessary documentation for Clinical consideration PRIOR to first Clinical experience. The Clinical courses are HITT 1160 and HITT 2361.

AAS – Health Information Management
60 credit hours

PREREQUISITES
BIOL 2404 Human Anatomy and Physiology Basic 1
ENGL 1301 Composition I
HITT 1305 Medical Terminology I
HITT 2471 Pathophysiology and Pharmacology
HUMA 1301 Introduction to Humanities I
(See Humanities/Fine Arts options)
GEN ED Social/Behavioral Sciences Course

FIRST YEAR
First Semester
HITT 1301 Health Data Content and Structure
HITT 1311 Health Information Systems
HITT 1341 Coding and Classification Systems
HPRS 2232 Health Care Communications
MATH 1342 Elementary Statistical Methods

Second Semester
HITT 1160 Clinical I – Health Information/Medical Records Technology
HITT 1345 Health Care Delivery Systems
HITT 1353 Legal and Ethical Aspects of Health Information
HITT 2346 Advanced Medical Coding
HITT 2435 Coding and Reimbursement Methodologies

Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
SECOND YEAR

First Semester
HITT 2249  RHIT Competency Review
HITT 2339  Health Information Organization and Supervision
HITT 2361  Clinical II – Health Information/Medical Records Technology (Capstone)
HITT 2443  Quality Assessment and Performance Improvement

* No course substitutions

Certificate Level 2 - Health Information Foundations for Data Forensics and Informatics
21 credit hours
(Designed for the IT person interested in moving into Health Information Management and Reporting)

First Semester
HITT 1301  Health Data Content and Structure
HITT 1305  Medical Terminology I
HITT 1311  Health Information Systems
HITT 1341  Coding and Classification System
HPRS 2232  Health Care Communications

Second Semester
MATH 1342  Elementary Statistical Methods
HITT 2472  Portfolio Development (Capstone)

Certificate Level 1 – Medical Coding and Billing
30 credit hours

PREREQUISITES
BIOL 2404  Human Anatomy and Physiology Basic
HITT 1305  Medical Terminology I
HITT 2471  Pharmacology and Pathophysiology

FIRST YEAR

First Semester
HITT 1301  Health Data Content and Structure
HITT 1311  Health Information Systems
HITT 1341  Coding and Classification Systems

Second Semester
HITT 1353  Legal and Ethical Aspects of Health Information
HITT 2346  Advanced Medical Coding (Capstone)
HITT 2435  Coding and Reimbursement Methodologies

Health Professions

Department Website:
http://www.collin.edu/department/healthprofessions/

Program Options:
AAS – Health Professions
- Certified Nurse Aide (CNA) Track
- Electrocardiograph Technician (EKG) Track
- Emergency Medical Technician (EMT) Track
- Patient Care Technician (PCT) Track
- Phlebotomy Technician (PHLEB) Track

OSA – Health Professions
- Certified Nurse Aide (CNA) Track
- Electrocardiograph Technician (EKG) Track
- Phlebotomy Technician (PHLEB) Track

OSA – Patient Care Technician
Certificate Level 1 – Health Professions
- Certified Nurse Aide (CNA) Track
- Electrocardiograph Technician (EKG) Track
- Patient Care Technician (PCT) Track
- Phlebotomy Technician (PHLEB) Track

Certificate Level 1 – Emergency Medical Technician (EMT)

Collin College's Health Professions curriculum provides you with the training and knowledge you need for a rewarding career as a Certified Nurse Aide (CNA), Electrocardiography (EKG) Technician, Patient Care Technician (PCT), Emergency Medical Technician (EMT)

Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

Certificate Level 1 – Medical Coding and Billing
30 credit hours

PREREQUISITES
BIOL 2404  Human Anatomy and Physiology Basic
HITT 1305  Medical Terminology I
HITT 2471  Pharmacology and Pathophysiology

Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
or Phlebotomy Technician (PHLEB). The five career tracks allow you to choose the specialization that best fits your career goals. All offer an in-depth education with hands-on experience, thanks to staff that has worked in the field and state-of-the-art simulation equipment that puts our students in reality-based training scenarios.

The variety of options in Health Professions also allows you to build your knowledge and skills as you progress through the different levels of awards. You can earn occupational skills awards (OSA) and certificates on your way to an associate of applied science in Health Professions, providing you with the chance to work in your field as you continue your education.

If your program requires a criminal background check, your placement in a required clinical site, cooperative, practicum, internship, and/or licensure/certification opportunity may be impacted. If you have any questions or concerns, please contact your program director and check with your licensing/certifying entity, if any, to determine your status.

The curriculum contains both transfer and workforce courses. The workforce courses are mainly offered at the Central Park Campus (CPC). For additional information, please contact the Health Sciences Office, at CPC, Room H200, or call 972.548.6679.

**FUNCTIONAL ABILITIES/CORE PERFORMANCE STANDARDS STATEMENT**

After initial acceptance to this program, all students are required to meet specific functional abilities with or without accommodations for successful completion of the program and to function safely and effectively in the variety of the profession’s settings. The specific functional requirements are found in “Functional Abilities/Core Performance Standards” documents provided in the program information and application packets. Students who think they may not be able to meet the functional standards and need accommodation are encouraged to contact the college ACCESS department as soon as this program is of interest.

Prior to enrolling in any clinical courses, students must complete all immunizations required by the Texas Department of State Health Services (TDSHS)*. All required workforce courses require a minimum grade of “C” to continue in the program.

*It is important to note that one of the required vaccinations, Hepatitis B, consists of a three dose series, which can take up to 7 months to complete. Individuals unable to receive the HBV must inform the Program Coordinator. In such cases, the applicant must sign a declination form. All immunizations must be complete before assignment to clinical training.

**Health Insurance** - All Health Profession students are required to show proof of health insurance prior to starting clinical rotations each semester.

**AAS – Health Professions-Certified Nurse Aide (CNA) Track**

60 credit hours

**FIRST YEAR**

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BIOL 1406</td>
<td>4</td>
<td>Biology for Science Majors I</td>
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<tr>
<td>ENGL 1301</td>
<td>3</td>
<td>Composition I</td>
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<tr>
<td>GOVT 2305</td>
<td>3</td>
<td>Federal Government (Federal constitution and topics)</td>
</tr>
<tr>
<td>HIST 1301</td>
<td>3</td>
<td>United States History I</td>
</tr>
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<td>HITT 1305</td>
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**Second Semester**

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<td>PSYC 2301</td>
<td>3</td>
<td>General Psychology 2</td>
</tr>
<tr>
<td>HPRS 1204</td>
<td>3</td>
<td>Basic Health Profession Skills 3</td>
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<tr>
<td>HPRS 2232</td>
<td>3</td>
<td>Health Care Communications</td>
</tr>
<tr>
<td>SPCH 1311</td>
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<td>Introduction to Speech Communication</td>
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(See Speech Options)

**Summer Semester**

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(See Mathematics options)

**SECOND YEAR**

**First Semester**

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<tr>
<th>Course</th>
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<tr>
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<td>Legal and Ethical Aspects of Health Information</td>
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<td>HPRS 1303</td>
<td>3</td>
<td>End of Life Issues</td>
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<tr>
<td>HPRS 2301</td>
<td>3</td>
<td>Pathophysiology</td>
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<tr>
<td>NURA 1301</td>
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**Second Semester**

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<tr>
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<td>HITT 2328</td>
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<td>Introduction to Public Health</td>
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<tr>
<td>HPRS 1310</td>
<td>3</td>
<td>Introduction to Pharmacology</td>
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<td>NURA 1160</td>
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**GEN ED**

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<td>Trends in Healthcare (Capstone)</td>
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1. May substitute ECON 1301, ECON 2301, or ECON 2302
2. May substitute ANTH 2302, ANTH 2346, ANTH 2351, HIST 1302, HIST 2301, SOCI 1301, or SOCI 1306
3. May substitute HPRS 1271
AAS – Health Professions-Electrocardiograph Technician (EKG) Track
60 credit hours

FIRST YEAR
First Semester
BIOL 1406 Biology for Science Majors I
ENGL 1301 Composition I
GOVT 2305 Federal Government (Federal constitution and topics) ¹
HIST 1301 United States History I
HITT 1305 Medical Terminology I

Second Semester
ENGL 1302 Composition II
PSYC 2301 General Psychology
HPRS 1204 Basic Health Profession Skills ³
HPRS 2232 Health Care Communications
SPCH 1311 Introduction to Speech Communication
(See Speech Options)

Summer Semester
MATH 1314 College Algebra
(See Mathematics options)

SECOND YEAR
First Semester
DSAE 1340 Diagnostic Electrocardiography
ECRD 1111 Electrocardiography
HITT 1353 Legal and Ethical Aspects of Health Information
HPRS 1303 End of Life Issues
HPRS 2301 Pathophysiology

Second Semester
HITT 1345 Health Care Delivery Systems
HITT 2328 Introduction to Public Health
HPRS 1310 Introduction to Pharmacology
GEN ED Humanities/Fine Arts course

Summer Semester
HPRS 2374 Trends in Healthcare (Capstone)

1. May substitute ECON 1301, ECON 2301, ECON 2302
2. May Substitute ANTH 2302, ANTH 2346, ANTH 2351, HIST 1302, HIST 1302, HIST 2301, SOCI 1301 or SOCI 1306
3. May substitute HPRS 1271

AAS – Health Professions – Emergency Medical Technician (EMT) Track
60 credit hours

FIRST YEAR
First Semester
BIOL 1406 Biology for Science Majors I
ENGL 1301 Composition I
GOVT 2305 Federal Government (Federal constitution and topics) ¹
HIST 1301 United States History I
HITT 1305 Medical Terminology I

Second Semester
ENGL 1302 Composition II
PSYC 2301 General Psychology
HPRS 1204 Basic Health Profession Skills ³
HPRS 2232 Health Care Communications
SPCH 1311 Introduction to Speech Communication
(See Speech Options)

Summer Semester
MATH 1314 College Algebra (See Mathematics options)

SECOND YEAR
First Semester
EMSP 1160 Clinical – Emergency Medical Technician (EMT Paramedic) – Basic
EMSP 1371 Introduction to Emergency Medical Technician (EMT)
EMSP 1501 Emergency Medical Technician
HITT 1353 Legal and Ethical Aspects of Health Information

Second Semester
HITT 1345 Health Care Delivery Systems
HPRS 1191 Special Topics in Health Professions and Related Sciences, Other
HPRS 1310 Introduction to Pharmacology
HPRS 2301 Pathophysiology
GEN ED Humanities/Fine Arts course

Summer Semester
HPRS 2374 Trends in Healthcare (Capstone)

1. May substitute ECON 1301, ECON 2301, ECON 2302
2. May Substitute ANTH 2302, ANTH 2346, ANTH 2351, HIST 1302, HIST 2301, SOCI 1301 or SOCI 1306
3. May substitute HPRS 1271

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Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
### AAS – Health Professions-Patient Care Technician (PCT) Track

60 credit hours

**FIRST YEAR**

**First Semester**
- **BIOL 1406** Biology for Science Majors I
- **ENGL 1301** Composition I
- **GOVT 2305** Federal Government (Federal constitution and topics)
- **HIST 1301** United States History I
- **HITT 1305** Medical Terminology I

**Second Semester**
- **ENGL 1302** Composition II
- **PSYC 2301** General Psychology
- **HPRS 1204** Basic Health Profession Skills
- **HPRS 2232** Health Care Communications
- **SPCH 1311** Introduction to Speech Communication

*See Speech Options*

**Summer Semester**
- **MATH 1314** College Algebra (See Mathematics options)

**SECOND YEAR**

**First Semester**
- **DSAE 1340** Diagnostic Electrocardiography
- **ECRD 1111** Electrocardiography
- **HITT 1353** Legal and Ethical Aspects of Health Information
- **HPRS 2301** Pathophysiology
- **NURA 1301** Nurse Aide for Health Care

**Second Semester**
- **HITT 1345** Health Care Delivery Systems
- **HPRS 1310** Introduction to Pharmacology
- **PLAB 1323** Phlebotomy
- **PLAB 1160** Clinical – Phlebotomy

*Humanities/Fine Arts course*

**Summer Semester**
- **HPRS 1191** Special Topics in Health Professions and Related Sciences, Other
- **NURA 1160** Clinical – Nursing Aide and Patient Care Assistant (Capstone)

1. **May substitute ECON 1301, ECON 2301, or ECON 2302**
2. **May substitute ANTH 2302, ANTH 2346, ANTH 2351, HIST 1302, HIST 2301, SOCI 1301, or SOCI 1306**
3. **May substitute HPRS 1271**

### AAS – Health Professions-Phlebotomy Technician (PHLEB) Track

60 credit hours

**FIRST YEAR**

**First Semester**
- **BIOL 1406** Biology for Science Majors I
- **ENGL 1301** Composition I
- **GOVT 2305** Federal Government (Federal constitution and topics)
- **HIST 1301** United States History I
- **HITT 1305** Medical Terminology I

**Second Semester**
- **ENGL 1302** Composition II
- **PSYC 2301** General Psychology
- **HPRS 1204** Basic Health Profession Skills
- **HPRS 2232** Health Care Communications
- **SPCH 1311** Introduction to Speech Communication

*See Speech Options*

**Summer Semester**
- **MATH 1314** College Algebra

**SECOND YEAR**

**First Semester**
- **HITT 1353** Legal and Ethical Aspects of Health Information
- **HITT 2328** Introduction to Public Health
- **HPRS 1303** End of Life Issues
- **HPRS 2301** Pathophysiology

**Second Semester**
- **HITT 1345** Health Care Delivery Systems
- **HPRS 1310** Introduction to Pharmacology
- **PLAB 1323** Phlebotomy
- **PLAB 1160** Clinical – Phlebotomy

*Humanities/Fine Arts course*

**Summer Semester**
- **HPRS 2374** Trends in Healthcare (Capstone)

1. **May substitute ECON 1301, ECON 2301, or ECON 2302**
2. **May substitute ANTH 2302, ANTH 2346, ANTH 2351, HIST 1302, HIST 2301, SOCI 1301, or SOCI 1306**
3. **May substitute HPRS 1271**

**Occupational Skills Awards**

Courses used in these awards, except HITT 1305 and HPRS 1271, are offered at the Central Park Campus and through dual-credit at select high schools. Please contact the Health Sciences, Biology and Chemistry Office at the Central Park Campus (CPC), Room B122G, or call 972.548.6679 for additional information.
OSA – Health Professions-Certified Nurse Aide (CNA) Track
9 credit hours

HITT 1305 Medical Terminology I
HPRS 1271 Introduction to the Healthcare System
NURA 1160 Clinical – Nursing Aide and Patient Care Assistant
NURA 1301 Nurse Aide for Health Care

1. May substitute HPRS 1204

OSA – Health Profession-Electrocardiography (EKG) Track
9 credit hours

DSAE 1340 Diagnostic Electrocardiography
ECRD 1111 Electrocardiography
HITT 1305 Medical Terminology I
HPRS 1271 Introduction to the Healthcare System

1. May substitute HPRS 1204

OSA – Health Professions-Phlebotomy (PHLEB) Track
9 credit hours

HITT 1305 Medical Terminology I
HPRS 1271 Introduction to the Healthcare System
PLAB 1160 Clinical – Phlebotomy
PLAB 1323 Phlebotomy

1. May substitute HPRS 1204

OSA – Patient Care Technician
This award requires successful CNA, PHLEB and EKG course completion.
12 credit hours

DSAE 1340 Diagnostic Electrocardiography
ECRD 1111 Electrocardiography
NURA 1160 Clinical – Nursing Aide and Patient Care Assistant
NURA 1301 Nurse Aide for Health Care
PLAB 1323 Phlebotomy
PLAB 1360 Clinical – Phlebotomy

Certificate Level 1 – Health Professions-Certified Nurse Aide (CNA) Track
15 credit hours

FIRST YEAR
First Semester
HPRS 1204 Basic Health Profession Skills
HITT 1305 Medical Terminology I

Second Semester
NURA 1301 Nurse Aide for Health Care
ELECTIVE *
ELECTIVE *

Third Semester
NURA 1160 Clinical – Nursing Aide and Patient Care Assistant (Capstone)
1. May substitute HPRS 1271

* Elective (6 credit hours): HITT 1311, HITT 1345, HITT 1353, HITT 2328, HPRS 1303, HPRS 1310, HPRS 2232, HPRS 2301

Certificate Level 1 – Health Professions – Electrocardiograph Technician (EKG) Track
15 credit hours

FIRST YEAR
First Semester
HPRS 1204 Basic Health Profession Skills
HITT 1305 Medical Terminology I

Second Semester
DSAE 1340 Diagnostic Electrocardiography (Capstone)
ECRD 1111 Electrocardiography
ELECTIVE *
ELECTIVE *

1. May substitute HPRS 1271

* Elective (6 credit hours): HITT 1311, HITT 1345, HITT 1353, HITT 2328, HPRS 1303, HPRS 1310, HPRS 2232, HPRS 2301

Certificate Level 1 – Health Professions-Patient Care Technician (PCT) Track
17 credit hours

FIRST YEAR
First Semester
HPRS 1204 Basic Health Profession Skills
HITT 1305 Medical Terminology I

Second Semester
DSAE 1340 Diagnostic Electrocardiography
ECRD 1111 Electrocardiography
PLAB 1160 Clinical – Phlebotomy
PLAB 1323 Phlebotomy
PLAB 1360 Clinical – Phlebotomy
NURA 1301 Nurse Aide for Health Care

Summer Semester
NURA 1160 Clinical – Nursing Aide and Patient Care Assistant (Capstone)
1. May substitute HPRS 1271
Certificate Level 1 – Health Professions-Phlebotomy Technician (PHLEB) Track
15 credit hours

FIRST YEAR
First Semester
HPRS 1204 Basic Health Profession Skills 1
HITT 1305 Medical Terminology I

Second Semester
PLAB 1160 Clinical – Phlebotomy (Capstone)
PLAB 1323 Phlebotomy
ELECTIVE *
ELECTIVE *

1. May substitute HPRS 1271

* Elective (6 credit hours): HITT 1311, HITT 1345, HITT 1353, HITT 2328, HPRS 1303, HPRS 1310, HPRS 2232, HPRS 2301

Certificate Level 1 – Emergency Medical Technician (EMT)
16 credit hours

FIRST YEAR
First Semester
BIOL 2404 Human Anatomy and Physiology Basic
HITT 1305 Medical Terminology I
EMSP 1160 Clinical – Emergency Medical Technician (EMT Paramedic) – Basic (Capstone)
EMSP 1371 Introduction to Emergency Medical Technician (EMT)
EMSP 1501 Emergency Medical Technician

No matter where you may move in life, there will be a market for hospitality and food service employees. A degree in hospitality and food service management will prepare you for a career in the largest service industry in the world, with the knowledge and the skills to manage hotels, restaurants, tourist attractions or other businesses. The program offers two concentrations, one in hotel and restaurant management, and the other in meeting and event management.

A part of the college’s Institute of Hospitality and Culinary Education (IHCE), classes are taught by industry professionals who emphasize problem-solving, creativity and industry involvement, in addition to practical on-the-job experience. By the time you completed an Associate of Applied Science degree from Collin, you will have achieved more than 300 hours of work experience directly related to your chosen field. The program also offers certificates, so you can get a quicker return on your educational investment as you build toward an AAS degree.

If your program requires a criminal background check, your placement in a required clinical site, cooperative, practicum, internship, and/or licensure/certification opportunity may be impacted. If you have any questions or concerns, please contact your program director and check with your licensing/certifying entity, if any, to determine your status.

Day and night classes are open-entry courses that provide a flexible schedule and meet a variety of individual needs.

ACCREDITATION
The Hospitality & Foodservice Management program is accredited by the Accreditation Commission for Programs in Hospitality Administration (ACPHA).
http://www.acpha-cahm.org/

TRANSFER
Articulation agreements are being developed with nationally recognized hospitality programs such as the Texas Tech University – Restaurant, Hotel & Institutional Management, Business & Hotel Management School, Lucerne – Switzerland, and the Conrad N. Hilton School of Hotel & Restaurant Management – University of Houston.

Students planning to transfer to a college or university should check with a Collin academic advisor. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.
### AAS – Hospitality and Food Service Management – Hotel/Restaurant Management Track

60 credit hours

**FIRST YEAR**

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CHEF 1305</td>
<td>Sanitation and Safety 1, 2</td>
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<tr>
<td>ENGL 1301</td>
<td>Composition I</td>
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<tr>
<td>HAMG 1321</td>
<td>Introduction to Hospitality Industry ~</td>
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<tr>
<td>HAMG 1340</td>
<td>Hospitality Legal Issues</td>
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<tr>
<td>TRVM 2301</td>
<td>Introduction to Convention/Meeting Management ~</td>
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**Second Semester**

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<td>HAMG 1313</td>
<td>Front Office Management ~</td>
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<tr>
<td>HAMG 1324</td>
<td>Hospitality Human Resources Management ~</td>
</tr>
<tr>
<td>HAMG 2337</td>
<td>Hospitality Facilities Management ~</td>
</tr>
<tr>
<td>GEN ED</td>
<td>Humanities/Fine Arts course</td>
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<tr>
<td>RSTO 1325</td>
<td>Purchasing for Hospitality Operations ~</td>
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**Third Semester**

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<tr>
<td>MATH 1332</td>
<td>Contemporary Mathematics (Quantitative Reasoning) (See Mathematics options)</td>
</tr>
<tr>
<td>GEN ED</td>
<td>Social/Behavioral Sciences course</td>
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**SECOND YEAR**

**First Semester**

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<th>Course</th>
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<tbody>
<tr>
<td>HAMG 2301</td>
<td>Principles of Food and Beverage Operations ~</td>
</tr>
<tr>
<td>HAMG 2307</td>
<td>Hospitality Marketing and Sales ~</td>
</tr>
<tr>
<td>HAMG 2380</td>
<td>Cooperative Education – Hospitality Administration/Management, General ~</td>
</tr>
<tr>
<td>SPCH 1321</td>
<td>Business and Professional Communication (See Speech Options)</td>
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**Second Semester**

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<tr>
<td>HAMG 2305</td>
<td>Hospitality Management and Leadership (Capstone) ~</td>
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<tr>
<td>HAMG 2332</td>
<td>Hospitality Financial Management ~</td>
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<tr>
<td>RSTO 2307</td>
<td>Catering</td>
</tr>
<tr>
<td>ELECTIVE *</td>
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</table>

* Offered in eight-week format

1. Certification in ServSafe
2. Certification in Food Protection Management

*Elective (3 Credit Hours): CHEF 1301, CHEF 1305, HAMG 1313~, HAMG 2337~ or PSTR 1301~

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### AAS – Hospitality and Food Service Management – Meetings and Event Management Track

60 credit hours

**FIRST YEAR**

**First Semester**

<table>
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<th>Course</th>
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<tbody>
<tr>
<td>ENGL 1301</td>
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<td>HAMG 1321</td>
<td>Introduction to Hospitality Industry ~</td>
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<tr>
<td>HAMG 1340</td>
<td>Hospitality Legal Issues</td>
</tr>
<tr>
<td>TRVM 1327</td>
<td>Special Events Design ~</td>
</tr>
<tr>
<td>TRVM 2301</td>
<td>Introduction to Convention/Meeting Management ~</td>
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**Second Semester**

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<th>Course</th>
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<tbody>
<tr>
<td>GEN ED</td>
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<tr>
<td>HAMG 1324</td>
<td>Hospitality Human Resources Management ~</td>
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<tr>
<td>TRVM 1323</td>
<td>Group Tour Operations ~</td>
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<tr>
<td>TRVM 2341</td>
<td>International Convention/Meeting Management ~</td>
</tr>
<tr>
<td>TRVM 2355</td>
<td>Exposition and Trade Show Operations ~</td>
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**Third Semester**

<table>
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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>GEN ED</td>
<td>Social/Behavioral Sciences course</td>
</tr>
<tr>
<td>MATH 1332</td>
<td>Contemporary Mathematics (Quantitative Reasoning) (See Mathematics options)</td>
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</table>

**SECOND YEAR**

**First Semester**

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<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>HAMG 2301</td>
<td>Principles of Food and Beverage Operations ~</td>
</tr>
<tr>
<td>HAMG 2307</td>
<td>Hospitality Marketing and Sales ~</td>
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<tr>
<td>SPCH 1321</td>
<td>Business and Professional Communication (See Speech Options)</td>
</tr>
<tr>
<td>TRVM 2380</td>
<td>Cooperative Education – Tourism and Travel Services Management ~</td>
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**Second Semester**

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<th>Course</th>
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<tbody>
<tr>
<td>HAMG 2305</td>
<td>Hospitality Management and Leadership (Capstone) ~</td>
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<td>HAMG 2332</td>
<td>Hospitality Financial Management ~</td>
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<tr>
<td>RSTO 2307</td>
<td>Catering</td>
</tr>
<tr>
<td>ELECTIVE *</td>
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</tbody>
</table>

* Offered in eight-week format

* Elective (3 credit hours): CHEF 1301, CHEF 1305, HAMG 1313~, HAMG 2337~ or PSTR 1301~
Certificate Level 1 – Hotel/Restaurant Management
21 credit hours

FIRST YEAR
First Semester
CHEF 1305 Sanitation and Safety 1, 2
HAMG 1321 Introduction to Hospitality Industry
HAMG 1340 Hospitality Legal Issues
RSTO 1325 Purchasing for Hospitality Operations

Second Semester
HAMG 1324 Hospitality Human Resources Management
HAMG 2337 Hospitality Facilities Management (Capstone)
HAMG 1313 Front Office Management
Or
HAMG 2301 Principles of Food and Beverage Operations

1. Certification in ServSafe
2. Certification in Food Protection Management
~Offered in eight-week format

Certificate Level 1 – Meetings and Event Management
21 credit hours

FIRST YEAR
First Semester
HAMG 1321 Introduction to Hospitality Industry
HAMG 1340 Hospitality Legal Issues
TRVM 1327 Special Events Design
TRVM 2301 Introduction to Convention/Meeting Management

Second Semester
TRVM 1323 Group Tour Operations
TRVM 2341 International Convention/Meeting Management (Capstone)
TRVM 2355 Exposition and Trade Show Operations
~Offered in eight-week format

HVAC (Heating, Ventilation, Air Conditioning)

Program Options:
AAS – HVAC (Heating, Ventilation, Air Conditioning)
Certificate Level 1 – HVAC (Heating, Ventilation, Air Conditioning)
Certificate Level 2 – HVAC (Heating, Ventilation, Air Conditioning)

The need for qualified heating, ventilation, air conditioning (HVAC) technicians is never going away. Collin College can teach you what it takes to work in the residential HVAC industry installing and servicing gas and electric furnaces and heat pump systems.

You will learn how to work safely and responsibly within Environmental Protection Agency guidelines and standards that apply to the HVAC industry, and identify and use HVAC equipment, components and tools, while understanding their functions within the industry. You will also learn common mechanical, electrical and electronic components such as compressors, switches, thermostats, motors and fans. You will even be able to practice all of the techniques you learn with heat pumps, heating units, a/c units, refrigeration units and more with hands-on instruction in Collin College facilities.

If your program requires a criminal background check, your placement in a required clinical site, cooperative, practicum, internship, and/or licensure/certification opportunity may be impacted. If you have any questions or concerns, please contact your program director and check with your licensing/certifying entity, if any, to determine your status.

Students planning to transfer to a college or university should check with the Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

AAS – HVAC (Heating, Ventilation, Air Conditioning)
60 credit hours

FIRST YEAR
First Semester
ENGL 1301 Composition I
HART 1256 EPA Recovery Certification Preparation
HART 1301 Basic Electricity for HVAC
HART 1307 Refrigeration Principles
HART 1403 Air Conditioning Control Principles
SECOND SEMESTER
HART 1441 Residential Air Conditioning
HART 1445 Gas and Electric Heating
HART 2449 Heat Pumps
SPCH 1321 Business and Professional Communication (See Speech options)

SECOND YEAR
First Semester
HART 2436 Air Conditioning Troubleshooting
HART 2438 Air Conditioning Installation and Startup
HART 2442 Commercial Refrigeration
GEN ED Mathematics course

Second Semester
ECON 1301 Introduction to Economics
HART 2268 Practicum – Heating, Air Conditioning and Refrigeration Technology/Technician (Capstone)
HART 2345 Residential Air Conditioning Systems Design
HART 2341 Advanced Electricity for HVAC
GEN ED Humanities/Fine Arts course

1. May substitute ECON 2301, ECON 2302, or PAVC 2301

Certificate Level 1 – HVAC (Heating, Ventilation, Air Conditioning)
24 credit hours

FIRST YEAR
First Semester
HART 1256 EPA Recovery Certification Preparation
HART 1301 Basic Electricity for HVAC
HART 1307 Refrigeration Principles
HART 1403 Air Conditioning Control Principles

Second Semester
HART 1441 Residential Air Conditioning
HART 1445 Gas and Electric Heating
HART 2449 Heat Pumps

Verification of Workplace Competencies: Obtaining Industry Certification (NATE)

Certificate Level 2 – HVAC
(Heating, Ventilation, Air Conditioning)
42 credit hours

Students must be TSI complete.

FIRST YEAR
First Semester
ENGL 1301 Composition I
HART 1256 EPA Recovery Certification Preparation
HART 1301 Basic Electricity for HVAC

HART 1307 Refrigeration Principles
HART 1403 Air Conditioning Control Principles

SECOND SEMESTER
HART 1441 Residential Air Conditioning
HART 1445 Gas and Electric Heating
HART 2449 Heat Pumps
SPCH 1321 Business and Professional Communication (See Speech options)

SECOND YEAR
First Semester
HART 2436 Air Conditioning Troubleshooting
HART 2438 Air Conditioning Installation and Startup
HART 2442 Commercial Refrigeration

Verification of Workplace Competencies: Obtaining Industry Certification (NATE)

Information Systems Cybersecurity

Program Options:
AAS – Information Systems Cybersecurity
Certificate Level 1 – Information Systems Cybersecurity
Certificate Level 1 – CISSP Information Systems Cybersecurity Professional

With high-profile information breaches and identity thefts in the news regularly, the need to secure data and the systems that store it has never been more important. Play your part in keeping important information safe with a certificate or degree from Collin College’s Information Systems Cybersecurity program.

Collin’s cybersecurity program will prepare you for a career in cybersecurity management and support with an education in network management, system administration, technical support, hardware/software installation and equipment repair. Courses and hands-on labs will prepare you to take a variety of Cisco, Microsoft and CompTIA certification examinations. As a graduate with an Associate of Applied Science, you will be able to design and install secure network systems based on customer requirements, monitor and maintain network traffic and security, and maintain network hardware and software.

If your program requires a criminal background check, your placement in a required clinical site, cooperative, practicum, internship, and/or licensure/certification opportunity may be impacted. If you have any questions or concerns, please contact your program director and check with your licensing/certifying entity, if any, to determine your status.

2018-19 Collin College Catalog
Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

**AAS – Information Systems Cybersecurity**
60 credit hours

Many ITCC, ITMT, ITNW, and ITSY courses are offered in eight-week express sessions.

**FIRST YEAR**
First Semester
ITNW 1358  Network +
CPMT 1305  IT Essentials I: PC Hardware and Software
ITMT 1371  Configuring and Supporting Microsoft Windows 10 (70-698)
ITMT 1372  Installation, Storage and Computing With Windows

Second Semester
GEN ED  Mathematics course
ITCC 1314  CCNA 1: Cisco – Introduction to Networks
ITMT 1373  Networking with Windows Server 2016
ITSC 1316  Linux Installation and Configuration

**SECOND YEAR**
First Semester
ITSY 2300  Operating System Security
ITSY 2301  Firewalls and Network Security
ITSY 2342  Incident Response and Handling

Second Semester
GEN ED  Humanities/Fine Arts course
ITCC 2341  Security Management Practices (Capstone)
ITSY 2343  Computer System Forensics
SPCH 1321  Business and Professional Communication (See Speech Options)

* Electives (6 credit hours): ITSY 1300 (recommended) or ITSY 2572 (recommended), or any ITCC, ITNW, ITMT, or ITSY course not listed above

**Certificate Level 1 – Information Systems Cybersecurity**
33-35 credit hours

Many ITCC, ITMT, ITNW, and ITSY courses are offered in eight-week express sessions.

**FIRST YEAR**
First Semester
ITCC 1314  CCNA 1: Cisco – Introduction to Networks
ITMT 1372  Installation, Storage and Computing with Windows Server 2016
ITNW 1358  Network +

Second Semester
ITCC 1340  CCNA 2: Routing and Switching Essentials
ITMT 1373  Networking with Windows Server 2016

**SECOND YEAR**
First Semester
ITAL 2250  Operating System Security
ITAL 2251  Firewalls and Network Security
ITAL 2242  Incident Response and Handling

Second Semester
IALS 2241  Security Management Practices (Capstone)
IALS 2243  Computer System Forensics

* Elective (3-5 credit hours): ITMT 2304, ITSY 1300 or ITSY 2572

**Certificate Level 1 – CISSP Information Systems Cybersecurity Professional**
17 credit hours

Many ITCC, ITMT, ITNW, and ITSY courses are offered in eight-week express sessions.

**First Year**
First Semester
ITNW 1358  Network +

Second Semester
ITAL 1300  Fundamentals of Information Security
ITAL 2341  Security Management Practices
ITAL 2572  Certified Information Systems Security Professional (CISSP) Common Body of Knowledge Domain Instruction (Capstone)

* Elective (3 credit hours): Any ITSY course not listed above, with consent of the Associate Dean

2018-19 Collin College Catalog
Please refer to [http://www.collin.edu/academics/programs/index.html](http://www.collin.edu/academics/programs/index.html) for the most current information.
Interior Design

Program Options:
AAS – Interior Design
OSA – Interior Design
Certificate Level 1 – Interior Design
Certificate Level 1 – Advanced Interior Design

As an interior designer, you can shape the way your clients interact with the world. With Collin College’s Interior Design program, you will learn how to use space effectively and responsibly, considering your supply sourcing, client needs and other factors.

You will learn skills important to any architect or interior designer, including spatial composition, drafting, space planning, building codes and material selection. Students are immediately valuable to employers because of the college’s strong curriculum in computer-aided design drafting, and the program’s strengths in advanced levels of drafting and modeling means you can position yourself within interior and architectural design firms to continue your training.

Interior Design is a state-licensed profession and all state requirements must be met before either title can be used.

Students planning to transfer to a college or university should check with the Collin academic advisor. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

All new students: Please contact one of the Interior Design faculty or the college academic advisor prior to registering for any INDS courses. Please call 972.377.1029 to make an appointment with a faculty member.

AAS – Interior Design
60 credit hours

Many ITCC, ITMT, ITNW, and ITSY courses are offered in eight-week express sessions.

FIRST YEAR
First Semester
DFTG 1309 Basic Computer-Aided Drafting
INDS 1301 Basic Elements of Design
INDS 1341 Color Theory and Application
INDS 1371 Introduction to Green Design
SPCH 1321 Business and Professional Communication (See Speech options)

Second Semester
INDS 1351 History of Interiors I
INDS 1372 Computer-Aided Drafting for Interior Designers
INDS 1349 Fundamentals of Space Planning
MATH 1324 Mathematics for Business and Social Sciences (See Mathematics options)

Summer
ENGL 1301 Composition I
GEN ED Social/Behavioral Sciences course

SECOND YEAR
First Semester
INDS 1352 History of Interiors II
INDS 2313 Residential Design I
INDS 2315 Lighting for Interior Designers
GEN ED Humanities/Fine Arts course

Second Semester
INDS 1315 Materials, Methods and Estimating
INDS 1345 Commercial Design I
INDS 1373 Green Interiors
INDS 2374 Sustainable Living

Summer
INDS 2330 Interior Design Building Systems (Capstone) 1

1. May substitute INDS 2380 for any INDS course, with consent of Associate Dean and Discipline Lead.

OSA – Interior Design
12 credit hours

FIRST YEAR
First Semester
DFTG 1309 Basic Computer-Aided Drafting
INDS 1371 Introduction to Green Design

Second Semester
INDS 1349 Fundamentals of Space Planning
INDS 1372 Computer-Aided Drafting for Interior Designers

Certificate Level 1 – Interior Design
21 credit hours

FIRST YEAR
First Semester
DFTG 1309 Basic Computer-Aided Drafting
INDS 1301 Basic Elements of Design
INDS 1341 Color Theory and Application
INDS 1371 Introduction to Green Design

Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
Second Semester
INDS 1349 Fundamentals of Space Planning
INDS 1351 History of Interiors I \(^1\)
INDS 1372 Computer-Aided Drafting for Interior Designers (Capstone)

1. May substitute INDS 1352

Certificate Level 1 – Advanced Interior Design
42 credit hours

FIRST YEAR
First Semester
DFTG 1309 Basic Computer-Aided Drafting
INDS 1301 Basic Elements of Design
INDS 1341 Color Theory and Application
INDS 1371 Introduction to Green Design

Second Semester
INDS 1349 Fundamentals of Space Planning
INDS 1351 History of Interiors I
INDS 1372 Computer-Aided Drafting for Interior Designers

Summer Semester
INDS 1352 History of Interiors II

SECOND YEAR
First Semester
INDS 1373 Green Interiors
INDS 2313 Residential Design I
INDS 2315 Lighting for Interior Designers

Second Semester
INDS 1315 Materials, Methods and Estimating
INDS 1345 Commercial Design I

Summer Semester
INDS 2330 Interior Design Building Systems (Capstone)

Interpreter Education Program (IEP)
Also see Associate of Arts – American Sign Language for academic transfer coursework.

Program Options:
AAS – Interpreter Education Program (IEP)
Certificate Level 2 – ASL Studies
Certificate Level 3 – ESC – Interpreting in Medical Settings

(Using beginning January 2012, in order to become a Texas BEI Certified Interpreter, you must have an associate degree or have earned 60 credit hours from an accredited college or university.)

Interested in an American Sign Language (ASL) interpreting career? Collin College’s Interpreter Education Program (IEP) can put you on a path to a personally rewarding career working with the Deaf community.

As an IEP student, your education will be based in a foundation of American Sign Language. Focus areas are language learning, interpreting skills and an understanding of Deaf Culture taught by Deaf professors.

Interpreting requires excellence in ASL and a thorough knowledge of oneself and one’s ethics because interpreters are privy to confidential information. To confirm adequate proficiency in ASL, IEP students are required to complete the IEP Language Assessment prior to beginning their second year in the program. Students must complete the assessment in order to continue in the IEP program. Students who do not successfully pass any part of the assessment may continue in the program but must complete skills development – including workshops, lab materials, interaction with ASL Lab assistants, group study, community events, online materials – that strengthens their language skills.

Licensure Notice: Students who have been involved with the criminal system, please be advised that your background could keep you from being licensed by the State of Texas. If you have a question about your background and licensure, please speak with your faculty member or the department chair. You also have the right to request a criminal history evaluation letter from the applicable licensing agency.

Vaccination Requirements for Interpreters in a Healthcare Setting: As of January 1, 2012, the Joint Commission has a requirement that all on-site Contract Medical Interpreters are current on all immunizations. This has become known as "hospital ready". Proof of Immunization records required: Hepatitis B (requires 7 months to get all 3 shots required), annual Tuberculosis "TB" screening and annual Influenza. Some agencies also require proof of MMR, DTAP, and Varicella. Contact your physician and ask for a statement of current vaccinations. If you do not meet all the requirements above, please schedule an appointment with your physician and obtain your needed immunizations. These immunizations will be required prior to some onsite observations.

Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

Pass/Fail Option
Non-degree-seeking students may take a sign language class as pass/fail. Degree-seeking students should not
pursue this option. The pass/fail option will not satisfy the degree-seeking transfer requirements.

Note: Students may not convert a pass/fail grade to a letter grade. Foreign language classes, including sign language, cannot be audited.

AAS – Interpreter Education Program (IEP)  
65 credit hours

FIRST YEAR
Fall Semester
ENGL 1301 Composition I  
MATH 1314 College Algebra (See Mathematics Options)  
SGNL 1401 Beginning American Sign Language I +  
SLNG 1215 Visual/Gestural Communication (Fall Semester only)

Second Semester
SGNL 1402 Beginning American Sign Language II +  
SLNG 1207 Intra-lingual Skills Development for Interpreters (Spring Semester only)  
SLNG 1347 Deaf Culture  
SPCH 1311 Introduction to Speech Communication (See Speech Options)

Summer Semester
SGNL 2301 Intermediate American Sign Language I  
SLNG 1211 Fingerspelling and Numbers (Summer Semester only)  
SLNG 1321 Introduction to the Interpreting Profession

SECOND YEAR
Fall Semester
SGNL 2302 Intermediate American Sign Language II +  
SLNG 1350 Sign-to-Voice (Fall Semester only)  
SLNG 2301 Interpreting I (Fall Semester only)  
GEN ED Social/Behavioral Sciences course

Spring Semester
PHIL 2306 Introduction to Ethics  
SLNG 2186 Internship I – Sign Language Interpretation and Translation  
SLNG 2302 Interpreting II (Spring Semester only)  
SLNG 2303 Transliterating (Spring Semester only)  
SLNG 2311 Interpreting in Specialized Settings (Spring Semester only)

Summer Semester
SLNG 1291 Special Topics in Sign Language Interpreting (Summer Semester only)  
SLNG 2331 Interpreting III (Summer Semester only)  
SLNG 2387 Internship II – Sign Language Interpretation and Translation (Capstone) (Summer Semester only)

Certificate Level 2 – ASL Studies  
35 credit hours

Student must meet Texas Success Initiative (TSI) college-readiness standards. See the Dean to file a degree plan for this certificate before registering for required courses marked with an asterisk.

FIRST YEAR
Fall Semester
ENGL 1301 *Composition I  
SGNL 1401 Beginning American Sign Language I +  
SLNG 1215 Visual/Gestural Communication (Fall Semester only)

Second Semester
SGNL 1402 American Sign Language: Beginning II +  
SLNG 1207 Intra-lingual Skills Development for Interpreters (Spring Semester only)  
SPCH 1311 Introduction to Speech Communication (See Speech Options)

Summer Semester
SGNL 2302 American Sign Language: Intermediate I  
SLNG 1211 Fingerspelling and Numbers (Summer Semester only)  
SLNG 1321 Introduction to the Interpreting Profession (Summer Semester only)

SECOND YEAR
Fall Semester
SGNL 2302 American Sign Language: Intermediate II +  
SLNG 1350 Sign-to-Voice (Capstone) (Fall Semester only)
American Sign Language courses are also transfer courses and may be used, at some institutions, to satisfy a Foreign Language requirement.

**Certificate Level 3 – ESC – Interpreting in Medical Settings**
7 credit hours

Prior to being admitted into this award, the student must have earned an AAS in Interpreter Education Program (IEP), or earned a Texas BEI Certified Interpreter certification.

**FIRST YEAR**

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HITT 1305</td>
<td>Medical Terminology I</td>
</tr>
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**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>SLNG 2189</td>
<td>ESC Internship – Sign Language Interpretation and Translation (Capstone)</td>
</tr>
<tr>
<td>SLNG 2371</td>
<td>Interpreting in the Medical Setting</td>
</tr>
</tbody>
</table>

**Marketing**

Department Website:

**Program Options:**

**AAS – Marketing**

**Certificate Level 1 – Entrepreneurship**

**Certificate Level 1 – Marketing**

In marketing, creativity and business come together to create engaging messages designed to drive communications, involvement and sales. With a marketing education from Collin College, you’ll be prepared to work in all types of work atmospheres, from retail or wholesale organizations to non-profits, governmental agencies and academic institutions.

Collin’s marketing program is designed to give you a thorough background in aspects of marketing for students new to marketing and to provide methods for improving skills for people already employed in marketing careers.

If your program requires a criminal background check, your placement in a required clinical site, cooperative, practicum, internship, and/or licensure/certification opportunity may be impacted. If you have any questions or concerns, please contact your program director and check with your licensing/certifying entity, if any, to determine your status.

Through a transfer agreement, students may earn their Associate of Applied Science (AAS) degree in Marketing from Collin and transfer to numerous universities in Texas where their Collin courses may be applied toward Bachelor of Applied Arts and Science (BAAS) and Bachelor of Applied Technology (BAT) degrees.

Students planning to transfer to a college or university should check with the Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

**AAS – Marketing**

60 credit hours

**FIRST YEAR**

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMGT 1307</td>
<td>Team Building</td>
</tr>
<tr>
<td>BMGT 2303</td>
<td>Problem Solving and Decision Making</td>
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<tr>
<td>MATH 1332</td>
<td>Contemporary Mathematics (Quantitative Reasoning) (See Mathematics options)</td>
</tr>
<tr>
<td>MRKG 1301</td>
<td>Customer Relationship Management</td>
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<tr>
<td>MRKG 1311</td>
<td>Principles of Marketing</td>
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</table>

**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>BMGT 1305</td>
<td>Communications in Management</td>
</tr>
<tr>
<td>BMGT 1341</td>
<td>Business Ethics</td>
</tr>
<tr>
<td>BUSG 2309</td>
<td>Small Business Management/Entrepreneurship</td>
</tr>
<tr>
<td>ENGL 1301</td>
<td>Composition I</td>
</tr>
<tr>
<td>IBUS 1354</td>
<td>International Marketing Management</td>
</tr>
<tr>
<td>MRKG 2349</td>
<td>Advertising and Sales Promotion</td>
</tr>
</tbody>
</table>

**SECOND YEAR**

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>BMGT 1327</td>
<td>Principles of Management</td>
</tr>
<tr>
<td>GEN ED</td>
<td>Humanities/Fine Arts course</td>
</tr>
<tr>
<td>IBUS 2341</td>
<td>Intercultural Management</td>
</tr>
<tr>
<td>MRKG 2312</td>
<td>e-Commerce Marketing</td>
</tr>
<tr>
<td>MRKG 2333</td>
<td>Principles of Selling</td>
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</table>

**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ECON 1301</td>
<td>Introduction to Economics ¹</td>
</tr>
<tr>
<td>MRKG 2348</td>
<td>Marketing Research and Strategies ²</td>
</tr>
<tr>
<td>MRKG 2381</td>
<td>Cooperative Education – Marketing / Marketing Management, General (Capstone) ³</td>
</tr>
<tr>
<td>SPCH 1321</td>
<td>Business and Professional Communication (See Speech options)</td>
</tr>
</tbody>
</table>

¹ May substitute ECON 2301, ECON 2302 or PSYC 2301
² May substitute BUSG 1307
³ May substitute BUSG 2371, with consent of Discipline Lead (prior to registering)
Certificate Level 1 – Entrepreneurship  
18 credit hours

FIRST YEAR
First Semester
BUSG 1307 Entrepreneurship and Economic Development
BUSG 2309 Small Business Management /Entrepreneurship
MRKG 1311 Principles of Marketing
MRKG 2333 Principles of Selling

Second Semester
BUSG 2371 Entrepreneurship Experience (Capstone)
MRKG 2312 e-Commerce Marketing

1. May substitute ACCT 2301, ACNT 1303 or ACNT 1311
2. For approval, students must meet with the Discipline Lead for the Marketing Program to determine which program packets are required for course completion.
3. May substitute MRKG 2381, with consent of Discipline Lead (prior to registering).

Certificate Level 1 – Marketing  
18 credit hours

FIRST YEAR
First Semester
BMGT 2303 Problem Solving and Decision Making
MRKG 1301 Customer Relationship Management
MRKG 1311 Principles of Marketing

Second Semester
BMGT 1341 Business Ethics
BUSG 2309 Small Business Management/Entrepreneurship (Capstone)
IBUS 1354 International Marketing Management

Music, Commercial
Also see Associate of Arts – Music Field of Study, an academic transfer program.

Department Website:
http://www.collin.edu/department/music

Program Options:
AAS – Commercial Music
Certificate Level 1 – Audio Engineering
Studio Track
Live Sound Track
Certificate Level 2 – Music Business

Music program provides career training in performance, audio engineering, sound reinforcement, electronic music, composition and songwriting.

The Associates of Applied Science (AAS) in Commercial Music is a broader two-year degree which includes general education and traditional music courses beyond the courses in music business or audio engineering. You can earn an Associate of Applied Science or one of a pair of certificates which fold into the AAS.

The audio engineering certificate has two tracks. The Studio Track focuses on recording, mixing and mastering. The Live Sound Track focuses on designing, setting up and running sound reinforcement for live events. The courses concentrate on building the skills necessary to successfully work in the music industry as either a mixing engineer or live sound engineer.

The music business certificate addresses the demands for working in the music industry in marketing and management positions such as artist promotions, concerts and tours, merchandising, social networking, etc.

Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

AAS – Commercial Music  
60 credit hours

FIRST YEAR
First Semester
ARTC 1325 Introduction to Computer Graphics
MUSB 1305 Survey of the Music Business
MUSC 1327 Audio Engineering I
MUSI 1303 Fundamentals of Music

Second Semester
MUSC 1313 Commercial Music Theory I
MUSC 2427 Audio Engineering II
MUSI 1116 Aural Skills I
SPCH 1321 Business and Professional Communication (See Speech Options)
ELECTIVE *
ELECTIVE *

SECOND YEAR
First Semester
ENGL 1301 Composition I
MUSB 2301 Music Marketing
MUSC 1331 MIDI I
MUSP 1113 Introductory Group Piano I
GEN ED Mathematics/Natural Sciences Course
ELECTIVE *
## Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>MUSB 2350</td>
<td>Commercial Music Project (Capstone) ³</td>
</tr>
<tr>
<td>MUSC 1405</td>
<td>Live Sound I</td>
</tr>
<tr>
<td>MUSC 2351</td>
<td>Audio for Video</td>
</tr>
<tr>
<td>MUSI 1307</td>
<td>Music Literature ⁴</td>
</tr>
<tr>
<td>MUSP 1114</td>
<td>Introductory Group Piano II ⁵</td>
</tr>
</tbody>
</table>

**GEN ED** **Social/Behavioral Sciences** course

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Audio Engineering courses (MUSC 1327, MUSC 2427, MUSC 2447 and MUSC 2448) are offered in both eight- and sixteen-week formats. Students planning to follow the curriculum outline above may need to take the courses in the eight-week format in order to meet the prerequisite requirements.

1. Required for Commercial Music Majors
2. May substitute MUSI 1181 or MUSP 1110, departmental permission required
3. May substitute MUSB 2380, departmental permission required
4. Required to fulfill the Humanities/Fine Arts requirement – No course substitutions
5. May substitute MUSI 1182 or MUSP 1110 or MUSP-2235, departmental permission required

* Electives (minimum of 7 credit hours) If not used in degree requirements: Any MUAP, any MUEN, MUSB 1341, MUSB 2345, MUSB 2355, MUSB 2380, MUSC 1209, MUSC 1321, MUSC 1323, MUSC 1333, MUSC 2313, MUSC 2314, MUSC 2330, MUSC 2345, MUSC 2355, MUSC 2356, MUSC 2403, MUSC 2447, MUSC 2448, MUSC 2453, MUSI 1117, MUSI 1181, MUSI 1182, MUSI 1183, MUSI 1184, MUSI 1192, MUSI 1193, MUSI 1310, MUSI 1312, MUSI 2116, MUSI 2117, MUSI 2181, MUSI 2182, MUSI 2311, MUSI 2312, MUSP 1104, MUSP 1105, MUSP 1110, MUSP 1117, MUSP 1127, MUSP 1131, MUSP 1153, MUSP 1202, MUSP 2230, MUSP 2233, MUSP 2235, MUSP 2257 or MUSP 2249

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### Certificate Level 1 – Audio Engineering

#### Studio Track

31 credit hours

**FIRST YEAR**

**Summer Semester**

- MUSC 1327  Audio Engineering I ~

**First Semester**

- MUSB 1305  Survey of the Music Business
- MUSB 2301  Music Marketing
- MUSC 1405  Live Sound I
- MUSC 2427  Audio Engineering II ~

**Second Semester**

- MUSC 1323  Audio Electronics
- MUSC 1331  MIDI I
- MUSC 2447  Audio Engineering III ~
- MUSC 2448  Audio Engineering IV ~ (Capstone)

~ Audio Engineering courses (MUSC 1327, MUSC 2427, MUSC 2447 and MUSC 2448) are offered in both eight- and sixteen-week formats. Students planning to follow the curriculum outline above would need to take the courses in the eight-week format in order to meet the prerequisite requirements.

#### Certificate Level 1 – Audio Engineering-Live Sound Track

31 credit hours

**FIRST YEAR**

**Summer Semester**

- MUSC 1327  Audio Engineering I ~

**First Semester**

- MUSB 1305  Survey of the Music Business
- MUSB 1341  Concert Promotion and Venue Management
- MUSC 1405  Live Sound I
- MUSC 2427  Audio Engineering II ~

**Second Semester**

- MUSC 1323  Audio Electronics
- MUSC 1331  MIDI I
- MUSC 2403  Live Sound II
- MUSC 2453  Live Sound III (Capstone)

~ Audio Engineering courses (MUSC 1327 and MUSC 2427) are offered in both eight- and sixteen-week formats. Students planning to follow the curriculum outline above would need to take the courses in the eight-week format in order to meet the prerequisite requirements.
**Certificate Level 2 – Music Business**

33 credit hours

*Students must be TSI complete.*

**FIRST YEAR**

**Summer Semester**

MUSB 1305  Survey of the Music Business

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
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<tbody>
<tr>
<td>First</td>
<td>MUSB 1341</td>
<td>Concert Promotion and Venue Management</td>
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<td>First</td>
<td>MUSB 2301</td>
<td>Music Marketing</td>
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<tr>
<td>First</td>
<td>MUSC 1327</td>
<td>Audio Engineering I</td>
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<td>First</td>
<td>MUSI 1310</td>
<td>American Music</td>
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<tr>
<td>First</td>
<td>SPCH 1321</td>
<td>Business and Professional Communication</td>
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<table>
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<th>Course Title</th>
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<tbody>
<tr>
<td>Second</td>
<td>MUSB 2345</td>
<td>Live Music and Talent Management</td>
</tr>
<tr>
<td>Second</td>
<td>MUSB 2350</td>
<td>Commercial Music Project (Capstone)</td>
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<tr>
<td>Second</td>
<td>MUSC 1331</td>
<td>MIDI I</td>
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</tr>
<tr>
<td>Second</td>
<td>ELECTIVE **</td>
<td>**</td>
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</table>

**Second Semester**

MUSB 2345  Live Music and Talent Management

**Electives (minimum of 6 credit hours):**

- MUSB 2355, MUSB 2380, MUSC 1321, MUSC 1405,
- MUSC 2355, MUSC 2356 or MUSC 2427

**Nursing (RN)**

Department website:

http://www.collin.edu/nursing

Program Options:

- AAS – Nursing (RN)
- Nursing (RN) Bridge for LVN/Paramedic/Medic

A career in nursing will make a difference in your own life and the lives of others. Pursuing your nursing degree at Collin College is a great way to start.

Collin’s Associate Degree Nursing (ADN) program prepares students for a career as a professional registered nurse in this quickly-growing field with state-of-the-art facilities and educators who have years of practical experience working in health care. Collin College has been recognized as a Center of Excellence in Nursing Education by the National League for Nursing (NLN) since 2011, one of only a handful of community colleges in the nation to earn that honor.

The nursing curriculum is designed for deep learning so that you develop higher-level clinical judgment. The curriculum divides nursing concepts into two categories – health care concepts and professional nursing concepts – which are learned in the classroom and then applied in practical settings like the health sciences simulation labs in the Cary A. Israel Health Sciences Center, as well as in local health care facilities where students perform clinical rotations.

The nursing curriculum is approved by the Texas Board of Nursing (Texas BON) and accredited by the Accreditation Commission for Education in Nursing (ACEN). Upon graduation, Collin’s ADN program students are ready to make application to the Texas BON for licensure as a registered nurse (RN) through the NCLEX-RN examination.

The college also offers a bridge program for LVNs, paramedics and medics, allowing for faster degree completion you to begin your career as a professional registered nurse earlier.

**Licensure Notice:** Students who have been involved with the criminal system, please be advised that your background could keep you from being licensed by the State of Texas. If you have a question about your background and licensure, please speak with your faculty member or the department chair. You also have the right to request a criminal history evaluation letter from the applicable licensing agency.

If an individual has reason to believe he/she is ineligible for licensure, he/she may petition the Texas BON for a declaratory order. Upon application to the nursing program, you must show your eligibility to take the NCLEX-RN exam through outcomes letter that will be issued by the Texas BON if the declaratory order is approved. To check your eligibility, please review the following questions. If you answer “yes” to any one of the following questions, you must have the declaratory order from the Texas BON completed prior to applying to the nursing program.

- Have you ever been convicted of a misdemeanor (other than a class C misdemeanor traffic violation)?
- Have you ever been convicted of a felony?
- Have you ever pled nolo contender, no contest, or guilty?
- Have you ever received deferred adjudication?
- Have you ever been placed on community supervision or court-ordered probation, whether or not adjudicated guilty?
- Have you ever been sentenced to serve jail or prison time or court-ordered confinement?
- Have you ever been granted pre-trial diversion?
- Have you ever been arrested or have any pending criminal charges?
• Have you ever been cited or charged with any violation of the law?
• Have you ever been subject of a court-martial; Article 15 violation; or received any form of military judgment, punishment, or action?

Contact the Nursing Department for further information.

Collin County healthcare facilities support the ADN program. Several healthcare facilities throughout the Metroplex are used for the clinical experience. The role of the nurse continues to change in an evolving healthcare system.

Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

FUNCTIONAL ABILITIES/CORE PERFORMANCE STANDARDS STATEMENT
After initial acceptance to this program, all students are required to meet specific functional abilities - with or without accommodations - for successful completion of the program and to function safely and effectively in the variety of the profession’s settings. The specific functional requirements are found in the Functional Abilities/Core Performance Standards documents provided in the program information on the Nursing website http://www.collin.edu/nursing. Students who think they may not be able to meet the functional standards and need accommodation are encouraged to contact the college ACCESS department as soon as this program is of interest.

ACCREDITATION
The Nursing Program is fully accredited by the Accreditation Commission for Education in Nursing (ACEN). They may be contacted at:
3343 Peachtree Road NE, Suite 850
Atlanta, GA 30326
404.975.5000
www.acenursing.org

SCHOLARSHIPS
Various scholarships are available to students when they have been accepted into the Nursing Program. Most scholarships are awarded based on financial need. Other types of monetary support are available through the college’s Financial Aid Office.

ADDITIONAL ADMISSIONS REQUIREMENTS
Admission to the Nursing Program is selective. Admission to the college does not guarantee admission to the Nursing Program. Registration is by permission only. Information and applications may be obtained from the Nursing Office or the Nursing website: http://www.collin.edu/nursing.

• Complete pre-entrance course requirements with a minimum 2.5 GPA
• Earn a grade of “C” or better in all courses applicable to the Nursing program
• Submit official copies of all college transcripts to include Collin College
• Complete the PSB (Nursing School Aptitude Exam) prior to the Jan. 31st, March 31st or Aug. 31st deadline with a satisfactory result
• Successful completion of drug screen, background check and physical/mental competencies, and dental exam
• Submit a current American Heart Association CPR for Health Care workers
• Provide a current negative TB test
• Complete a declaratory order from the Texas BON, if needed
• Show positive titer immunizations required by the Texas Department of State Health Services (TDSHS) *

* It is important to note that one of the required vaccinations, Hepatitis B, consists of a three dose series, which can take up to 7 months to complete. Individuals unable to receive the HBV must inform the Clinical Coordinator.

Health Insurance – All nursing students are required to show proof of health insurance prior to starting clinical rotations each semester.

Placement in mathematics and English courses is based upon the results of each student’s assessments and subjects completed before admission.

Nursing (RN)
The Nursing curriculum allows for deep learning and promotes higher level clinical judgment. Students focus on generalities of specifically identified concepts and then apply those concepts within the context of specific priority exemplars. A great advantage of concept-based learning, from a curriculum point-of-view, is that it provides an efficient content management process. Nursing concepts are divided into two categories: Health Care Concepts, and Professional Nursing Concepts. These concepts are learned in the classroom and applied using sound clinical judgment in practical settings such as the campus hospital and Health Sciences Simulation labs as well as in local healthcare facilities.

AAS – Nursing (RN)
60 credit hours

PREREQUISITES
BIOL 2401 Anatomy and Physiology I
BIOL 2402 Anatomy and Physiology II
BIOL 2420 Microbiology for Non-Science Majors
### FIRST YEAR

#### First Semester
- **PSYC 2301** General Psychology ¹
- **RNSG 1125** Professional Nursing Concepts I
- **RNSG 1128** Introduction to Health Care Concepts
- **RNSG 1161** Clinical I – Nursing – Registered Nurse Training
- **RNSG 1216** Professional Nursing Competencies
- **RNSG 1430** Health Care Concepts I

#### Second Semester
- **PSYC 2314** Life-Span Growth and Development
- **RNSG 1126** Professional Nursing Concepts II
- **RNSG 1533** Health Care Concepts II
- **RNSG 2361** Clinical II – Nursing – Registered Nurse Training

### SECOND YEAR

#### First Semester
- **ENGL 1301** Composition I
- **RNSG 1137** Professional Nursing Concepts III
- **RNSG 1538** Health Care Concepts III
- **RNSG 2362** Clinical III – Nursing – Registered Nurse Training

#### Second Semester
- **RNSG 2138** Professional Nursing Concepts IV (Capstone)
- **RNSG 2363** Clinical IV – Nursing – Registered Nurse Training
- **RNSG 2539** Health Care Concepts IV
- **GEN ED** Humanities/Fine Arts course

1. No course substitutions

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#### Nursing (RN) Bridge for LVN/Paramedic/Medic

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>2018-19 Collin College Catalog</td>
<td>Please refer to <a href="http://www.collin.edu/academics/programs/index.html">http://www.collin.edu/academics/programs/index.html</a> for the most current information.</td>
</tr>
</tbody>
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### PREREQUISITES

- **BIOL 2401** Anatomy and Physiology I ¹
- **BIOL 2402** Anatomy and Physiology II ¹
- **BIOL 2420** Microbiology for Non-Science Majors
- **PSYC 2301** General Psychology ¹
- **PSYC 2314** Life-Span Growth and Development

1. Nursing faculty will determine the application and approval process. Students accepted into the Bridge for LVN/Paramedic/Medic Program will receive credit for the following courses: RNSG 1125, RNSG 1126, RN3G 1161, RNSG 1430, and RNSG 1533

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### Paralegal/Legal Assistant

**Program Options:**

- **AAS – Paralegal/Legal Assistant**
- **Certificate Level 2 – Paralegal General**

Collin College’s Paralegal Program is approved by the American Bar Association (ABA).

If you are interested in a legal career in law, Collin College’s Paralegal/Legal Assistant program is an excellent starting point and is approved by the American Bar Association.

Law firms, corporations and governmental agencies hire paralegals/legal assistants to perform a wide variety of legal tasks under the direction and supervision of a licensed attorney. For example, paralegals investigate cases, interview witnesses and draft documents such as wills, contracts and court papers. As a result, paralegals must be proficient in computer skills, legal terminology and legal procedures. Collin’s Associate of Applied Science degree in Paralegal/Legal Assistant Studies provides excellent training in these areas and offers opportunities for specialization.

Not only is this career path interesting; it is growing at a fast pace. According to the U.S. Bureau of Labor Statistics, employment of paralegals and legal assistants is projected...
to grow 15 percent from 2016 to 2026, much faster than the average for all occupations.

This program trains students to become paralegals and legal assistants and helps them prepare for a national certification examination. The program does not qualify a graduate to take a state bar exam, represent clients in court, give legal advice or provide independent legal services. Admission to the Paralegal/Legal Assistant program is open to all students. Students with a prior degree may be eligible for admission to the Level II Paralegal General Certificate program. For more information about eligibility, please see the certificate pre-entrance requirements.

**Paralegal Program Goals**
Consistent with the core values of the district, the mission of the paralegal studies program is to further the paralegal profession by providing specialized training and education in law and legal procedure that will produce graduates who are prepared to enter the legal workforce with sufficient technology skills and a firm understanding of the ethical responsibilities of the attorney and paralegal.

The goals of the paralegal program are:
1. The program will reflect a diverse student body.
2. The program will produce graduates who possess the legal knowledge and technology skills necessary to qualify them for employment in a legal work environment.
3. The program will produce graduates who demonstrate an understanding of their ethical responsibility in the legal profession.
4. The program will emphasize written communication skills.
5. The program will promote opportunities to service the needs of the local community and encourage pro bono and public interest causes.

Texas Woman’s University (TWU) and Collin Paralegal/Legal Assistant programs entered an articulation agreement effective fall 1999, which establishes a plan for students to obtain an AAS degree from Collin and a Bachelor of Science in Government – Legal Studies Emphasis degree from TWU. Collin College established a similar articulation agreement with Texas A&M University-Commerce, effective fall 2004, for the Bachelor of Arts/Science in Political Science with Emphasis in Paralegal Studies degree.

Admission to the Paralegal/Legal Assistant Associate of Applied Science Program is open to all students. Students with a prior degree may be eligible for admission to the Level II Paralegal General Certificate program. See certificate pre-entrance requirements.

Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

**AAS – Paralegal/Legal Assistant**
60 credit hours

**FIRST YEAR**

**First Semester**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ENGL 1301</td>
<td>Composition I</td>
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<tr>
<td>LGLA 1303</td>
<td>Legal Research</td>
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<tr>
<td>LGLA 1307</td>
<td>Introduction to Law and the Legal Professions</td>
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<tr>
<td>MATH 1314</td>
<td>College Algebra</td>
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**Second Semester**

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<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>GOVT 2305</td>
<td>Federal Government (Federal constitution and topics)</td>
</tr>
<tr>
<td>LGLA 1345</td>
<td>Civil Litigation</td>
</tr>
<tr>
<td>LGLA 2303</td>
<td>Torts and Personal Injury Law</td>
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**Summer**

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<tr>
<td>ENGL 1302</td>
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<tr>
<td>LGLA 1351</td>
<td>Contracts</td>
</tr>
<tr>
<td>LGLA 2311</td>
<td>Business Organizations</td>
</tr>
<tr>
<td>PHIL 2303</td>
<td>Introduction to Logic 3 (See Humanities/Fine Arts Options)</td>
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**SECOND YEAR**

**First Semester**

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<tr>
<td>LGLA 1305</td>
<td>Legal Writing</td>
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<td>LGLA 1355</td>
<td>Family Law</td>
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<tr>
<td>LGLA 2333</td>
<td>Advanced Legal Document Preparation</td>
</tr>
<tr>
<td>LGLA 1370</td>
<td>Introduction to Legal Conventions</td>
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<tr>
<td>GEN ED</td>
<td>Speech</td>
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**Second Semester**

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<tr>
<td>LGLA 1353</td>
<td>Wills, Trusts and Probate Administration</td>
</tr>
<tr>
<td>LGLA 2339</td>
<td>Certified Paralegal Exam Review (Capstone)</td>
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</table>

**LAW ELECTIVE * **

**LAW ELECTIVE * **

1. May substitute MATH 1316, MATH 1324, MATH 1332, MATH 1342, MATH 1350, MATH 1351, or MATH 1414

2. May substitute GOVT 2306; no other substitutions

3. Recommended for students planning to take the LSAT.

* Law Electives (6 credit hours): LGLA 1323, LGLA 1343, LGLA 1380, LGLA 2307, LGLA 2309, LGLA 2313, LGLA 2323
Certificate Level 2 – Paralegal General
36 credit hours

Pre-Entrance Requirements
Admission to the college or the degree program does not guarantee admission to the Paralegal General Certificate Program. Prior to admission to the certificate program, students must provide official documentation showing that they have earned a Bachelor of Arts, Bachelor of Science, Bachelor of Business Administration, Associate of Arts, Associate of Science, or Associate of Arts for Teaching degree to demonstrate that they have met the American Bar Association requirements of having successfully developed critical reasoning, writing skills, and oral communication skills by completing at least eighteen semester credits of general education courses.

First Semester
LGLA 1303 Legal Research
LGLA 1307 Introduction to Law and the Legal Professions
LGLA 1345 Civil Litigation
LGLA 2333 Advanced Legal Document Preparation

Second Semester
LGLA 1370 Introduction to Legal Conventions
LGLA 2303 Torts and Personal Injury Law
LAW ELECTIVE *
LAW ELECTIVE *

Third Semester
LGLA 1305 Legal Writing
LGLA 1351 Contracts
LGLA 2311 Business Organizations
LGLA 2339 Certified Paralegal Exam Review (Capstone) ¹

¹. Students should contact the National Association of Legal Assistants (NALA) for current exam eligibility requirements.

* Law Electives (6 credit hours): LGLA 1323, LGLA 1343, LGLA 1353, LGLA 1355, LGLA 1380, LGLA 2307, LGLA 2309, LGLA 2313, or LGLA 2323

Pastry Arts
Also see Culinary Arts

Department Website:
http://www.collin.edu/department/ihce/index.html

Program Options:
AAS – Pastry Arts
Certificate Level 1 – Pastry Arts
Certificate Level 3 – Advanced Pastry Arts

Sweet! Learn how to build a career of creating delectable delights with Collin College’s Pastry Arts program. Once you complete the Pastry Arts program, you will be qualified for a variety of bakery positions in the food service industry.

A part of the college’s Institute of Hospitality and Culinary Education (IHCE), Collin’s Pastry Arts program emphasizes a broad selection of hands-on food preparation courses, building on baking and pastry foundation skills that will allow you to be effective in a commercial bakeshop environment. The curriculum is designed by industry experts and taught by experienced pastry professionals, as well as being fully accredited by the American Culinary Federation Education Foundation.

If your program requires a criminal background check, your placement in a required clinical site, cooperative, practicum, internship, and/or licensure/certification opportunity may be impacted. If you have any questions or concerns, please contact your program director and check with your licensing/certifying entity, if any, to determine your status.

TRANSFER
Students planning to transfer to a college or university should check with a Collin academic advisor. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

ACCREDITATION
The Culinary Arts Program is fully accredited by the American Culinary Federation Education Foundation. They may be contacted at:
180 Center Place Way
St. Augustine, FL 32095
800.624.9458
http://www.acfchefs.org

ADMISSION REQUIREMENTS
Students are required to attend mandatory Pastry Arts Orientation. Please visit the program website (http://www.collin.edu/department/ihce/) for dates and times.

Note: Pastry lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.
**AAS – Pastry Arts**
60 credit hours

An American Culinary Federation (ACF) accredited program. Students will be eligible for Certified Pastry Culinarian (CPC) upon graduation.

**FIRST YEAR**

**First Semester**
- CHEF 1301 Basic Food Preparation
- CHEF 1305 Sanitation and Safety 1, 2
- ENGL 1301 Composition I
- HAMG 1321 Introduction to Hospitality Industry
- PSTR 1301 Fundamentals of Baking

**Second Semester**
- IFWA 1310 Nutrition and Menu Planning
- MATH 1332 Contemporary Mathematics (Quantitative Reasoning) (See Mathematics options)
- PSTR 1305 Breads and Rolls
- PSTR 1310 Pies, Tarts, Teacakes and Cookies
- RSTO 1325 Purchasing for Hospitality Operations

**Third Semester**
- PSTR 1306 Cake Decorating I
- GEN ED Humanities/Fine Arts course

**SECOND YEAR**

**First Semester**
- HAMG 1324 Hospitality Human Resources Management
- PSTR 2301 Chocolates and Confections
- PSTR 2307 Cake Decorating II
- GEN ED Social/Behavioral Sciences course

**Second Semester**
- PSTR 2331 Advanced Pastry Shop (Capstone)
- PSTR 2380 Cooperative Education – Baking and Pastry Arts/Baker/Pastry Chef
- SPCH 1321 Business and Professional Communication (See Speech options)

**Certificate Level 1 – Pastry Arts**
24 credit hours

**FIRST YEAR**

**First Semester**
- CHEF 1301 Basic Food Preparation
- CHEF 1305 Sanitation and Safety 1, 2
- IFWA 1310 Nutrition and Menu Planning
- PSTR 1301 Fundamentals of Baking

**Second Semester**
- PSTR 1305 Breads and Rolls
- PSTR 1306 Cake Decorating I
- PSTR 1310 Pies, Tarts, Teacakes and Cookies (Capstone)
- PSTR 2301 Chocolates and Confections

Taught in eight-week format
1. Certification in ServSafe
2. Certification in Food Protection Management

**Certificate Level 3 – Advanced Pastry Arts**
12 credit hours

Prior to being admitted to this program, students must provide official documentation showing they have earned a Certificate or AAS in Pastry Arts.

**ADVANCED PASTRY ARTS COURSES**

**First Semester**
- PSTR 1312 Laminated Dough, Pate a Choux and Donuts
- PSTR 1340 Plated Desserts

**Second Semester**
- PSTR 1342 Quantity Bakeshop Production (Capstone)
- PSTR 1343 Bakery Operations and Management

**Photography, Commercial**

Associate of Arts – Photography for academic transfer coursework.

**Department Website:**
http://www.collin.edu/department/photography/

**Program Options:**
AAS – Commercial Photography
Certificate Level 1 – Studio Production
Certificate Level 2 – Commercial Photography Specialist

Commercial photography allows you to take a skill that you love and turn it into a career.

Learn techniques and technology from experienced photographers who know the industry and can guide your
development as a commercial artist. Collin College’s Photography Department teaches historic and contemporary photographic practices and offers training for students to pursue a career in the industry.

Studies include a variety of commercial shooting styles, with emphasis in natural, studio and location lighting, management of a commercial studio, and the skills to assist professional photographers, art directors and stylists. The commercial photography program will prepare you to freelance and/or start an independent photography practice.

The department’s state-of-the-art photography facility is one of the best in the state and includes a fully-equipped 20 work station MAC lab, a digital media room with Nikon / Imacon / Epson scanners and 20 Epson printers from 13 to 44 inches, a double studio with Profoto strobe set-ups and a continuous artificial lighting set-up for digital video, a 20 enlarger archival black and white dark room and film processing room; an alternative processing room and black arts facilities with a Davey board cutter; and equipment check out with digital, 35mm, medium and large format film cameras, and portable strobe lighting equipment available.

Students planning to transfer to a college or university should check with the Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

AAS – Commercial Photography
60 credit hours

FIRST YEAR
First Semester
ARTS 1313 Foundations of Art (See Humanities/Fine Arts options)
ARTS 2348 Digital Photography I
PHTC 1371 Book, Design, and Presentation
ENGL 1301 Composition I
PHTC 2340 Photographic Studio Management

Second Semester
GEN ED Mathematics/Natural Sciences course
PHTC 1300 Digital Photography II
PHTC 1353 Portraiture I
PHTC 2331 Architectural Photography
CREATIVE COURSE 1

SECOND YEAR
First Semester
PHTC 1341 Color Photography I
PHTC 2349 Digital Photography III
PHTC 2371 Video for Photographers
SPCH 1321 Business and Professional Communication (See Speech options)

TECHNICAL COURSE 2

Second Semester
PHTC 1345 Illustrative Photography I
PHTC 2343 Portfolio Development (Capstone)
PHTC 2353 Portraiture II
PHTC 2380 Cooperative Education – Commercial Photography
SOCL 1301 Introduction to Sociology (See Social/Behavioral Sciences options)

1. Select one Creative course (3 hours): ARTS 1311, ARTS 2356 or PHTC 1343
2. Select one Technical course (3 hours): PHTC 1347, PHTC 1351 or PHTC 2342

Certificate Level 1 – Studio Production
15 credit hours

FIRST YEAR
First Semester
ARTS 1313 Foundations of Art
ARTS 2348 Digital Photography I

Second Semester
PHTC 1353 Portraiture I
PHTC 2371 Video for Photographers (Capstone)

CREATIVE COURSE 1

1. Select one Creative course (3 hours): ARTS 2356 or PHTC 1300

Certificate Level 2 – Commercial Photography Specialist
36 credit hours

Prior to being admitted into this program, the student must have earned the Certificate Level 1 – Studio Production or have permission of the Associate Dean.

Students must be TSI complete.

FIRST YEAR
First Semester
PHTC 1300 Photo Digital Imaging I
PHTC 1371 Book, Design and Presentation
PHTC 2340 Photographic Studio Management

CREATIVE COURSE 1
Second Semester
PHTC 1341 Color Photography I (Theory and Management)
PHTC 2331 Architectural Photography
PHTC 2349 Digital Photography II

TECHNICAL COURSE 2

SECOND YEAR

First Semester
PHTC 1345 Illustrative Photography I
PHTC 2343 Portfolio Development (Capstone)
PHTC 2353 Portraiture II
PHTC 2380 Cooperative Education – Commercial Photography

1. Select one Creative course (3 hours): ARTS 1311, ARTS 2356 or PHTC 1343
2. Select one Technical course (3 hours): PHTC 1347, PHTC 1351 or PHTC 2342

Licensure Notice: Students who have been involved with the criminal system, please be advised that your background could keep you from being licensed by the State of Texas. If you have a question about your background and licensure, please speak with your faculty member or the department chair. You also have the right to request a criminal history evaluation letter from the applicable licensing agency.

The mission of the Basic Peace Officer courses (BPOC) is to provide the student with the foundational skills necessary to successfully police a free society in a professional, ethical, and effective manner.

ADMISSION REQUIREMENTS:
All students must complete the admission process required by Collin College. Prospective students applying to the Basic Peace Officer Program are classified as: Sponsored and Non-Sponsored. Sponsored applicants are employed by a law enforcement agency, meet all the requirements of TCOLE Rule 217, and are being sent through the course by that law enforcement agency. Non-sponsored applicants include all other individuals applying to the Basic Peace Officer Program.

Additional information may be obtained from the Collin College Law Enforcement Academy website at http://www.collin.edu/department/lawenforcement or by calling 972.548.6813.

1. All prospective students must meet the “Minimum Enrollment Requirements” for training as a Texas Peace Officer as established by TCOLE Rule 217.1 Minimum Standards for Enrollment and Initial Licensure. (See website at: http://www.collin.edu/department/lawenforcement for these requirements.)
2. All sponsored students must provide a notarized letter signed by the head of the sponsoring law enforcement agency stating the student meets the minimum enrollment requirements as established by TCOLE.
3. All non-sponsored applicants must successfully complete all phases of the Basic Peace Officer Program entrance assessment process, meet the minimum enrollment requirements established by TCOLE and be recommended by the oral board.
4. State law requires all new students under the age of 22 entering a higher education institution to show proof of having the bacterial meningitis vaccination or booster 10 days prior to the start of term in which they are attending.

The Basic Peace Officer Program is offered in both a part-time and full-time format. The full-time day program requires 19 weeks for completion. The part-time program requires approximately 43 weeks for completion. The
classes are conducted at the Central Park Campus in McKinney, Texas.

**Certificate Level 1 – Basic Peace Officer**  
24 credit hours

**FIRST YEAR**  
**First Semester**  
CJLE 1506 Basic Peace Officer I  
CJLE 1512 Basic Peace Officer II  
CJLE 1518 Basic Peace Officer III  
CJLE 1524 Basic Peace Officer IV  
CJLE 1429 Basic Peace Officer V (Capstone)

**Polysomnographic Technology**  
**Department Website:**  
[www.collin.edu/sleep](http://www.collin.edu/sleep)

**Program Options:**  
**AAS – Polysomnographic Technology**  
**Certificate Level 1 – Polysomnographic Technology**

Sleep medicine is a growing field with more than 100 sleep disorders identified, and an estimated 60 million people in the United States suffering from at least one sleep disorder. Be part of the team that diagnoses and helps treat those disorders with a certificate or Associate of Applied Science degree from Collin College.

Polysomnographic technologists conduct the sleep studies that allow physicians to diagnose and treat patients suffering from sleep disorders. Through this program, Collin College students are prepared to enter the growing and challenging field of sleep medicine by equipping them with the skills and fundamental knowledge to effectively monitor, manage and treat sleep disorders under medical supervision.

The Polysomnographic Technology program offers two degree options. The 22-month AAS degree track is for students who do not have a background in health care. The 12-month certificate is for individuals who are board registered in any health care field and/or have a minimum of one year of current work experience in a sleep lab/center.

Upon graduation from either award, the graduate is eligible to sit for the Board of Registered Polysomnographic Technologists exam to become a Registered Polysomnographic Technologist (RPSGT) and/or the American Board of Sleep Medicine exam to become a Registered Sleep Technologist (RST).

**Licensure Notice:** Students who have been involved with the criminal system, please be advised that your background could keep you from being licensed by the State of Texas. If you have a question about your background and licensure, please speak with your faculty member or the department chair. You also have the right to request a criminal history evaluation letter from the applicable licensing agency.

Mathematics and science courses that are part of the curriculum but completed at a regionally accredited institution must have been completed within five years of the fall semester of the admission year in order to receive transfer credits. The minimum passing grade for all Polysomnographic Technology lecture, lab and clinical course work is a C.

Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

**FUNCTIONAL ABILITIES/CORE PERFORMANCE STANDARDS STATEMENT**

After initial acceptance to this program, all students are required to meet specific functional abilities—with or without accommodations—for successful completion of the program and to function safely and effectively in the variety of the profession’s settings. The specific functional requirements are found in the Functional Abilities/Core Performance Standards documents provided in the program information on the Polysomnographic Technology website: [http://www.collin.edu/sleep](http://www.collin.edu/sleep). Students who think they may not be able to meet the functional standards and need accommodation are encouraged to contact the college ACCESS department as soon as this program is of interest.

**ACCREDITATION**

The Collin College Polysomnographic Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs ([http://www.caahep.org](http://www.caahep.org)) upon the recommendation of the Committee on Accreditation for Polysomnographic Technologist Education ([http://www.coapsg.org](http://www.coapsg.org)). They may be contacted at:

- Commission on Accreditation of Allied Health Education Programs  
  25400 U.S. Highway 19 North, Suite 158  
  Clearwater, FL 33763  
  727.210.2350  
  [http://www.caahep.org](http://www.caahep.org)

**ADDITIONAL ADMISSION REQUIREMENTS**

Registration is by permission only. Information and applications may be obtained online at [http://www.collin.edu/sleep](http://www.collin.edu/sleep) or the Health Sciences Division Office. To apply, students must:
Submit the required application form by the designated deadline
Provide proof of high school graduation or GED
Submit official copies of all college transcripts
Complete Collin College reading, writing and mathematics assessments
Complete Psychological Services Bureau (PSB) Health Occupations Aptitude Exam
Document acceptable findings on drug screens, background checks and physical/mental competencies
Complete program admission criteria (see Admission Packet)
Completion of immunizations required by the Texas Department of State Health Services (TDSHS) *

* It is important to note that one of the required vaccinations, Hepatitis B, consists of a three dose series, which can take up to 7 months to complete. Individuals unable to receive the HBV must inform the Program Coordinator. In such cases, the applicant must sign a declination form. All immunizations must be complete before assignment to clinical training.

Health Insurance – All Polysomnographic Technology students are required to show proof of health insurance prior to starting clinical rotations each semester.

PROGRAM COMPLETION REQUIREMENTS
In addition to completion of all polysomnographic technology course work, students are required to complete and pass a capstone Registered Polysomnographic Technologist (RPSGT) practice exam and a comprehensive capstone clinical simulation. Both the RPSGT capstone exam and clinical simulation will take place during the final semester of the program, which is the spring semester of the second year for AAS students and the spring semester for Certificate students.

If your program requires a criminal background check, your placement in a required clinical site, cooperative, practicum, internship, and/or licensure/certification opportunity may be impacted. If you have any questions or concerns, please contact your program director and check with your licensing/certifying entity, if any, to determine your status.

AAS – Polysomnographic Technology
60 credit hours

PREREQUISITES
BIOL 2404 Human Anatomy and Physiology Basic
HPRS 1204 Basic Health Profession Skills

FIRST YEAR
First Semester
ENGL 1301 Composition I
PSGT 1215 Introduction to Polysomnography
PSGT 1310 Neuroanatomy and Physiology
RSPT 1207 Cardiopulmonary Anatomy and Physiology
SPCH 1311 Introduction to Speech Communication

Second Semester
PSGT 1205 Neurophysiology of Sleep
PSGT 1340 Sleep Disorders
PSGT 1400 Polysomnography I
RSPT 1237 Basic Dysrhythmia Interpretation
GEN ED Social/Behavioral Sciences course

Third Semester (Summer)
PSGT 1360 AAS Clinical I – Polysomnography

SECOND YEAR
First Semester
PSGT 2205 Sleep Scoring and Staging
PSGT 2360 AAS Clinical II – Polysomnography
PSGT 2411 Polysomnography II
GEN ED Humanities/Fine Arts course

Second Semester
PSGT 2250 Infant and Pediatric Polysomnography
PSGT 2271 Pharmacology for Polysomnography
PSGT 2272 Polysomnography Exam Preparation (Capstone)
PSGT 2361 AAS Clinical III – Polysomnography
PSGT 2374 Clinical Sleep Education

Certificate Level 1 – Polysomnographic Technology
28 credit hours

PRE-ENTRANCE REQUIREMENTS
Prior to being admitted to this program, students must provide official documentation showing they have earned board registry in any health care field -AND/OR- they have a minimum of one year, current work experience in a sleep lab/center.

FIRST YEAR
First Semester (Fall)
PSGT 1260 Certificate Clinical I – Polysomnography
PSGT 1310 Neuroanatomy and Physiology
PSGT 1400 Polysomnography I
PSGT 1207 Cardiopulmonary Anatomy and Physiology
RSPT 1237 Basic Dysrhythmia Interpretation
Second Semester (Spring)
PSGT 1340 Sleep Disorders
PSGT 2205 Sleep Scoring and Staging
PSGT 2250 Infant and Pediatric Polysomnography
PSGT 2260 Certificate Clinical II – Polysomnography
PSGT 2411 Polysomnography II

Third Semester (Summer)
PSGT 2272 Polysomnography Exam Preparation (Capstone)

Real Estate Management

Department Website:
http://www.collin.edu/department/realestate/

Program Options:
AAS – Real Estate Management
Certificate Level 1 – Real Estate Salesperson

Real estate is a dynamic field in which highly-motivated men and women can and do create their own success stories. The degree program in real estate is designed with flexibility to allow students to successfully achieve a goal, whether it be personal knowledge, receipt of a degree, completion of a certificate program, transfer to a college or university, or real estate licensure.

Students will explore a variety of topics including fundamentals and principles of real estate; sources of financing; state and federal influences on financing; legal rights of owners, buyers and brokers; property appraisal; contract negotiations; and closing. An excellent instructional staff and a cooperative education program with local brokers give real estate students at Collin a personalized, practical, high quality educational experience.

Licensure Notice: Students who have been involved with the criminal system, please be advised that your background could keep you from being licensed by the State of Texas. If you have a question about your background and licensure, please speak with your faculty member or the department chair. You also have the right to request a criminal history evaluation letter from the applicable licensing agency.

Students will explore a variety of topics including fundamentals and principles of real estate; sources of financing; state and federal influences on financing; legal rights of owners, buyers and brokers; property appraisal; contract negotiations; and closing. An excellent instructional staff and a cooperative education program with local brokers give real estate students at Collin a personalized, practical, high quality educational experience.

Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

AAS – Real Estate Management
60 credit hours

FIRST YEAR
First Semester
Each of these courses is offered as a 5-week express course. Recommended sequence of courses:
RELE 1300 Contract Forms & Addenda
RELE 1301 Principles of Real Estate I
RELE 1311 Law of Contracts
RELE 1319 Real Estate Finance
RELE 1338 Principles of Real Estate II
RELE 2301 Law of Agency

SECOND YEAR
First Semester
RELE 1321 Real Estate Marketing
ECON 1301 Introduction to Economics 1
RELE 1325 Real Estate Mathematics
ENGL 1302 Composition II
HIST 1301 United States History I

Second Semester
MRKG 1301 Customer Relationship Management
MRKG 2349 Advertising and Sales Promotion (Capstone) 2
SPCH 1321 Business and Professional Communication (See Speech options)
GEN ED Humanities/Fine Arts course

1. May substitute ECON 2301 or ECON 2302
2. May substitute RELE 1380
Certificate Level 1 – Real Estate Salesperson
18 credit hours

This certificate provides the required core real estate courses for the Texas Salesperson Exam.

Recommended sequence of courses:
RELE 1301 Principles of Real Estate I
RELE 1338 Principles of Real Estate II
RELE 2301 Law of Agency
RELE 1311 Law of Contracts
RELE 1300 Contract Forms and Addenda
RELE 1319 Real Estate Finance

Respiratory Care
Department Website:
http://www.collin.edu/rcp

Program Option:
AAS - Respiratory Care

Breath is life. There are few things scarier than the inability to breathe, even for a short time. Be part of the team that helps patients breathe easier with an Associate of Applied Science in Respiratory Care from Collin College.

As a respiratory therapist, you will work with patients of all ages, providing treatment, monitoring responses to therapies, evaluating patients and helping them manage their breathing or cardiovascular conditions.

Collin's Respiratory Care Program prepares individuals for an allied health specialty in the clinical care and management of respiratory disorders. The 22-month program will prepare you to apply for the Therapist Multiple Choice and Clinical Simulation Exams given by the National Board for Respiratory Care. The college also partners with Midwestern State University to offer a bachelor of science in Respiratory Care online completion program. Learn more about it and the program's other offerings on the department webpage listed below.

Licensure Notice: Students who have been involved with the criminal system, please be advised that your background could keep you from being licensed by the State of Texas. If you have a question about your background and licensure, please speak with your faculty member or the department chair. You also have the right to request a criminal history evaluation letter from the applicable licensing agency.

Science courses that are part of the curriculum but completed at a regionally accredited institution, must have been completed within five years of the fall semester of the admission year in order to receive transfer credits. The minimum passing grade for all Respiratory Care lecture, lab and clinical course work is a C.

Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

Spaces in the Respiratory Care Program are limited. Please see the Respiratory Care Program Information Packet, at http://www.collin.edu/rcp for details on the selective admission process.

ACCREDITATION
The Respiratory Care Program is accredited by the Commission on Accreditation for Respiratory Care (CoARC). They may be contacted at:
Commission on Accreditation for Respiratory Care
1248 Harwood Road
Bedford, Texas 76021-4244
Phone: 817.283.2835
Fax: 817.354.8519

FUNCTIONAL ABILITIES/CORE PERFORMANCE STANDARDS STATEMENT
After initial acceptance to this program, all students are required to meet specific functional abilities - with or without accommodations - for successful completion of the program and to function safely and effectively in the variety of the profession’s settings. The specific functional requirements are found in the Functional Abilities/Core Performance Standards documents provided in the program information on the Respiratory Care website: http://www.collin.edu/rcp. Students who think they may not be able to meet the functional standards and need accommodation are encouraged to contact the college ACCESS department as soon as this program is of interest.

ADDITIONAL ADMISSION REQUIREMENTS
Registration is by permission only. Information and applications may be obtained online at http://www.collin.edu/rcp or the Health Sciences, Biology and Chemistry Office. To apply, students must:

• Submit the required application form by the designated deadline
• Submit official copies of all college transcripts to the Respiratory Care Program Director.
• Complete Collin College reading, writing and mathematics assessments
• Overall GPA of 2.5 with a minimum grade of “C” in all prerequisite courses
• Complete Psychological Services Bureau (PSB), Health Occupations Aptitude Exam prior to the application deadline
• Agree to criminal background check. Findings from the background check that do not meet
Clinical affiliation specification will result in the student not being admitted to the program.

- Once admitted, student must pass a drug screen at the student’s expense, when requested and as directed by the program.
- Attend a student orientation prior to the start of the first semester in the program.
- Successfully complete all program admission criteria (see Application Packet).
- Complete all immunizations required by the Texas Department of State Health Services (TDSHS) *

* It is important to note that one of the required vaccinations, Hepatitis B, consists of a three-dose series, which can take up to 7 months to complete. All immunizations must be complete before assignment to clinical training.

**Health Insurance** – All Respiratory Care students are required to show proof of health insurance prior to starting clinical rotations and must maintain coverage while in the program.

**PROGRAM COMPLETION REQUIREMENTS**

In addition to successfully completing the respiratory care curriculum, students are required to successfully complete a comprehensive Therapist Multiple Choice (TMC) Self-Assessment Examination and a Clinical Simulation Self-Assessment Examination during the second year of the program.

1. A TMC Practice exam will be given in the fall semester of the second year.
2. A TMC Self-Assessment Examination will be given in the spring semester of the second year.
   a. Clinical Simulation Self-Assessment Examination will be given in the spring semester of the second year.
3. Meet all Collin College graduation requirements.

Satisfactory completion of these exams is required for graduation from the program. Students who do not pass any of these exams will be required to complete prescribed remediation assignments and retest. The program reserves the right to limit the number of retests. Repeat testing will be at student expense.

**CRT TRANSITION PROGRAM**

The program, after admission to the college, offers a transition option to allow students who hold a CRT credential, have regionally accredited college credit in entry level respiratory care, and have one year of recent clinical experience as a respiratory therapist to enter the second year of the Respiratory Therapy Program, receive their degree and become registry-eligible. Content and clinical skill competency tests must be satisfactorily completed for students to enter this option. Contact the Program Director for more information.

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**AAS – Respiratory Care**

66 credit hours

**PREREQUISITES**

<table>
<thead>
<tr>
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<th>Title</th>
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<tbody>
<tr>
<td>BIOL</td>
<td>Anatomy and Physiology I</td>
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<tr>
<td>BIOL</td>
<td>Anatomy and Physiology II</td>
</tr>
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<td>HPRS</td>
<td>Basic Health Profession Skills</td>
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<td>HPRS</td>
<td>Microbiology for Health Professions</td>
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**FIRST YEAR**

**First Semester**

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<th>Course</th>
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<tr>
<td>RSPT 1160</td>
<td>Clinical I – Respiratory Care Therapist</td>
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<tr>
<td>RSPT 1201</td>
<td>Introduction to Respiratory Care</td>
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<tr>
<td>RSPT 1307</td>
<td>Cardiopulmonary Anatomy and Physiology</td>
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<tr>
<td>RSPT 1410</td>
<td>Respiratory Care Procedures I</td>
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**Second Semester**

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<td>RSPT 1411</td>
<td>Respiratory Care Procedures II</td>
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<td>RSPT 2217</td>
<td>Respiratory Care Pharmacology</td>
</tr>
<tr>
<td>RSPT 2310</td>
<td>Cardiopulmonary Disease</td>
</tr>
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<td>GEN ED</td>
<td>Humanities/Fine Arts course</td>
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**Summer**

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<tr>
<td>RSPT 1362</td>
<td>Clinical III – Respiratory Care Therapist</td>
</tr>
<tr>
<td>RSPT 2471</td>
<td>Respiratory Care Procedures III</td>
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**SECOND YEAR**

**First Semester**

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<th>Course</th>
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<td>PSYC 2301</td>
<td>General Psychology</td>
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<tr>
<td>RSPT 2255</td>
<td>Critical Care Monitoring</td>
</tr>
<tr>
<td>RSPT 2353</td>
<td>Neonatal/Pediatric Cardiopulmonary Care</td>
</tr>
<tr>
<td>RSPT 2360</td>
<td>Clinical IV – Respiratory Care Therapist</td>
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<table>
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<tbody>
<tr>
<td>ENGL 1301</td>
<td>Composition I</td>
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<tr>
<td>RSPT 2130</td>
<td>Respiratory Care Examination Preparation</td>
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<tr>
<td>RSPT 2139</td>
<td>Advanced Cardiac Life Support</td>
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<tr>
<td>RSPT 2147</td>
<td>Specialties in Respiratory Care</td>
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<tr>
<td>RSPT 2231</td>
<td>Simulations in Respiratory Care</td>
</tr>
<tr>
<td>RSPT 2361</td>
<td>Clinical V – Respiratory Care Therapist (Capstone)</td>
</tr>
</tbody>
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1. No course substitutions
2. May substitute SOCI 1301

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Please refer to [http://www.collin.edu/academics/programs/index.html](http://www.collin.edu/academics/programs/index.html) for the most current information.
Supply Chain Management

Department Website:
http://www.collin.edu/department/supplychain/

Program Options:
AAS – Supply Chain Management
Certificate Level 1 – Logistics
Certificate Level 1 – Purchasing

Learn to manage supply chain activities, including logistics, purchasing, inventory and warehouse management with an Associate of Applied Science or certificates from Collin College.

Collin’s Supply Chain Management program will prepare for employment in a variety of roles in this rapidly growing field which currently employs more than 6 million people and is anticipated to grow by 1.4 million jobs over the coming years. The Dallas/Fort Worth region is a national leader in supply chain services with 500 motor carriers, 50 air cargo carriers, three freight rail lines, three major airports and 250 area firms.

Students planning to transfer to a college or university should check with the Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

AAS – Supply Chain Management
60 credit hours

FIRST YEAR
First Semester
BMGT 1313 Principles of Purchasing
BMGT 1344 Negotiations and Conflict Management
ENGL 1301 Composition I
ITSC 1309 Integrated Software Applications I – MS Office
SPCH 1321 Business and Professional Communication (See Speech options)

Second Semester
ACNT 1303 Introduction to Accounting I
BMGT 1307 Team Building
ECON 1301 Introduction to Economics
GEN ED Humanities/Fine Arts course
IBUS 1341 Global Supply Chain Management

SECOND YEAR
First Semester
BMGT 1309 Information and Project Management
BMGT 2309 Leadership
BUSI 2301 Business Law
LMGT 1319 Introduction to Business Logistics
MATH 1324 Mathematics for Business or Social Sciences

Second Semester
BMGT 1341 Business Ethics
BMGT 2303 Problem Solving and Decision Making
IBUS 2332 Global Business Simulation (Capstone)
LMGT 2330 International Logistics Management

Certificate Level 1 – Logistics
18 credit hours

FIRST YEAR
First Semester
BMGT 1309 Information and Project Management
BMGT 2309 Leadership
LMGT 1319 Introduction to Business Logistics

Second Semester
BMGT 2303 Problem Solving and Decision Making
LMGT 1325 Warehouse and Distribution Center Management
LMGT 2330 International Logistics Management

Certificate Level 1 – Purchasing
18 credit hours

FIRST YEAR
First Semester
BMGT 1313 Principles of Purchasing
BMGT 1344 Negotiations and Conflict Management
ITSC 1309 Integrated Software Applications I – MS Office

Second Semester
ACNT 1303 Introduction to Accounting I
BMGT 1307 Team Building
IBUS 1341 Global Supply Chain Management (Capstone)

1. May substitute ACCT 2301
2. May substitute ECON 2301 or ECON 2302
3. May substitute MATH 1332 or 1314
4. May substitute LMGT 2388

Certificate Level 1 – Purchasing
18 credit hours

FIRST YEAR
First Semester
BMGT 1313 Principles of Purchasing
BMGT 1344 Negotiations and Conflict Management
ITSC 1309 Integrated Software Applications I – MS Office

Second Semester
ACNT 1303 Introduction to Accounting I
BMGT 1307 Team Building
IBUS 1341 Global Supply Chain Management (Capstone)
Surgical Technology

Department Website: https://www.collin.edu/surgtech

Program Options:
AAS – Surgical Technology
Certificate Level 1 – Central Sterile Processing
Advanced Technical Certificate 1 – Surgical Assisting

Be part of a lifesaving team as a surgical technologist with a degree from Collin College. Surgical technologists ensure a clean and orderly environment for surgery, assist doctors and other medical professionals, sterile equipment and track surgical items as a procedure goes forward.

Surgical Technologist
Collin's two-year Associate of Applied Science (AAS) program will prepare you for an entry-level position as a surgical technologist, providing you with a greater understanding of surgical procedures and your responsibilities as a member of the team. The first year of the program consists of prerequisites and general education courses. Once you have completed the first year, you may apply for admission into the program.

Central Sterile Processing
A two-semester level 1 certificate in Central Sterile Processing is also available and provides an introduction into the processes applied to surgical technology, including preparation of medical devices for use in surgery.

Surgical First Assistant (CSFA)
Surgical technologists who have already earned their AAS may choose to return for an advanced technical certificate (ATC) in surgical assisting. Graduates of this program are entitled to sit for the Certified Surgical First Assistant (CSFA) examination sponsored by the National Board of Surgical Technology and Surgical Assisting. Collin's Surgical Assisting program is the only one of its kind in the state and one of only 11 in the nation.

Licensure Notice: Students who have been involved with the criminal system, please be advised that your background could keep you from being licensed by the State of Texas. If you have a question about your background and licensure, please speak with your faculty member or the department chair. You also have the right to request a criminal history evaluation letter from the applicable licensing agency.

Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

SPECIAL ADMISSION REQUIREMENTS
Admission to the program is selective and competitive. Students must apply for admission and meet all requirements of external clinical facilities participating in the program. These requirements include drug screens, background checks, selected immunizations and proof of personal health insurance. Consult the program’s Admission Packet available on the website https://www.collin.edu/surgtech for more details.

- Submit an application for admission to Collin College Admission department
- Submit completed application to Surgical Technology Program (see Admission Packet at https://www.collin.edu/surgtech) by the application deadline (no later than the second Friday in April).
- Incomplete applications will NOT be considered for selection.
- An interview with the Admissions committee will be scheduled.
- Submit physical exam documentation, signed and dated.
- Provide proof of high school graduation or GED
- Overall GPA of 2.5 from all college courses completed and applicable to the surgical technology degree plan.
- Current Healthcare Provider CPR from the American Heart Association.
- Complete Psychological Services Bureau (PSB) Health Occupations Aptitude Exam prior to application deadline.
- Completion of or current enrollment in the prerequisite four pre-entrance required courses with a grade of 'C' or above and a cumulative prerequisite course GPA of 2.5. These courses are listed below and include: BIOL-2401, BIOL-2402, HITT-1305 and HPRS-1204. If prerequisite courses are being completed during the spring preceding admission, students will automatically receive conditional enrollment pending completion of prerequisites with a cumulative prerequisite GPA of 2.5.
- Students must be prepared to enter college-level mathematics by either completion of MATH 0310 or by placement at the MATH 1314 College Algebra level.
- Submit a handwritten one- to two-page essay that discusses why surgical technology has been selected as a profession.
- Submit two reference forms: one from an employer and one from an educator.
- These letters should be directly mailed by whomever writes them to: Attn: Director of Surgical Technology Program, Health Sciences,
ONCE ADMITTED TO THE PROGRAM:

- Participate in assessment of Core Performance Standards as defined by College policy and be reviewed by the ACCESS department if accommodations are necessary. (To review Core Performance Standards, see the Surgical Technology website at https://www.collin.edu/surgtech)
- Pass a drug screen at the student’s expense when requested by the program. Positive drug screens can result in students not being admitted to the program.
- Agree to a criminal background check. Findings from the background check that do not meet clinical affiliation specifications will result in the student not being admitted to the program.
- Purchase liability insurance prior to clinical rotations.
- Attend a student orientation prior to the start of each semester.
- Complete all immunizations required by the Texas Department of State Health Services (TDSHS)*.

* It is important to note that one of the required vaccinations, Hepatitis B, consists of a three dose series, which can take up to 7 months to complete. All immunizations must be complete before the first clinical day.

**Health Insurance** – All Surgical Technology students are required to show proof of health insurance prior to starting clinical rotations each semester.

**NOTE**: Students interested in admission to the program for summer semester should see their physician and begin immunizations four (4) months prior to the beginning of the semester.

**FUNCTIONAL ABILITIES/CORE PERFORMANCE STANDARDS STATEMENT**

After initial acceptance to this program, all students are required to meet specific functional abilities, with or without accommodations, for successful completion of the program, and to function safely and effectively in the variety of professional settings. The specific functional requirements are found in the Functional Abilities/Core Performance Standards documents provided in the program information packet and on the Surgical Technology website. Students who think they may not be able to meet the functional standards and need accommodation are encouraged to contact the college ACCESS department as soon as this program is of interest.

**ACCREDITATION**

The Collin College AAS – Surgical Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs upon the recommendation of the Accreditation Review Committee on Surgical Technology and Surgical Assisting (ARCSTA). They may be contacted at:

1361 Park Street
Clearwater, FL 33756
727.210.2350
http://www.caahep.org

The Central Sterile Processing (CSP) curriculum is approved by the International Association of Healthcare Central Service Material Management (IAHCSMM). Recipients of this certificate are eligible to sit for the national certification exam.

Students interested in the program should see the academic advisor for consultation and consult the college website for more specific information. An admission packet is available upon request from the Dean of Health Sciences Office and on the Surgical Technology website.

**AAS – Surgical Technology**

60 credit hours

**FIRST YEAR**

First Prerequisite Semester

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<td>HPRS 1204</td>
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<td>SPCH 1311</td>
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Second Prerequisite Semester

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<td>PSYC 2301</td>
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**SECOND YEAR**

First (Summer) Semester

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Second Semester

<table>
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<td>HITT 1303</td>
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<tr>
<td>HPRS 2300</td>
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<tr>
<td>SRGT 1441</td>
<td>3</td>
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<tr>
<td>SRGT 1461</td>
<td>3</td>
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</tbody>
</table>

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Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
### Third Semester
- **BIOL 2420** Microbiology for Non-Science Majors
- **SRGT 1171** Transition to Practice for the Surgical Technologist
- **SRGT 1442** Surgical Procedures II
- **SRGT 2130** Professional Readiness
- **SRGT 2561** Clinical – Surgical Technology II (Capstone)

1. No course substitutions
2. May substitute SOCI 1301

### Certificate Level 1 – Central Sterile Processing
16 credit hours

#### FIRST YEAR

<table>
<thead>
<tr>
<th>First Semester</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>HPRS 1470</td>
<td>Central Sterile Processing I</td>
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<td>HPRS 1370</td>
<td>Central Sterile Processing II</td>
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<table>
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<tbody>
<tr>
<td>HPRS 1561</td>
<td>Clinical – Health Services/Allied Health/Health Sciences, General (Capstone)</td>
<td></td>
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</tbody>
</table>

### Advanced Technical Certificate 1 – Surgical Assisting
38 credit hours

This certificate is designed for Surgical Technicians that already have a degree in Surgical Technology plus 2 years experience as a Certified Surgical technician.

#### First Semester
- **BUSI 1301** Business Principles
- **COSC 1301** Introducing to Computing
- **CSFA 1371** Fundamentals and Surgical Safety
- **CSFA 2371** Surgical Procedures
- **CSFA 2472** Suturing, Knot Tying, Hemostasis And Wound Healing

#### Second Semester
- **CSFA 1172** Pharmacology and Anesthesia
- **CSFA 1173** Principles of Surgical Assisting Lab I
- **CSFA 1175** Peroperative Microbiology and Bioscience
- **CSFA 2372** Operative Anatomy and Pathophysiology I
- **CSFA 2473** Surgical Assisting Clinical I
- **HPRS 2232** Health Care Communications

### Program Options:

#### AAS – Video Production

**Certificate Level 1 – Video Production**

Learn how to make your cinematic vision a reality with a certificate or degree in video production from Collin College.

Video Production focuses on developing the concept, design and production skills necessary for creating digital video content in any delivery format. You will learn script writing, storyboarding, video production with cameras, audio and lighting, as well as nonlinear editing using industry-standard tools and techniques.

For more than 20 years, the Communication Design department (formerly Applied Graphic Design Technology) at Collin has offered industry-standard education in the creative service fields of animation, digital video, graphic design, web and interactive design. All full-time faculty have industry experience and all associate faculty are practicing professionals. Guest speakers from industry are featured on an ongoing basis. Current industry practices and standards are a central component of classroom instruction and there is an elective option for the most diligent students to earn credit through local industry internships.

Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

#### AAS – Video Production
60 credit hours

#### FIRST YEAR

<table>
<thead>
<tr>
<th>First Semester</th>
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<tr>
<td>ARTC 1325</td>
<td>Introduction to Computer Graphics</td>
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<tr>
<td>ARTS 2348</td>
<td>Digital Photography 1</td>
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</tr>
<tr>
<td>ARTV 1371</td>
<td>Storyboard and Concept Development</td>
<td></td>
</tr>
</tbody>
</table>
Web and Mobile Development

Program Options:
AAS – Web and Mobile Development
OSA – Web Foundation
OSA – JavaScript Development
OSA – .Net Web Development
Certificate Level 1 – Full-stack Web Developer
Certificate Level 1 – Front-end Web Developer
Certificate Level 2 – Mobile Application Development

With the global impact of web and mobile technologies, interactive web and mobile technology professionals are in demand. The Web and Mobile Development Program prepares students for this role, teaching them to create responsive websites, and web and mobile applications.

This degree program offers front-end web development, back-end web development, and hybrid mobile development. Front-end web development focuses on developing the web pages that are viewed in a browser, while back-end web development deals with server-side technologies and connecting to databases. Hybrid mobile development uses web languages to create mobile applications that can run on many different mobile devices.

Three certificates are also offered, which can be applied toward the AAS degree. The certificates provide the knowledge to update current job requirements. After successfully completing a certificate, students may continue to work toward an AAS degree in Web and Mobile Development.

Web and mobile skills offered in our degrees include HTML, CSS, CSS Frameworks (Bootstrap), JavaScript, JavaScript Frameworks (jQuery, REACT, NodeJS, and others), C#.NET, PHP and Python. We also offer skills in using GIT repositories, troubleshooting and testing code, current industry development cycles, and best practices in web and mobile accessibility and usability.

Students planning to transfer to a college or university should check with Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability.

1. May substitute ARTS 2356 or PHTC 1311

Certificate Level 1 – Video Production

42 credit hours

FIRST YEAR

First Semester
ARTC 1325 Introduction to Computer Graphics
ARTS 2348 Digital Photography I
ARTV 1371 Storyboard and Concept Development
DRAM 2366 Introduction to Cinema
MUSC 1327 Audio Engineering I

Second Semester
ARTC 1302 Digital Imaging I
ARTV 1351 Digital Video
FLMC 1331 Video Graphics and Visual Effects I
RTVB 1329 Scriptwriting

SECOND YEAR

First Semester
ARTV 1303 Basic Animation
ARTV 2320 Team Program Production I
FLMC 2331 Video Graphics and Visual Effects II
RTVB 2330 Film and Video Editing

Second Semester
RTVB 2340 Portfolio Development (Capstone)

1. May substitute ARTS 2356 or PHTC 1311
AAS – Web and Mobile Development
60 credit hours

FIRST YEAR
First Semester
COSC 1315 Introduction to Computer Programming
ENGL 1301 Composition I
ITSE 1301 Web Designing Tools – Graphics
ITSW 1311 Beginning Web Programming
GEN ED Mathematics course

Second Semester
IMED 1341 Interface Design
ITNW 1358 Network+
ITSE 1330 Introduction to C# Programming
ITSE 1359 Introduction to Scripting Languages – Python
ITSE 2302 Intermediate Web Programming
ITSW 2309 Database Programming – SQL

Summer Semester
GEN ED See Social/Behavioral Sciences Course
GEN ED Humanities/Fine Arts course

SECOND YEAR
First Semester
ITSE 1306 PHP Programming
ITSE 1333 Mobile Applications Development
ITSE 2353 Advanced C# Programming
GEN ED Speech course

Second Semester
INEW 2334 Advanced Web Programming
ITSE 2374 Web and Mobile Application Development (Capstone)

Elective*
1. May substitute COSC 1436
2. May substitute Math 1314 or Math 1324 or Math 1332
3. May substitute ITSC 2380

* Elective (3 credit hours) Choose one course from the following:
Front-end Development: ITSE 2313
Back-end Development: ITSC 1316, ITSE 2347
Mobile Development: ITSE 1373, ITSE 2310, ITSE 2343

OSA – JavaScript Development
9 credit hours

ITSE 1311 Beginning Web Programming
ITSE 2302 Intermediate Web Programming
INEW 2334 Advanced Web Programming

OSA – .Net Web Development
12 credit hours

COSC 1315 Introduction to Computer Programming
ITSE 1311 Beginning Web Programming
ITSE 1330 Introduction to C# Programming
ITSE 2353 Advanced C# Programming

Certificate Level 1 – Full-Stack Web Developer
42 credit hours

First Summer Semester
COSC 1315 Introduction to Computer Programming
ITSE 1311 Beginning Web Programming

First Semester
IMED 1341 Interface Design
ITNW 1358 Network+
ITSE 1301 Web Designing Tools – Graphics
ITSE 1330 Introduction to C# Programming
ITSE 1359 Introduction to Scripting Languages – Python
ITSE 2302 Intermediate Web Programming

Second Semester
INEW 2334 Advanced Web Programming
ITSE 1306 PHP Programming
ITSE 2309 Database Programming – SQL
ITSE 2353 Advanced C# Programming

Second Summer Semester
ITSE 2374 Web and Mobile Application Development (Capstone)

1. May substitute ITSC 2380

* Elective (3 credit hours) : ITSC 1316, ITSE 2313, ITSE 1333

Certificate Level 1 – Front-end Web Developer
18 credit hours

Summer Semester
ITSE 1311 Beginning Web Programming

First Semester
IMED 1341 Interface Design
ITSE 1301 Web Designing Tools – Graphics
ITSE 2302 Intermediate Web Programming

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Second Semester
ITSE 2313  Web Authoring 1
ITSE 2374  Web and Mobile Application Development (Capstone) 2

1. May substitute INEW 2334
2. May substitute ITSC 2380

Certificate Level 2 – Mobile Application Development
27 credit hours
Students must be TSI complete

First Summer Semester
COSC 1315  Introduction to Computer Programming 1
ITSE 1311  Beginning Web Programming

First Semester
IMED 1341  Interface Design
ITSE 1330  Introduction to C# Programming
ITSE 2302  Intermediate Web Programming

Second Semester
INEW 2334  Advanced Web Programming 2
ITSE 1333  Mobile Applications Development
ELECTIVE*

Second Summer Semester
ITSE 2343  Advanced Mobile Programming (Capstone) 3

1. May substitute COSC 1436
2. May substitute COSC 1337
3. May substitute ITSC 2380 or ITSE 2374

*Elective (3 credit hours): ITSE 1373, ITSE 2309, ITSE 2310

The AAS will allow you to earn a degree in Welding or Foundry/Metalsmiting or a combination, while the certificates are designed to qualify you in specific processes such as welding, metal sculpting and foundry/metal smithing.

If your program requires a criminal background check, your placement in a required clinical site, cooperative, practicum, internship, and/or licensure/certification opportunity may be impacted. If you have any questions or concerns, please contact your program director and check with your licensing/certifying entity, if any, to determine your status.

The Welding program will be housed at the Spring Creek campus in room A185. The department has a foundry and TIG, MIG and stick welders.

Students planning to transfer to a college or university should check with the Collin academic advisors. Also check the degree requirement of the intended transfer college prior to beginning this program to verify course degree applicability

AAS – Welding – Foundry/Metalsmiting Track
60 credit hours

FIRST YEAR
First Semester
MATH 1332  Contemporary Mathematics
(Quantitative Reasoning)
(See Mathematics options)
WLDG 1428  Introduction to Shielded Metal Arc Welding (SMAW)
WLDG 1434  Introduction to Gas Tungsten Arc Welding (GTAW)
WLDG 1530  Introduction to Gas Metal Arc Welding (GMAW)

Second Semester
ENGL 1301  Composition I
SPCH 1321  Business and Professional Communication (See Speech options)
WLDG 1401  Metalsmiting
WLDG 1405  Art Metals

SECOND YEAR
First Semester
GEN ED  Humanities/Fine Arts course
TECHNICAL COURSE 1
TECHNICAL COURSE 2
WLDG 1408  Metal Sculpture

Welding
Program Options:
AAS – Welding
Foundry/Metalsmiting Track
Welding Technology Track
Certificate Level 1 – Foundry/Metalsmiting
Certificate Level 1 – Welding Technology

Welding is a craft that is highly valued in both the industrial and the artistic worlds. Welders who graduate from Collin College’s program will be prepared to earn a job or go into business for themselves, providing a service that is always in high demand.

Collin College offers an associate of applied science in welding with two tracks and two level 1 certificates, Foundry/Metalsmiting and Welding Technology.
## Technical Course Options

* The options are a three-course sequence focusing on Metal Sculpting or Metalsmithing. You must take all 3 course options from a single focus.

### Metal Sculpting Focus (12 credit hours)

- **Technical Course 1:** WLDG 2441 Power Hammer
- **Technical Course 2:** WLDG 2447 Advanced Gas Metal Arc Welding (GMAW)
- **Technical Course 3:** WLDG 2440 Advanced Metal Sculpture (Capstone) 5

### Foundry Metalsmithing Focus (12 credit hours)

- **Technical Course 1:** WLDG 1471 Introduction To Foundry Practices
- **Technical Course 2:** WLDG 2443 Advanced Shielded Metal Arc Welding (SMAW)
- **Technical Course 3:** WLDG 2471 Advanced Foundry Practices (Capstone) 1

1. May substitute WLDG 2480, with consent of Associate Dean

## AAS – Welding – Welding Technology Track

### FIRST YEAR

#### First Semester

- MATH 1332 Contemporary Mathematics (Quantitative Reasoning) (See Mathematics options)
- WLDG 1428 Introduction to Shielded Metal Arc Welding (SMAW)
- WLDG 1434 Introduction to Gas Tungsten Arc Welding (GTAW)
- WLDG 1530 Introduction to Gas Metal Arc Welding (GMAW)

#### Second Semester

- ENGL 1301 Composition I
- SPCH 1321 Business and Professional Communication (See Speech options)
- WLDG 1413 Introduction to Blueprint Reading for Welders
- WLDG 1435 Introduction to Pipe Welding

#### SECOND YEAR

#### First Semester

- WLDG 2451 Advanced Gas Tungsten Arc Welding (GTAW)
- WLDG 2443 Advanced Shielded Metal Arc Welding (SMAW)
- WLDG 2453 Advanced Pipe Welding 1

#### Second Semester

- WLDG 1425 Introduction to Oxy-Fuel Welding and Cutting
- WLDG 2413 Intermediate Welding Using Multiple Processes (Capstone) 2
- WLDG 2431 Advanced Blueprint Interpretation and Cost Analysis

### Certificate Level 1 – Foundry/Metalsmithing

41 credit hours

* The options are a three-course sequence focusing on Metal Sculpting or Metalsmithing. You must take all 3 course options from a single focus.
Foundry Metalsmithing Focus (12 credit hours)
Technical Course 1: WLDG 1471 Introduction to Foundry Practices
Technical Course 2: WLDG 2443 Advanced Shielded Metal Arc Welding (SMAW)
Technical Course 3: WLDG 2471 Advanced Foundry Practices (Capstone) ¹

¹. May substitute WLDG 2480, with consent of Associate Dean

Certificate Level 1 – Welding Technology
36 credit hours

FIRST YEAR
First Semester
WLDG 1428 Introduction to Shielded Metal Arc Welding (SMAW)
WLDG 1434 Introduction to Gas Tungsten Arc Welding (GTAW)
WLDG 1435 Introduction to Pipe Welding

Second Semester
WLDG 1413 Introduction to Blueprint Reading for Welders
WLDG 2443 Advanced Shielded Metal Arc Welding (SMAW)
WLDG 2451 Advanced Gas Tungsten Arc Welding (GTAW)

SECOND YEAR
First Semester
WLDG 2431 Advanced Blueprint Interpretation and Cost Analysis
WLDG 2413 Intermediate Welding Using Multiple Processes (Capstone) ¹
WLDG 2453 Advanced Pipe Welding ²

¹. May substitute WLDG 2480, with consent of Associate Dean
². May substitute WLDG 2450, with consent of Associate Dean
UNDERSTANDING COURSE TYPES AND CREDIT HOURS

COURSE TYPES
(A) indicates an academic transfer course that may apply to a baccalaureate degree.
(CE) indicates a Continuing Education course that may apply to training or meet licensure and certification requirements for professional development
(D) indicates a developmental pre-college course that does not apply to an associate degree or transfer.
(W) indicates a workforce course that may not transfer or apply to a baccalaureate degree.

Technical or workforce courses are designated by a (W) at the end of their course description. Workforce courses provide an opportunity for students to obtain skills and knowledge needed for career exploration, licensure, and specific job qualifications. Workforce courses do not always transfer or apply to academic degree programs at four-year colleges and universities. Some programs have transfer or articulation agreements in place to facilitate the transfer of workforce credits. Check with an academic advisor or transfer institution for more information.

COURSE NAMES AND COURSE NUMBERS
Course names and numbers contain useful information. In the Texas Common Course Numbering System each course is identified by a four-character "rubric" (i.e. discipline abbreviation) and a 4-digit number: The rubric is always four upper-case alphabetic characters. The course number denotes additional information explained in the table below. The course ACCT 2301 is used to illustrate the system.

<table>
<thead>
<tr>
<th>Rubric</th>
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<tr>
<td>Course level = 1st digit</td>
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</tr>
<tr>
<td>0 = pre-college</td>
<td></td>
</tr>
<tr>
<td>1 = freshman</td>
<td></td>
</tr>
<tr>
<td>2 = sophomore</td>
<td></td>
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<tr>
<td>Credit value = 2nd digit</td>
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</tr>
<tr>
<td>Credit value of the course, expressed in semester hours. Typically credit value ranges from 0-4 semester credit hours (SCH).</td>
<td></td>
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<tr>
<td>Course ID = 3rd &amp; 4th digits</td>
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</tr>
<tr>
<td>The course ID is used to uniquely identify the course within the course name.</td>
<td></td>
</tr>
</tbody>
</table>

Course numbers beginning with zero (0)
Course numbers beginning with zero include developmental education, English as Second Language (ESL) courses, and study skills courses. These courses prepare students to be successful in college-level work. They are not college-level courses and therefore do not apply to college degrees or other awards, nor do they transfer.

Course numbers beginning with one (1) or higher
Any course with a number that starts with a one (1) or higher is considered a college-level credit course. Completion of a college-level credit course with a D or higher will earn college credit.

EARNED COURSE CREDIT HOURS
Credit hours are earned upon successful completion of college credit courses. Each degree, certificate or award requires the completion of a specific number of credit hours. The second digit in a course number indicates the number of credit hours earned upon successful completion of the course.
**COURSE RUBRICS**

Course descriptions are listed alphabetically by rubrics. Rubrics can be found below and on the following pages, listed by subject and by rubric.

**ALPHABETIZED SUBJECT LIST**

<table>
<thead>
<tr>
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<th>Subject/Rubric Title</th>
<th>Subject/Rubric Title</th>
<th>Subject/Rubric Title</th>
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<td>Diagnostic Medical Sonography</td>
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<td>ESL Reading</td>
<td>ESLR</td>
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</table>

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<table>
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<td>Interpreter Prep/Deaf</td>
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Please refer to [http://www.collin.edu/academics/programs/index.html](http://www.collin.edu/academics/programs/index.html) for the most current information.
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**ALPHABETIZED COURSE DESCRIPTIONS**

**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) as applied to transactions and events that affect business organizations. Students will examine the procedures of 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). Lab required. Prerequisite: Meet TSI college-readiness standard for Mathematics; or equivalent. 3 credit hours. (A)

**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. Lab required. Prerequisite: ACCT 2301. 3 credit hours. (A)

**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. Lab required. 3 credit hours. (W)

**ACNT 1311 Introduction to Computerized Accounting**  
Introduction to utilizing the computer in maintaining accounting records with primary emphasis on a general ledger package. Lab required. 3 credit hours. (W)

**AERS 1105 The Air Force Today I**  
Introduces students to the U.S. Air Force and the Air Force Reserve Officer Training Corps (AFROTC); includes Officership, professionalism, military customs and courtesies, and officer opportunities and benefits. AFROTC cadets must register for Leadership Laboratory as it complements this course with followership experience. 1 credit hour. (A)

**AERS 1106 The Air Force Today II**  
Introduces students to the U.S. Air Force and the Air Force Reserve Officer Training Corps (AFROTC); includes Officership, professionalism, military customs and courtesies, and officer opportunities and benefits. AFROTC cadets must register for Leadership Laboratory as it complements this course with followership experience. 1 credit hour. (A)

**AERS 2103 The Development of Air Power I**  
Introduces students to the U.S. Air Force and the Air Force Reserve Officer Training Corps (AFROTC); includes Officership, professionalism, military customs and courtesies, and officer opportunities and benefits; AFROTC cadets must register for Leadership Laboratory as it complements this course with followership experience. 1 credit hour. (A)

**AERS 2104 The Development of Air Power II**  
Introduces students to the U.S. Air Force and the Air Force Reserve Officer Training Corps (AFROTC); includes Officership, professionalism, military customs and courtesies, and officer opportunities and benefits; AFROTC cadets must register for Leadership Laboratory as it complements this course with followership experience. 1 credit hour. (A)

**ANTH 2301 Physical Anthropology**  
The study of human origins and bio-cultural adaptations. Topics may include primatology, genetics, human variation, forensics, health, and ethics in the discipline. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A) .

**ANTH 2302 Introduction to Archeology**  
The study of the human past through material remains. The course includes a discussion of methods and theories relevant to archeological inquiry. Topics may include the adaption of agriculture, response to environmental charge, the emergence of complex societies, and ethics in the discipline. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**ANTH 2346 General Anthropology**  
The study of human beings, their antecedents, related primates, and their cultural behavior and institutions. Introduces the major subfields: physical and cultural anthropology, archeology, linguistics, their applications, and ethics in the discipline. Prerequisite: Meet TSI
college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**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. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**ANTH 2389 Academic Co-op Anthropology**
Integrates on-campus study with practical hands-on work experience in anthropology. In conjunction with class seminars, the student will set specific goals and objectives in the study of anthropology. Contact the Cooperative Work Experience Office. Prerequisites: Consent of Associate Dean and meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**ANTH 2401 Physical Anthropology**
Lecture: The study of human origins and bio-cultural adaptations. Topics may include primatology, genetics, human variation, forensics, health, and ethics in the discipline. Lab: Includes demonstrations of the major principles of the lecture section. Additionally, an overview of human origins and cultural adaptations combining study of our nearest relatives, the chimpanzees, with the analysis of reproductions of fossil bones. Unit concerning forensic anthropology explains how crimes can be solved from analysis of skeletal material; students work with replicas of human bone. Opportunity to participate in field trip to zoo. Lab required. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 4 credit hours. (A)

**ARAB 1411 Beginning Arabic I**
This course, which is designed for students with little or no prior training in the language, focuses on developing the four basic skills of speaking, reading, writing and listening, as well as the study of selected aspects of Arabic civilization. Instruction is enhanced by the use of audio and video materials. Lab required. 3 credit hours. (A)

**ARAB 1412 Beginning Arabic II**
This course is a continuation of ARAB 1411. It continues the development of the four basic skills of speaking, reading, writing and listening, as well as the study of selected aspects of Arabic civilization. Instruction is enhanced by the use of audio and video materials. Lab required. Prerequisite: ARAB 1411 or consent of Associate Dean. 3 credit hours. (A)

**ARCE 1342 Codes, Specifications, and Contract Documents**
Study of ordinances, codes and legal documents as they relate to specifications and drawings. Discussion of owner-architect-contractor responsibilities, duties, and legal relationships. Additionally, topics include EPA, RRC, and other regulatory entities potentially impacting construction projects, delivery methods and resulting contracts. Prerequisites: OSHT 1305 and either CNBT 1300 or CNBT 2310. 3 credit hours. (W)

**ARCE 1352 Structural Drafting**
A study of structural systems including concrete foundations and frames, wood framing and trusses, and structural steel framing systems. Includes detailing of concrete, wood, and steel to meet industry standards including the American Institute of Steel Construction and The American Concrete Institute. Lab required. Prerequisite: DFTG 1309. 3 credit hours. (W)

**ARCE 2352 Mechanical and Electrical Systems**
The properties of building materials (assemblies), specifications, codes, vendor references, and uses of mechanical, plumbing, conveying, and electrical systems as they relate to architecture for residential and commercial construction. Lab required. Prerequisite: DFTG 1317. 3 credit hours. (W)

**ARTC 1302 Digital Imaging I**
Digital imaging using raster image editing and/or image creation software: scanning, resolution, file formats, output devices, color systems, and image-acquisitions. Lab required. Prerequisite: ARTC 1325. 3 credit hours. (W)

**ARTC 1305 Basic Graphic Design**
Graphic design with emphasis on the visual communication process. Topics include basic terminology and graphic design principles. Lab required. 3 credit hours. (W)

**ARTC 1313 Digital Publishing I**
The fundamentals of using digital layout as a primary publishing tool and the basic concepts and terminology associated with typography and page layout. Lab included. Prerequisites: ARTC 1302, ARTC 1305 and ARTC 1325. 3 credit hours. (W)

**ARTC 1317 Design Communication I**
Study of design development relating to graphic design terminology, tools and media, and layout and design concepts. Topics include integration of type, images and other design elements, and developing computer skills in industry standard computer programs. Lab required. Prerequisite/Concurrent Enrollment: ARTC 1327 and ARTC 1353. 3 credit hours. (W)

**ARTC 1321 Illustration Techniques I**
A study of illustration techniques in various media. Emphasis on creative interpretation and the discipline of draftsmanship for visual communication of ideas. Lab required. Prerequisite: ARTS 1316. 3 credit hours. (W)
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. Lab required. 3 credit hours. (W)

ARTC 1327 Typography
A study of letterforms and typographic concepts as elements of graphic communication. Emphasis on developing a current, practical typographic knowledge based on industry standards. Lab required. Prerequisites: ARTC 1305 and ARTC 1325. 3 credit hours. (W)

ARTC 1349 Art Direction I
Creation of projects in art direction for advertising graphic campaigns for products, services, or ideas. Topics include all campaign procedures from initial research and creative strategy to final execution and presentation of a comprehensive project. Lab required. Prerequisite: ARTC 1302 and ARTC 1317. 3 credit hours. (W)

ARTC 1353 Computer Illustration I
Use of the tools and transformation options of an industry-standard vector drawing program to create complex illustrations or drawings. Includes principles of layout and design and manipulation of text and graphics. Lab required. Prerequisite: ARTC 1325. 3 credit hours. (W)

ARTC 2305 Digital Imaging II
Principles of digital image processing and digital painting. Emphasis on raster-based imaging and the creative aspects of electronic illustration for commercial or fine art applications. Lab included. Prerequisite: ARTC 1302. 3 credit hours. (W)

ARTC 2311 History of Communication Graphics
Survey of the evolution of graphic arts in relation to the history of art. Includes formal, stylistic, social, political, economic, and historical aspects. Emphasis on art movements, schools of thought, individuals, and technology as they interrelate with graphic arts. 3 credit hours. (W)

ARTC 2335 Portfolio Development for Graphic Design
Preparation of a portfolio comprised of completed graphic design projects. Evaluation and demonstration of portfolio presentation methods based on the student's specific area of study. Lab required. Prerequisite: Consent of Associate Dean. 3 credit hours. (W)

ARTC 2340 Computer Illustration II
Advanced use of software applications and/or various media with emphasis on output procedures, the resolution of complex design issues, and concept development. Lab required. Prerequisite: ARTC 1353. 3 credit hours. (W)

ARTC 2347 Design Communication II
An advanced study of the design process and art direction. Emphasis on form and content through the selection, creation, and integration of typographic, photographic, illustrative, and design elements. Lab required. Prerequisites: ARTC 1317 or ARTC 1349 and ARTC 1302 and ARTC 1327. 3 credit hours. (W)

ARTC 2349 Art Direction II
Mastery of advanced art direction projects with emphasis on selected topics in advertising campaigns. Includes written, oral, and visual skills. Lab required. Prerequisite: ARTC 1349. 3 credit hours. (W)

ARTC 2371 User Experience Design
An advanced study of design as it applies to user experience in digital media. Emphasis on form, function as it relates to usability, accessibility, ergonomics, human factors, system performance, branding and content through the development of interface architecture and compositional layouts. The selection and creation of visual assets including the integration of typographic, photographic, illustrative, and design elements. Lab required. Prerequisites: ARTC 1317, ARTC 1327 and IMED 1316. 3 credit hours. (W)

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 context. Prerequisite: Meet TSI standard for INRW 0315; or equivalent. 3 credit hours. (A)

ARTS 1303 Art History I (Prehistoric to the 14th century)
A chronological analysis of the historical and cultural contexts of the visual arts from prehistoric times to the 14th century. Prerequisite: Meet TSI standard for INRW 0315; or equivalent. 3 credit hours. (A) Note: Students should expect additional supply costs.

ARTS 1304 Art History II (14th century to the present)
A chronological analysis of the historical and cultural contexts of the visual arts from the 14th century to the present day. Prerequisite: Meet TSI standard for INRW 0315; or equivalent. 3 credit hours. (A) Note: Students should expect additional supply costs.
ARTS 1311 Design I (2-dimensional)
An introduction to the fundamental terminology, concepts, theory, and application of two-dimensional design. Lab required. 3 credit hours. (A) Note: Students should expect additional supply costs.

ARTS 1312 Design II (3-dimensional)
An introduction to the fundamental terminology, concepts, theory, and application of three-dimensional design. Lab required. 3 credit hours. (A) Note: Students should expect additional supply costs.

ARTS 1313 Foundations of Art
Introduction to the creative media designed to enhance artistic awareness and sensitivity through the creative and imaginative use of art materials and tools. Includes art history and culture through the exploration of a variety of art works with an emphasis on aesthetic judgment and growth. Additionally, the examination of the change in art creation based on the advancement of tools and materials pushing art production from optic technology in Renaissance painting to mechanical art to technology based art. 3 credit hours. (A)

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. Lab required. 3 credit hours. (A) Note: Students should expect additional supply costs.

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. Lab required. Prerequisite: ARTS 1316. 3 credit hours. (A) Note: Students should expect additional supply costs.

ARTS 2316 Painting I
Introduction to painting including use of materials, techniques, color study, and composition. Various painting styles will be practiced. Lab required. Prerequisite: ARTS 1316. 3 credit hours. (A) Note: Students should expect additional supply costs.

ARTS 2317 Painting II
Increases the student's ability to use various techniques, color, and composition with acrylics, oils, and other media. Explores realistic and abstract approaches to painting. Emphasis on design, imagination, personal expression and painting style. Lab required. Prerequisite: ARTS 2316. 3 credit hours. (A) Note: Students should expect additional supply costs.

ARTS 2323 Figure Drawing I
Drawing of the life model including instruction in anatomical and creative approaches to figure drawing. Emphasis on personal expression and creativity. Lab required. Prerequisite: ARTS 1316. 3 credit hours. (A) Note: Students should expect additional supply costs.

ARTS 2326 Sculpture I
Study of three-dimensional form and introduction to sculpture techniques including basic methods of modeling, construction, and simple casting procedures. Exploration of various media including stone, wood, metal, plaster, and paper. Lab required. 3 credit hours. (A) Note: Students should expect additional supply costs.

ARTS 2341 Jewelry/Art Metals I
Exploration of wearable and small sculptural forms using non-ferrous and precious metals. Metal construction and jewelry making techniques including soldering, lost wax casting, cold connections, patinas and surface embellishment. Lab required. 3 credit hours. (A) Note: Students should expect additional supply costs.

ARTS 2346 Ceramics I
Introduction to ceramic design and methods including hand building techniques and use of the potter's wheel. Explores clays, glazing, and firing techniques including stoneware and raku. Lab required. 3 credit hours. (A) Note: Students should expect additional supply costs.

ARTS 2347 Ceramics II
Further study of ceramic design, method, and media with exploration of various clays, glaze compositions, and kiln operations. Emphasis on creative expression and personal style. Lab required. Prerequisite: ARTS 2346. 3 credit hours. (A)
ARTS 2348 Digital Photography I
This is a foundational digital photography course. It is a studio art course that explores the potential of the computer hardware and software medium for visual, conceptual, and practical uses in the visual arts. It includes camera operation and professional image workflow, composition, supplemental lighting and exposure control. Lab required. 3 credit hours. (A) Note: Students should expect additional supply costs.

ARTS 2356 Photography I/Darkroom
Introduction to photography: basic camera operations and darkroom techniques; emphasis on visual imagination and design. Lab required. 3 credit hours. (A) Note: Students should expect additional supply costs.

ARTS 2357 Photography II/Darkroom
Intermediate black-and-white course; emphasis on developing a visual language, problem solving, craftsmanship, and learning to edit personal work. Technical considerations include print and negative quality, use of studio lighting, and large format cameras. Lab required. Prerequisite: ARTS 2356. 3 credit hours. (A) Note: Students should expect additional supply costs.

ARTS 2366 Watercolor I
Introduction to watercolor including instruction in the use of brushes, papers, materials, and various painting techniques on wet and dry paper. Gain experience in mixing colors, color methods, and problem solving in the use of technique and in skillful observation of composition and painting style. Lab required. 3 credit hours. (A) Note: Students should expect additional supply costs.

ARTS 2389 Academic Co-op Arts/Photography
Integrates on-campus study with practical hands-on work experience in art/photography. In conjunction with class seminars, the student will set specific goals and objectives in the study of art. Contact the Cooperative Work Experience Office. 3 credit hours. (A)

ARTV 1303 Basic Animation
Examination of animation concepts, principles, and storyboard for basic production. Emphasizes creating movement and expression utilizing traditionally or digitally generated image sequences. Lab required. Prerequisite: ARTC 1325. 3 credit hours. (W)

ARTV 1341 3-D Animation I
Intermediate level 3-D course introducing animation tools and techniques used to create movement. Emphasis on using the principles of animation. Lab required.

ARTV 1343 Digital Sound
Digitizing sound and incorporating it into video games, multimedia or web projects for various delivery systems. Emphasizes compression issues, sampling, synchronizing, and resource management. Lab required. 3 credit hours. (W)

ARTV 1345 3-D Modeling and Rendering I
Techniques of three-dimensional (3-D) modeling utilizing industry standard software. Includes the creation and modification of 3-D geometric shapes, use of a variety of rendering techniques, camera, light sources, texture, and surface mapping. Lab required. Prerequisite/Concurrent enrollment: ARTC 1325. 3 credit hours. (W)

ARTV 1371 Storyboard and Concept Development
Storyboarding for film, video and animation. Visual concept development for linear and interactive media. Lab required. 3 credit hours. (W)

ARTV 2301 2-D Animation I
Skill development in the use of software to develop storyboards and two-dimensional animation including creating, importing, and sequencing media elements to create multimedia presentations. Emphasis on conceptualization, creativity, and visual aesthetics. Lab required. Prerequisite: ARTV 1303. 3 credit hours. (W)

ARTV 2320 Team Program Production I
Students assume roles in a production team using techniques and equipment to create short-form production(s). Lab required. Prerequisite: ARTV 1351. 3 credit hours. (W)

ARTV 2335 Portfolio Development for Animation
A course in the development of a professional portfolio to showcase the student's skills in animation. Includes self-promotion, resumes, portfolio distribution, and interview techniques. Lab required. Prerequisite: Consent of Associate Dean. 3 credit hours. (W)

ARTV 2345 3-D Modeling and Rendering II
A studio course focused on advanced 3-D modeling and rendering techniques using industry standard software, modeling techniques, camera settings, lighting, and surfacing to develop detailed environments. Lab required. Prerequisite: ARTV 1345. 3 credit hours. (W)
ARTV 2351  3-D Animation II
Advanced level 3-D course utilizing animation tools and techniques used to develop movement. Emphasis on advanced animation techniques. Lab required. Prerequisite: ARTV 1341. 3 credit hours. (W)

ARTV 2371  Advanced Skill Development for Animation and Games
An upper level course in the development of concepts and execution of assets for 2D/3D animation and games. The student's incoming skill level and abilities are reviewed and areas of improvement are targeted. Includes the integration of aesthetic and technical skills as introduced in various lower level courses. Lab required. Prerequisite: GAME 2325, or consent of Associate Dean. 3 credit hours. (W)

BCIS 1305  Business Computer Applications
Students will study computer terminology, hardware, and software related to the business environment. The focus of this course is on business productivity software applications and professional behavior in computing, including word processing (as needed), spreadsheets, databases, presentation graphics, and business-oriented utilization of the Internet. Prerequisite: Meet TSI college-readiness standard for Reading; or equivalent. 3 credit hours. (A)

BIOL 1322  Nutrition and Diet Therapy
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. 3 credit hours. (A)

BIOL 1323  Nutrition and Diet Therapy II
Applications of nutrition principles and techniques of nutrition care for healthy individuals and patients/clients at nutritional risk. Nutrition risk screening, interviewing/counseling methods, diet evaluation, basic diet calculations, and documentation. 3 credit hours. (A)

BIOL 1406  Biology for Science Majors I
Lecture: 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. Lab: 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. Lab required. Prerequisite: Meet TSI standard for MATH 0310, and TSI college-readiness standard for Reading and Writing; or equivalent. 4 credit hours. (A)

BIOL 1407  Biology for Science Majors II
Lecture: 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: Laboratory activities will reinforce study of the diversity and classifications of life, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals. Lab required. Prerequisite: BIOL 1406. 4 credit hours. (A) Note: This course includes dissection in lab.

BIOL 1408  Biology for Non-Science Majors I
Lecture: Provides a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction. Lab: Laboratory activities will reinforce a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction. Lab required. 4 credit hours. (A)

BIOL 1409  Biology for Non-Science Majors II
Lecture: This course will provide a survey of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity, and physiology. Lab: Laboratory activities will reinforce a survey of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity, and physiology. Lab required. Prerequisite: BIOL 1408. 4 credit hours. (A) Note: This course includes dissection in lab.

BIOL 1414  Introduction to Biotechnology I
Overview of classical genetics, DNA structure, the flow of genetic information, DNA replication, gene transcription, protein translation. Principles of molecular biology and genetic engineering techniques, including restriction enzymes and their uses, major types of cloning vectors, construction of libraries, Southern and Northern blotting, hybridization, PCR, DNA typing. Applications of these techniques in human health and welfare, medicine, agriculture and the environment. Introduction to the human genome project, gene therapy, molecular diagnostics, forensics, creation and uses of transgenic plants and animal and animal cloning and of the ethical, legal, and social issues and scientific problems associated with these technologies. Relevant practical exercises in the above areas. Lab required. Prerequisite: Meet TSI standard for MATH 0310, and TSI college-readiness standard for Reading and Writing; or equivalent. 4 credit hours. (A) Note: This course will transfer to a specific
2+2 baccalaureate program. Please check with your advisor to learn whether the course will transfer to the four-year program of your choice. There is an additional fee for this course.

**BIOL 1415 Introduction to Biotechnology II**
Lecture: to focus on an integrative approach to study biomolecules with an emphasis on protein structures, functions and uses in the modern bioscience laboratory. Students will investigate the mechanisms involved in the transfer of information from DNA sequences to proteins to biochemical functions. The course will integrate biological and chemical concepts with techniques that are used in research and industry. Critical thinking will be applied in laboratory exercises using inquiry-based approaches, troubleshooting and analyzing experimental data. Lab: 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). Lab required. Prerequisite: Biology 2401 with a grade of C or better within the last five years. 4 credit hours. (A)

**BIOL 2404 Human Anatomy and Physiology Basic**
A one-semester survey of the structure and function of the human body, including discussion and study of cells, tissues, organs, and systems. Lab required. 4 credit hours. (A)

**BIOL 2406 Environmental Biology**
Lecture: 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. Lab: 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. Lab required, including field trips. 4 credit hours. (A)

**BIOL 2416 Genetics**
Study of the principles of molecular and classical genetics, and the function and transmission of hereditary material. Special emphasis on molecular genetics and genetic engineering. Lab required. Prerequisite: BIOL 1406. 4 credit hours. (A)

**BIOL 2420 Microbiology for Non-Science Majors**
Lecture: 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. Lab: 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. Lab required. Prerequisite: BIOL 2401

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with a grade of C or better within the last three years, and Prerequisite/Concurrent enrollment in BIOL 2402 with a grade of C or better within the last three years.

4 credit hours. (A)

**BIOL 2421 Microbiology for Science Majors**
Lecture: Principles of microbiology, including metabolism, structure, function, genetics, and phylogeny of microbes. The course will also examine the interactions of microbes with each other, hosts, and the environment.

Lab: Laboratory activities will reinforce principles of microbiology, including metabolism, structure, function, genetics, and phylogeny of microbes. The course will also examine the interactions of microbes with each other, hosts, and the environment. Lab required. Prerequisites: BIOL 1407 and CHEM 1411. 4 credit hours. (A)

**BIOM 1355 Medical Electronic Applications**
Presentation of sensors, transducers, and supporting circuits used in medical instrumentation devices. Lab required. 3 credit hours. (W)

**BIOM 2280 Cooperative Education - Biomedical 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. Contact the Cooperative Work Experience Office. 2 credit hours. (W)

**BIOM 2380 Cooperative Education - Biomedical 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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

**BITC 1340 Quality Assurance for the Biosciences**
Quality assurance principles and applications. Includes quality control and Federal Drug Administration (FDA) regulations to the biotechnology, biopharmaceutical, and biomedical device industries. Additionally, BITC 1340 Quality Assurance for the Biosciences is a course designed to introduce the student to quality principles as they apply to the biotechnology, biopharmaceutical, and the biomedical device industries. Theories and application of quality assurance and quality control will be presented and several different quality systems will be discussed such as cGMP, ISO9000, Six Sigma and Lean. This class will be focused on quality in the bioscience workplace and therefore will include many applied assignments, which include internet research in current regulations and discussion board participation. Prerequisite/Concurrent enrollment: BIOL 1415 or consent of Instructor. 3 credit hours. (W)

**BITC 1350 Special Studies and Bioethical Issues of Biotechnology**
Current events, skills, attitudes, and behaviors pertinent to biotechnology and relevant to the professional development of the student. Includes exploration of ethical and legal behaviors in the context of the biotechnology industry. Prerequisites: BIOL 1414 and BIOL 1415 or Consent of Instructor. 3 credit hours. (W)

**BITC 2350 Bioinformatics**
Current topics in bioinformatics, proteomics, and computational biology. Includes methods for high-throughput data collection, storing, and accessing biological data. Covers programs and algorithms used to analyze data. Prerequisite: BITC 2411 or consent of Instructor. 3 credit hours. (W)

**BITC 2386 Internship-Biology Technician/Biotechnology Laboratory Technician**
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. Contact the Cooperative Work Experience Office. Prerequisite: Completed 9 hours of biotechnology courses and consent of Instructor. Major Requirement: Biotechnology. 3 credit hours. (W)

**BITC 2411 Biotechnology Laboratory Instrumentation**
Theory, applications, and safe operation of various biotechnology-related analytical instruments. Addresses separation and identification techniques including electrophoresis, spectrophotometry, and chromatography. Lab required. Prerequisites: BIOL 1414 and BIOL 1415 or consent of Instructor. 4 credit hours. (W)

**BITC 2431 Cell Culture Techniques**
Theory and applications of cell culture techniques. Laboratory emphasis on the principles and practices of applications such as initiation, cultivation, maintenance, and preservation of cell lines. Lab required. Prerequisite: BIOL 1406 or BIOL 1414 or consent of Instructor. 4 credit hours. (W)

**BITC 2441 Molecular Biology Techniques**
In-depth coverage of the theory and laboratory techniques in molecular biology with an emphasis on gene expression and regulation, recombinant DNA, and nucleic acids. Lab required. Prerequisites: BIOL 1414 and BIOL 1415 or consent of Instructor. 4 credit hours. (W)
BITC 2486 Internship - Biology Technician/Biotechnology Laboratory Technician
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. Contact the Cooperative Work Experience Office. Prerequisite: Completed 9 hours of biotechnology courses and consent of Instructor. Major Requirement: Biotechnology. 4 credit hours. (W)

BMGT 1305 Communications in Management
Basic theory and processes of communication skills necessary for the management of an organization's workforce. 3 credit hours. (W)

BMGT 1307 Team Building
Principles of building and sustaining teams in organizations. Includes team dynamics, process improvement, trust and collaboration, conflict resolution, and the role of the individual in the team. 3 credit hours. (W)

BMGT 1309 Information and Project Management
Critical path methods for planning and controlling projects. Includes time/cost tradeoffs, resource utilization, stochastic considerations, task determination, time management, scheduling management, status reports, budget management, customer service, professional attitude, and project supervision. 3 credit hours. (W)

BMGT 1313 Principles of Purchasing
The purchasing process as it relates to such topics as inventory control, price determination, vendor selection, supply chain management, negotiation techniques, and ethical issues in purchasing. 3 credit hours. (W)

BMGT 1327 Principles of Management
Concepts, terminology, principles, theories, and issues in the field of management. 3 credit hours. (W)

BMGT 1341 Business Ethics
Discussion of ethical issues, the development of a moral frame of reference, and the need for an awareness of social responsibility in management practices and business activities. Includes ethical corporate responsibility. 3 credit hours. (W)

BMGT 1344 Negotiations and Conflict Management
Theories which aid in the diagnosis of interpersonal and intergroup conflict. The role of manager as negotiator, intermediary, and problem solver. 3 credit hours. (W)

BMGT 2303 Problem Solving and Decision Making
Decision-making and problem-solving processes in organizations utilizing logical and creative problem solving techniques. Application of theory is provided by experiential activities using managerial decision tools. 3 credit hours. (W)

BMGT 2309 Leadership
Leadership and its relationship to management. Prepares the student with leadership and communication skills needed to motivate and identify leadership styles. 3 credit hours. (W)

BMGT 2311 Change Management
Knowledge, skills, and tools that enable a leader/organization to facilitate change in a participative style. 3 credit hours. (W)

BMGT 2341 Strategic Management
Strategic management process, including analysis of how organizations develop and implement a strategy for achieving organizational objectives in a changing environment. Prerequisite: BMGT 1327. Prerequisite/Concurrent enrollment: BMGT 2311. 3 credit hours. (W)

BMGT 2382 Cooperative Education - Business Administration and 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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

BUSG 1307 Entrepreneurship and Economic Development
Overview of entrepreneurship as an economic development strategy. Includes community support systems for entrepreneurs. 3 credit hours. (W)

BUSG 2309 Small Business Management/Entrepreneurship
Starting, operating, and growing a small business. Includes essential management skills, how to prepare a business plan, accounting, financial needs, staffing, marketing strategies, and legal issues. 3 credit hours. (W)

BUSG 2371 Entrepreneurship Experience
Career-related activities associated with the operation of one's own business. This course will allow the student to identify and implement the necessary knowledge and skills required to be a successful business owner. Prerequisite: Consent of Discipline Lead. 3 credit hours. (W)
BUSI 1301 Business Principles
This course provides a survey of economic systems, forms of business ownership, and considerations for running a business. Students will learn various aspects of business, management, and leadership functions; organizational considerations; and decision-making processes. Financial topics are introduced, including accounting, money and banking, and securities markets. Also included are discussions of business challenges in the legal and regulatory environment, business ethics, social responsibility, and international business. Emphasized is the dynamic role of business in everyday life. 3 credit hours. (A)

BUSI 1307 Personal Finance
Personal financial issues including financial planning, insurance, budgeting, credit, home ownership, savings and tax problems. 3 credit hours. (A)

BUSI 2301 Business Law
The course provides the student with foundational information about the U.S. legal system and dispute resolution, and their impact on business. The major content areas will include general principles of law, the relationship of business and the U.S. Constitution, state and federal legal systems, the relationship between law and ethics, contracts, sales, torts, agency law, intellectual property, and business law in the global context. Prerequisite: High school coursework in U.S. history and government; or equivalent. 3 credit hours. (A)

CDEC 1270 Introduction to Teaching ESL
An overview of ESL education. Topics include awareness of cultural diversity, assessment strategies, teaching techniques, instructional activity development and historical/philosophical concepts of ESL education. Lab required. 2 credit hours. (W)

CDEC 1313 Curriculum Resources for Early Childhood Programs
A study of the fundamentals developmentally appropriate curriculum design and implementation in early care and education programs for children birth through age eight. Lab required. 3 credit hours. (W)

CDEC 1317 Child Development Associate Training I
Based on the requirements for the Child Development Associate credential (CDA). Topics include CDA overview, observation skills, and child growth and development. The four functional areas of study are creative, cognitive, physical, and communication. Lab required. 3 credit hours. (W)

CDEC 1319 Child Guidance
An exploration of guidance strategies for promoting pro-social behaviors with individual and groups of children. Emphasis on positive guidance principles and techniques, family involvement, and cultural influences. Lab required. 3 credit hours. (W)

CDEC 1321 The Infant and Toddler
A study of appropriate infant and toddler programs (birth to age 3), including an overview of development, quality routines, learning environments, materials and activities, and teaching/guidance techniques. Lab required. 3 credit hours. (W)

CDEC 1323 Observation and Assessment
A study of observation skills, assessment techniques, and documentation of children's development. Lab required. 3 credit hours. (W)

CDEC 1358 Creative Arts for Early Childhood
An exploration of principles, methods and materials for teaching music, movement, visual arts, and dramatic play through process-oriented experiences to support divergent thinking for children birth through age eight. Lab required. 3 credit hours. (W)

CDEC 1359 Children with Special Needs
A survey of information regarding children with special needs including possible causes and characteristics of exceptionalities, intervention strategies, available resources, referral processes, the advocacy role, and legislative issues. Lab required. 3 credit hours. (W)

CDEC 1385 Cooperative Education - Child Development
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. Contact the Cooperative Work Experience Office. Prerequisite: Consent of Associate Dean. 3 credit hours. (W)

CDEC 2166 Practicum - Child Care Provider/Assistant
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Contact the Cooperative Work Experience Office. Prerequisite: Consent of Associate Dean. 3 credit hours. (W)

CDEC 2304 Child Abuse and Neglect
Methods used in the identification of physical, emotional, and sexual abuse and neglect with an emphasis on developing skills for working with children and families. Includes methods of referral to public and private
CDEC 2307 Math and Science for Early Childhood
Exploration of principles, methods, and materials for teaching children math and science concepts and process skills through discovery and play. Lab required. 3 credit hours. (W)

CDEC 2322 Child Development Associate Training II
A continuation of the study of the requirements for the Child Development Associate credential (CDA). The six functional areas of study include safe, healthy, learning environment, self, social, and guidance. Lab required. 3 credit hours. (W)

CDEC 2324 Child Development Associate Training III
Continuation of the requirements for the Child Development Associate credential (CDA). The three functional areas of study include family, program management, and professionalism. Lab required. 3 credit hours. (W)

CDEC 2326 Administration of Programs for Children I
Application of management procedures for early care and education programs. Includes planning, operating, supervising, and evaluating programs. Topics cover philosophy, types of programs, policies, fiscal management, regulations, staffing, evaluation, and communication. Lab required. 3 credit hours. (W)

CDEC 2328 Administration of Programs for Children II
An in-depth study of the skills and techniques in managing early care and education programs, including legal and ethical issues, personnel management, team building, leadership, conflict resolution, stress management, advocacy, professionalism, fiscal analysis, technical applications in programs and planning parent education/partnerships. Lab required. 3 credit hours. (W)

CDEC 2336 Administration of Programs for Children III
An advanced study of the skills and techniques in administering early care education programs. Lab required. 3 credit hours. (W)

CDEC 2340 Instructional Techniques for Children with Special Needs
Exploration of development and implementation of curriculum for children with special needs. Lab required. 3 credit hours. (W)

CDEC 2371 Using Technology in the Classroom
An overview of technology, media and digital information in education. This course includes a review of research on the impact, as well as methodology on effective use, of technology and media on children and teachers in the classroom and in curriculum planning and presentation. Lab required. 3 credit hours. (W)

CETT 1303 DC Circuits
A study of the fundamentals of direct current including Ohm’s law, Kirchhoff’s law, and circuit analysis techniques. Lab required. 3 credit hours. (W)

CETT 1305 AC Circuits
A study of the fundamentals of alternating current including series and parallel AC circuits, phasors, capacitive and inductive networks, transformers, and resonance. Lab required. Prerequisite: CETT 1303 or consent of Associate Dean. 3 credit hours. (W)

CETT 1329 Solid State Devices
A study of diodes and other semiconductor devices, including analysis of static and dynamic characteristics, biasing techniques, and thermal considerations. Lab required. 3 credit hours. (W)

CETT 1407 Fundamentals of Electronics
Applies concepts of electricity, electronics, and digital fundamentals; supports programs requiring a general knowledge of electronics. Lab required. Corequisite: TECM 1343 or consent of Instructor. 4 credit hours. (W)

CETT 1409 DC-AC Circuits
Fundamentals of DC circuits and AC circuits operation including Ohm’s law, Kirchhoff’s laws, networks, transformers, resonance, phasors, capacitive and inductive circuit analysis techniques. Lab required. Prerequisites: CETT 1407 and TECM 1343. 4 credit hours. (W)

CETT 1425 Digital Fundamentals
Formerly CETT 1325 An entry level course in digital electronics to include numbering systems, logic gates, Boolean algebra, and combinational logic. Lab required. 4 credit hours. (W)

CETT 1445 Microprocessor
Formerly CETT 1345 An introductory course in microprocessor software and hardware: its architecture, timing sequence, operation, and programming. Discussion of appropriate software diagnostic language and tools. Lab required. Prerequisites: CETT 1407 and CETT 1425, or consent of Instructor or Discipline Lead. 4 credit hours. (W)
CETT 1457  Linear Integrated Circuits
Formerly CETT 1357  A study of the characteristics, operations and testing of linear integrated circuits. Applications include instrumentation and active filtering. Lab required. Prerequisite: CETT 1409 or consent of Instructor or Discipline Lead. 4 credit hours. (W)

CETT 2380  Cooperative Education-Computer Engineering 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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

CETT 2471  Emerging Topics in Engineering Technology
Topics address identified emerging technology developments, skills, knowledge pertinent to the technology or occupation and relevant to the professional development of the student. Lab required. Prerequisites: CETT 1409 and CETT 1425, or consent of Instructor. 4 credit hours. (W)

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 required. Prerequisite: Mandatory Culinary/Pastry Arts Orientation. 3 credit hours. (W)

CHEF 1302  Principles of Healthy Cuisine
Introduction to the principles of planning, preparation, and presentation of nutritionally balanced meals. Alternative methods and ingredients will be used to achieve a healthier cooking style. Lab required. Prerequisites: CHEF 2331 with a grade of C or better and IFWA 1310. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

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. 3 credit hours. (W)

CHEF 1310  Garde Manger
A study of cold foods and garnishes. Emphasis on design, techniques, and display of fine foods. Lab required. Prerequisite/Concurrent enrollment: CHEF 2331 with a grade of "C" or better. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

CHEF 1314  A La Carte Cooking
A course in a la carte or "cooking to order" concepts. Topics include menu and recipe interpretation and conversion, organization of work station, employment of appropriate cooking methods, plating, and saucing principles. Lab included. Prerequisites: CHEF 1310, CHEF 1341, CHEF 1345, and PSTR 1301. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

CHEF 1341  American Regional Cuisine
A study of the development of regional cuisine's in the United States with emphasis on the similarities in production and service systems. Application of skills to develop, organize, and acquire knowledge of recipe strategies and production systems. Professional chef uniform and kitchen tools required. Lab required. Prerequisite/Concurrent enrollment: CHEF 2331 with a grade of "C" or better. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

CHEF 1345  International Cuisine
A course in a la carte or "cooking to order" concepts. Topics include menu and recipe interpretation and conversion, organization of work station, employment of appropriate cooking methods, plating, and saucing principles. Lab included. Prerequisites: CHEF 2331 with a grade of "C" or better. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

CHEF 2302  Saucier
Instruction in the preparation of stocks, soups, classical sauces, contemporary sauces, accompaniments, and the pairing of sauces with a variety of foods. Lab included. Prerequisite: CHEF 2331 with a grade of "C" or better. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

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CHEM 2389 Academic Co-op Chemistry
Integrates on-campus study with practical hands-on work experience in chemistry. In conjunction with class seminars, the student will set specific goals and objectives in the study of chemistry. Contact the Cooperative Work Experience Office. 3 credit hours. (A)

CHEM 2423 Organic Chemistry I
Lecture: 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. Lab: 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 and recitation required. Prerequisite: CHEM 1412 within the last five years with a grade of "C" or better. 4 credit hours. (A)

CHEM 2425 Organic Chemistry II Lecture: 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. Lab: 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 and recitation required. Prerequisite: CHEM 2423 within the last 5 years with a grade of "C" or better. 4 credit hours. (A)

CHIN 2312 Intermediate Chinese II Continuation of CHIN 2311, emphasizing conversation and reading skills. Prerequisite: CHIN 2311 or consent of Associate Dean. 3 credit hours. (A)

CJLE 1429 Basic Peace Officer V Supplemental course taken in conjunction with Basic Peace Officer I, II, III, and IV. Satisfies or exceeds the Texas Commission on Law Enforcement (TCOLE) approved Basic Peace Officer Training Academy. Additionally, this course incorporates the following sections of TCOLE Course 1000 Strategies of Defense-Racial Profiling and the Law; Identity Crimes; Asset Forfeiture; Criminal Investigation. The entire basic peace officer training will be reviewed to prepare students for the state licensing exam. Lab required. Prerequisite: Admission to the Basic Peace Officer Program and consent of the Law Enforcement Academy Director or Designee. Prerequisite/Concurrent enrollment: CJLE 1506, CJLE 1512, CJLE 1518 and CJLE 1524. Major Requirement: Certificate - Basic Peace Officer. 4 credit hours. (W)

CJLE 1506 Basic Peace Officer I Basic preparation for a new peace officer. Should be taken in conjunction with Basic Peace Officer II, III, IV and V (supplement) to satisfy the Texas Commission on Law Enforcement (TCOLE) approved Basic Peace Officer Training Academy. Additionally, this course incorporates the following sections of TCOLE Course 1000: Introduction and Orientation; TCOLE Rules; Fitness and Wellness, and Stress Management; Professional Policing; Professionalism and Ethics; U. S. and Texas Constitutions, Bill of Rights, and Criminal Justice System; Multiculturalism and Human Relations; Code of Criminal Procedure; Arrest, Search and Seizure; Penal Code. Lab required. Prerequisite: Admission to the Basic Peace Officer Program and consent of the Law Enforcement Academy Director or Designee. Corequisite: CJLE 1512. Major Requirement: Certificate - Basic Peace Officer. 5 credit hours. (W)

CJLE 1512 Basic Peace Officer II Basic preparation for a new peace officer. Should be taken in conjunction with Basic Peace Officer I, III, IV and V (supplement) to satisfy the Texas Commission on Law Enforcement (TCOLE) approved Basic Peace Officer Training Academy. Additionally, this course incorporates the following sections of TCOLE Course 1000: Traffic, Intoxicated Driver and Standardized Field Sobriety Testing; Civil Process and Liability; Texas Alcoholic Beverage Code; Health and Safety Code - Controlled Substances Act; Family Code and Juvenile Issues; Force Options. Lab required. Prerequisite: Admission to the Basic Peace Officer Program and consent of the Law Enforcement Academy Director or
CJLE 1518 Basic Peace Officer III
Basic preparation for a new peace officer. Should be taken in conjunction with Basic Peace Officer I, II, IV and V (supplement) to satisfy the Texas Commission on Law Enforcement (TCOLE) approved Basic Peace Officer Training Academy. Additionally, this course incorporates the following sections of TCOLE Course 1000: Written and Verbal Communications; Introductory Spanish; Strategies of Defense - Mechanics of Arrest; Strategies of Defense - Firearms; Emergency Medical Assistance; Problem Solving and Critical Thinking. Lab required. Prerequisite: Admission to the Basic Peace Officer Program and consent of the Law Enforcement Academy Director or Designee. Prerequisite/Concurrent enrollment: CJLE 1506. and CJLE 1512 Corequisite: CJLE 1524. Major Requirement: Certificate - Basic Peace Officer. 5 credit hours. (W)

CJLE 1524 Basic Peace Officer IV
Basic preparation for a new peace officer. Should be taken in conjunction with Basic Peace Officer I, II, III and V (supplement) to satisfy the Texas Commission on Law Enforcement (TCOLE) approved Basic Peace Officer Training Academy. Additionally, this course incorporates the following sections of TCOLE Course 1000: Emergency Communications; Professional Police Driving; Patrol/Consular Notification; Victims of Crime; Family Violence and Related Assaultive Offenses; Crisis Intervention Training (CIT)/Mental Health Code; Hazardous Materials Awareness. Lab required. Prerequisite: Admission to the Basic Peace Officer Program and consent of the Law Enforcement Academy Director or Designee. Prerequisite/Concurrent enrollment: CJLE 1506 and CJLE 1512. Major Requirement: Certificate - Basic Peace Officer. 5 credit hours. (W)

CNBT 1300 Residential and Light Commercial Blueprint Reading
Introductory blueprint reading for residential and light commercial construction. Additionally, this course will include an introduction to computerized prints and related software. Lab required. 3 credit hours. (W)

CNBT 1301 Introduction to the Construction Industry
Overview of the construction industry. Additionally, this course will cover basic construction terminology in English and Spanish, outline the process from land acquisition to finished project and provide an introduction to ethical issues facing the industry. 3 credit hours. (W)

CNBT 1302 Mechanical, Plumbing & Electrical Systems in Construction I (Residential)
A presentation of the basic mechanical, plumbing, and electrical components in construction and their relationship to residential and light commercial buildings. Additionally, the course includes MEP blueprints, schedule coordination, and safety. Lab required. Prerequisites: CNBT 1300 and OSHT 1305. 3 credit hours. (W)

CNBT 1311 Construction Methods and Materials I
Introduction to construction materials and methods and their applications. Lab required. Prerequisite: OSHT 1305. 3 credit hours. (W)

CNBT 1315 Field Engineering I
Surveying equipment, sketches, proper field note taking, methods of staking, layout of building site, and horizontal and vertical controls. Lab required. Prerequisite: OSHT 1305. 3 credit hours. (W)

CNBT 1346 Construction Estimating I
Fundamentals of estimating materials and labor costs in construction. 3 credit hours. (W)

CNBT 1359 Project Scheduling
A study of conventional scheduling using critical-path-method; precedence and arrow networks; bar charts; monthly reports; and fast track scheduling. Additionally, scheduling software for the construction industry will be used. Lab required. Prerequisite: CNBT 1311. 3 credit hours. (W)

CNBT 1380 Cooperative Education - Construction Engineering 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. Contact your Workforce Program Career Coach. Prerequisite: Consent of Discipline Lead. 3 credit hours. (W)

CNBT 2304 Construction Methods and Materials II
Continuation of the study of the properties of building materials, methods and equipment for their integrated use in completing construction projects. Additionally, the course will address quality control in construction. Lab required. Prerequisites: CNBT 1311 and OSHT 1305. 3 credit hours. (W)

CNBT 2310 Commercial/Industrial Blueprint Reading
Blueprint reading for commercial/industrial construction. Additionally, this course will include an introduction to
commercial/Industrial computerized prints and related software. Lab required. 3 credit hours. (W)

CNBT 2337 Construction Estimating II
Advanced estimating concepts using computer software for construction and crafts. Lab required. Prerequisite: CNBT 1346. 3 credit hours. (W)

CNBT 2340 Mechanical, Plumbing & Electrical Systems in Construction II (Commercial)
Processes and methods used in design, selection of equipment, and installation of mechanical, plumbing, and electrical systems in commercial buildings. Includes heating and cooling systems, duct work, mechanical and electrical control systems, lighting requirements, and design of water supply and sanitary sewer systems. Additionally, the course addresses MEP blueprints, schedule coordination, and safety. Lab required. Prerequisites: CNBT 2310 and OSHT 1305. 3 credit hours. (W)

CNBT 2342 Construction Management I
Management skills on the job site. Topics include written and oral communications, leadership and motivation, problem solving, and decision making. Additionally, this course includes customer and contractor relations and ethics in the construction industry. 3 credit hours. (W)

CNBT 2344 Construction Management II
A management course in contract documents, safety, planning, scheduling, production control, and labor issues. Topics include contracts, planning, cost and production peripheral documents, and cost and work analysis. Additionally, topics include customer service and quality control. Prerequisite: CNBT 1311. 3 credit hours. (W)

CNBT 2346 Construction Management III
Advanced course work in construction safety, project management, scheduling, material handling, layout, payment scheduling, and inspection. Additionally, this is a capstone course in which program learning outcomes will be demonstrated. Prerequisite: Consent of Discipline Lead. 3 credit hours. (W)

COMM 1307 Introduction to Mass Communication
Survey of basic content and structural elements of mass media and their functions and influences on society. Additionally, a study of mass media in the United States with emphasis on newspapers, magazines, radio, film, publishing, the internet and television; history of mass media and the business models that support them; and the role and responsibility of mass media in modern society. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

COMM 1335 Introduction to Electronic Media
An overview of the development, regulation, economics, social impact, and industry practices in electronic media. Additionally, an historical and critical comparison of the first two broadcast media as they have evolved, this course includes discussion of important historical issues that resonate with contemporary media concerns - including intellectual property and patent rights, aesthetics and production values, censorship and freedom of speech, broadcast ethics, ratings fallibility, public responsibility and emotional contagion. The course also discusses the development and necessary metamorphosis of each medium in response to contemporary events, social change, and the encroachment of new technology, new media and alternative delivery methods. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

COMM 2300 Media Literacy
Criticism and analysis of the function, role, and responsibility of the mass media in modern society from the consumer perspective. Includes the ethical problems and issues facing each media format, with the effect of political, economic, and cultural factors on the operation of the media. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

COMM 2330 Introduction to Public Relations
Exploration of the history and development of public relations. Presentation of the theory behind and process of public relations, including the planning, implementation, and evaluation of PR campaigns. Additionally, exploration of current trends in the profession and overview of how the process is carried out in different public relations specializations. The student is recommended to complete either COMM 1307 or SPCH 1311 prior to registering for this course, but not required. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

COMM 2331 Radio/Television Announcing
Principles of, and practice in, radio and TV announcing, including the study of voice (diction, pronunciation, and delivery) as it relates to mediated contexts and experience in news announcing, interviewing, and acting in commercial. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

COMM 2332 Radio/Television News
The preparation and analysis of news styles for the electronic media. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)
COMM 2339 Writing for Radio, Television, and Film
Designed to train the student in all typical forms of broadcast and film writing, including news, commercial copy, critique and commentary, radio theatre, comedy and dramatic teleplay, and screenplay. Course provides both writing and production experiences. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

COMM 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. Lab required. Prerequisite: ARTS 2348 or PHTC 1311 or consent of Associate Dean. 3 credit hours. (A) Note: Students may take either DRAM 2366 or COMM 2366, but not both.

COMM 2389 Academic Co-op Communication
For students with interest or major in mass communications, radio, TV, or film. Integrates on-campus study with practical hands-on work experience in communication. In conjunction with class seminars, the student will set specific goals and objectives in the study of communication. Contact the Cooperative Work Experience Office. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

COSC 1301 Introduction to Computing
Overview of computer systems - hardware, operating systems, the Internet and application software including word processing, spreadsheets, presentation graphics, and databases. Current topics such as the effect of computers on society, and the history and use of computers in business, educational, and other interdisciplinary settings are also studied. This course is not intended to count toward a student's major field of study in business or computer science. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

COSC 1337 Programming Fundamentals II (Java)
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 Field of Study Curriculum for Computer Science.) Prerequisite: COSC 1315 or COSC 1436 or consent of Associate Dean. 3 credit hours. (A) Note: Students may take either COSC 1337 or COSC 1437 but not both.

COSC 1420 C Programming
Introduces the fundamental concepts of structured programming in the C language. Topics include data types; control structures; functions, structures, arrays, pointers, pointer arithmetic, unions, and files; the mechanics of running, testing, and debugging programs; introduction to programming; and introduction to the historical and social context of computing. Additionally, this course assumes computer literacy. Prerequisite: MATH 1314 or equivalent academic preparation. 4 credit hours. (A)

COSC 1436 Programming Fundamentals I (C++)
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 Field of Study Curriculum for Computer Science.) Prerequisite: Meet TSI college-readiness standard for Mathematics; or equivalent. 4 credit hours. (A)

COSC 1437 Programming Fundamentals II (C++)
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 Field of Study Curriculum for Computer Science.) Prerequisite: COSC 1436, COSC 1420, or consent of Associate Dean. 4 credit hours. (A)

COSC 2325 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

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debugging computer systems. Embedded systems and device interfacing are introduced. Additionally, this class is taught with Intel assembly language. Prerequisites: COSC 1436 or consent of Associate Dean. 3 credit hours. (A)

COSC 2336 Programming Fundamentals III (C++)
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 Field of Study Curriculum for Computer Science.) Prerequisite: COSC 1437 or consent of Associate Dean. 3 credit hours. (A) Note: Students may take either COSC 2336 or COSC 2436 but not both.

COSC 2436 Programming Fundamentals III (Java)
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 Field of Study Curriculum for Computer Science.) Prerequisite: COSC 1337 or consent of Associate Dean. 4 credit hours. (A) Note: Students may take either COSC 2336 or COSC 2436 but not both.

COSU 301 Test-Taking and Study Skills for Non-Native English Speakers
This class will prepare non-native English speaking students for success by providing instruction and practice in test-taking techniques as well as exposing them to the expectations and realities of college academic coursework. Topics that will be covered include information processing, memory, strategic learning, self-regulation, goal setting, motivation, educational planning, and learning styles. Techniques of study such as organization, time-management, listening/speaking/reading/writing in a lecture or classroom setting, note-taking, research skills, and test preparation will be covered. This course will be particularly beneficial to students who are required to complete the TOEFL or the IELTS prior to admission to college or university. Prerequisites: ESLC 0310, ESLR 0310 and ESLW 0310, or consent of ESL Testing Coordinator or ESL Associate Dean. 3 credit hours. (D)

CPMT 1305 IT Essentials I: PC Hardware and Software
Provides comprehensive overview of computer hardware and software and an introduction to advanced concepts addressed by CISCO CCENT certification. Lab required. 3 credit hours. (W)

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. 3 credit hours. (A)

CRIJ 1306 Court Systems and 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 statutes and case law. 3 credit hours. (A)

CRIJ 1307 Crime in America
American crime problems in historical perspective, social and public policy factors affecting crime, impact and crime trends, social characteristics of specific crimes, and prevention of crime. 3 credit hours. (A)

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. 3 credit hours. (A)

CRIJ 1313 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. 3 credit hours. (A)

CRIJ 2313 Correctional Systems and 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. 3 credit hours. (A)

CRIJ 2314 Criminal Investigation
Investigative theory; collection and preservation of evidence; sources of information; interview and interrogation; uses of forensic sciences; case and trial preparation. 3 credit hours. (A)

CRIJ 2323 Legal Aspects of Law Enforcement
Police authority; responsibilities; constitutional constraints; laws of arrest, search, and seizure; and police liability. 3 credit hours. (A)

CRIJ 2328 Police Systems and 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. 3 credit hours. (A)

CSFA 1172 Pharmacology and Anesthesia
Pharmacology and Anesthesia will provide the surgical assisting student with the fundamentals of basic pharmacology and clinical pharmacology related to the surgical patient. The course will also examine the basics of anesthesia methods and agents and the association with various surgical situations. Lab required. 1 credit hour. (W)

CSFA 1173 Principles of Surgical Assisting Lab I
A lab course that teaches fundamental skills: Placement of monitoring devices, review of bladder catheterization, surgical positioning, application of tourniquets, prepping and draping, operative instrumentation, visualization techniques, hemostasis, suturing and knot tying techniques, dressings and drainage systems, post-operative pain control methods, and the use of special equipment. Lab required. 1 credit hour. (W)

CSFA 1175 Perioperative Microbiology and Bioscience
Course covers three main components: fundamental concepts in microbiology and infection, major clinical syndromes corresponding to the clinical specialties, and additional information on bacteriology, virology, parasitology, mycology, and entomology, including related laboratory tests and antibiotics. Emphasis on surgical events related to wound healing and the integrity of the surgical wound. Also covered are different diagnostic tests and the relationship between those tests and the management of the surgical patient. In addition, issues surrounding the care and handling of surgical specimens, management of the critically ill patient, thermoregulatory devices, fluid balances and related issues, and finally, skin assessment are discussed in detail. Lab required. 1 credit hour. (W)

CSFA 1176 Complications in Surgery
Surgical complications, including hemorrhage, perforation of viscus or cavity, contamination, exposure, retraction, compression injuries, cardiac events, sudden hypoxia, sudden shock, interruption of surgical supervision, critical equipment failure and corrective measures are discussed, in addition to how to initiate the appropriate course of action to address these situations. 1 credit hour. (W)

CSFA 1371 Fundamentals and Surgical Safety
Fundamentals and Surgical Safety will provide the surgical assisting student with basic fundamentals and the surgical assistant's role in the proper and safe positioning of the surgical patient, use of pneumatic devices, drapes and draping, proper skin preparation, instrumentation, exposure and visualization techniques, post-operative pain control, patient transport, and provide instruction of surgical monitoring devices. Fundamentals and Surgical Safety will also provide the surgical assisting student with information and appreciation of the importance of safety in the surgical setting. Lab required. 3 credit hours. (W)

CSFA 2171 Role Definition, Ethical, Legal, and Moral Responsibilities
Course addresses factors that will result in positive team relationships, the practice of professional ethics, and the parameters of one's specific role, including the identification of certain possible crises and problem areas, with an understanding as to how the Surgical Assistant should deal with each given situation. Different legal definitions and terminology are covered, and how to understand and identify Operating Room situations that could lead to ethical conflict. Students also gain an understanding of appropriate (and legal) decision-making, as well as what establishes negligence, basic patient and caregiver rights, Operating Room incidents that could result in litigation, and problems peculiar to the Surgical Assistant's role. 1 credit hour. (W)

CSFA 2173 Principles of Surgical Assisting Lab II
A lab course continuation that teaches fundamental skills: Placement of monitoring devices, review of bladder catheterization, surgical positioning, application of tourniquets, prepping and draping, operative instrumentation, visualization techniques, hemostasis, suturing and knot tying techniques, dressings and drainage systems, post-operative pain control methods, and the use of special equipment. Lab required. 1 credit hour. (W)

CSFA 2371 Surgical Procedures
Surgical Procedures will provide the surgical assisting student with an in-depth procedural analysis of most major surgeries performed in the operating room; delivering step-by-step surgical, anatomical, and physiological instruction in preparation for their clinical externship. Lab required. 3 credit hours. (W)

CSFA 2372 Operative Anatomy and Pathophysiology I
A systematic investigation of the structure and organization of the human body and the mechanism and manifestation of different human diseases. The basic science of pathology is concerned with the etiology and pathogenesis of disease. Essential information is provided for understanding the diagnosis of disease in the clinical setting. When studying anatomy, the emphasis must be based on regional anatomy with surgical anatomy as the critical component, as opposed to the entry-level approach of systemic anatomy. Surgical anatomy is the critical factor with an emphasis on advanced anatomical knowledge that is applied towards the surgical diagnosis and procedure. This course will thoroughly examine

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several major surgical specialties: General, Plastics, Obstetrics and Gynecology, Ortho/Joints, Colorectal, Robotics, and Cardio/Thoracic/Vascular. This course has been specifically prepared for the surgical assisting Advanced Technical Certificate program. Lab required. 3 credit hours. (W)

CSFA 2373 Operative Anatomy and Pathophysiology II
A continuation of the investigation of the structure and organization of the human body and the mechanism and manifestation of different human diseases. The basic science of pathology is concerned with the etiology and pathogenesis of disease. Essential information is provided for understanding the diagnosis of disease in the clinical setting. When studying anatomy, the emphasis must be based on regional anatomy with surgical anatomy as the critical component, as opposed to the entry-level approach of systemic anatomy. Surgical anatomy is the critical factor with an emphasis on advanced anatomical knowledge that is applied towards the surgical diagnosis and procedure. This course will thoroughly examine several major surgical specialties: General, Plastics, Obstetrics and Gynecology, Ortho/Joints, Colorectal, Robotics, and Cardio/Thoracic/Vascular. This course has been specifically prepared for the surgical assisting Advanced Technical Certificate program. Lab required. 3 credit hours. (W)

CSFA 2472 Suturing, Knot Tying, Hemostasis, and Wound Healing
Suturing, Knot Tying, Hemostasis, and Wound Healing is a comprehensive lab course designed to provide instruction of and participation in the various suturing and tying techniques including simple and complex stitches, interrupted and running stitches, two-handed, one-handed, and instrument knot tying techniques. The course will provide the surgical assisting student with the detailed principles of wound healing, the interaction of a complex cascade of cellular events that generates resurfacing, reconstitution, and restoration of the tensile strength of the surgical wound. The course will also provide an in-depth and interactive discussion of hemostatic methods: chemical/topical agents, sutures and ties, direct pressure, and physical agents. Lab required. 4 credit hours. (W)

CSFA 2473 Surgical Assisting Clinical I
Surgical Assisting Clinical I is intended to provide training and clinical practice in basic surgical skills applicable to the surgical assisting student. A student enrolled in the course is assigned to qualified preceptors - surgeons who provide direct supervision and guidance during the clinical rotation. Each student in the course is required to complete 140 cases with 100 percent skill competency. To fulfill the role of the surgical assistant, the student must perform with proficiency in a minimum of 20 General Surgery cases with the remaining cases divided between two or more specialty areas, also with a minimum of 20 cases in each. 4 credit hours. (W)

CSFA 2474 Surgical Assisting Clinical II
Surgical Assisting Clinical II is intended to provide training and clinical practice in basic surgical skills applicable to the surgical assisting student. A student enrolled in the course is assigned to qualified preceptors - surgeons who provide direct supervision and guidance during the clinical rotation. Each student in the course is required to complete 140 cases with 100 percent skill competency. To fulfill the role of the surgical assistant, the student must perform with proficiency in a minimum of 20 General Surgery cases with the remaining cases divided between two or more specialty areas, also with a minimum of 20 cases in each. 4 credit hours. (W)

DANC 1110 Tap Dance
Instruction in the fundamental techniques and concepts associated with Tap dance. May be repeated one time for additional degree credit. Lab required. 1 credit hour. (A) Note: Students may take DANC 1110, DANC 1128, DANC 1151, DANC 2151 for a combined total of no more than 18 credit hours.

DANC 1112 Dance Practicum
Practicum in dance related topics with emphasis on practical skills necessary for the field. May be repeated one time for additional credit. Prerequisite: Consent of Instructor. 1 credit hour. (A) Note: May be repeated one time for additional credit.

DANC 1128 Ballroom and Social Dance
Introductory instruction in the fundamental techniques and concepts associated with Ballroom and Social Dance. May be repeated one time for additional degree credit. Lab required. 1 credit hour. (A) Note: Students may take DANC 1110, DANC 1128, DANC 1151, and DANC 2151 for a combined total of no more than 18 credit hours.

DANC 1151 Freshman Dance Performance
Instruction in dance performance through experiential projects at the freshman level. May be repeated one time for additional degree credit. Lab required. Prerequisite: Audition. 1 credit hour. (A) Note: Students may take DANC 1110, DANC 1128, DANC 1151, and DANC 2151 for a combined total of no more than 18 credit hours.

DANC 1201 Dance Composition - Improvisation
This introductory course in improvisation will investigate spontaneous problem solving as a means of generating movement for dance composition. Students will be called upon to explore and respond to various forms of stimuli.
DANC 1241 Beginning Ballet
Instruction in the fundamental techniques and concepts associated with ballet. May be repeated one time for additional degree credit. Lab required. 2 credit hours. (A)

DANC 1245 Beginning Modern Dance
Instruction in the fundamental techniques and concepts associated with the concert form of modern dance. May be repeated one time for additional degree credit. Lab required. 2 credit hours. (A)

DANC 1247 Beginning Jazz Dance
Instruction in the fundamental techniques and concepts associated with jazz dance. May be repeated one time for additional degree credit. Lab required. 2 credit hours. (A)

DANC 1247 Intermediate Jazz Dance
Instruction in the intermediate techniques and concepts associated with jazz dance. May be repeated one time for additional degree credit. Lab required. Prerequisite: DANC 1247 or Consent of Instructor. 2 credit hours. (A)

DANC 1301 Dance Composition - Choreography
This course is an examination of the principles of movement generation, phrasing, choreographic structure, and manipulation. Integration of choreographic principles will foster the growth of personal artistic style. Lab required. 3 credit hours. (A)

DANC 1305 World Dance
A survey of dances from different cultures, their histories, and their influences on contemporary dance and society. Cultural origins, significance, motivations and techniques will be explored experientially. 3 credit hours. (A)

DANC 2151 Sophomore Dance Performance
Instruction in dance performance through experiential projects at the sophomore level. May be repeated for credit once. Lab required. Prerequisite: DANC 1151, Audition. 1 credit hour. (A)

DANC 2241 Intermediate Ballet
Instruction in the intermediate techniques and concepts associated with ballet. May be repeated one time for additional degree credit. Lab required. Prerequisite: DANC 1241 or Consent of Instructor. 2 credit hours. (A)

DANC 2245 Intermediate Modern Dance
Instruction in the intermediate techniques and concepts associated with the concert form of modern dance. May be repeated one time for additional degree credit. Lab required. Prerequisite: DANC 1245 or Consent of Instructor. 2 credit hours. (A)

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, auxiliary views. Lab required. 3 credit hours. (W)

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, coordinating systems; and plot/print to scale. Lab required. 3 credit hours. (W)

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. Lab required. Prerequisite: DFTG 2328. 3 credit hours. (W)

DFTG 1333 Mechanical Drafting
Study of mechanical drawings using dimensioning and tolerances, sectioning techniques, orthographic projection, and pictorial drawings. Lab required. Prerequisite: DFTG 2319. 3 credit hours. (W)

DFTG 1345 Parametric Modeling and Design
Parametric-based design software for 3D design and drafting. Lab required. Prerequisite: DFTG 1372. 3 credit hours. (W)
DFTG 1371  Mechanical Drafting-Fundamentals of Sheetmetal Design
The Fundamentals of Sheetmetal Design course teaches the skills required in designing sheetmetal parts and assemblies, trouble shooting and creating production drawings. All functions needed to create sheetmetal parts, drawings and assemblies are taught in this course. The lesson modules are structured to maximize hands-on interaction with the Pro/Sheetmetal module in Pro/Engineer. Lab required. Prerequisite: DFTG 1333. 3 credit hours. (W)

DFTG 1372  SOLIDWORKS Essentials
A study of mechanical drafting and design using SOLIDWORKS mechanical design automation software to build parametric models of parts and assemblies. The course teaches how to make drawings of those parts and assemblies through the use of dimensioning and tolerancing, sectioning techniques and orthographic projection. Lab required. 3 credit hours. (W)

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. Lab required. Prerequisite: DFTG 1309. 3 credit hours. (W)

DFTG 2321  Topographical Drafting
Plotting of surveyors field notes. Includes drawing elevations, contour lines, plan and profiles, and laying out traverses. Lab required. Prerequisite: DFTG 1309. 3 credit hours. (W)

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. Lab required. Prerequisite: DFTG 1309. Prerequisite/Concurrent enrollment: DFTG 2319. 3 credit hours. (W)

DFTG 2350  Geometric Dimensioning and Tolerancing
Geometric dimensioning and tolerancing, according to standards, application of various geometric dimensions and tolerances to production drawings. Lab required. Prerequisite: DFTG 1309. 3 credit hours. (W)

DFTG 2373  Advanced SOLIDWORKS
Study of advanced topics in SOLIDWORKS mechanical drafting and design. The course teaches how to build assemblies, to create professional drawing, and to use various SOLIDWORKS tools to manage information to facilitate the design process. Lab required. Prerequisite: DFTG 1372. 3 credit hours. (W)

DFTG 2381  Cooperative Education-Drafting and Design Technology/Technician, 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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

DFTG 2432  Advanced Computer-Aided Drafting
Application of advanced CAD techniques. Lab required. Prerequisite/Concurrent enrollment: DFTG 1372. 4 credit hours. (W)

DHYG 1201  Orofacial Anatomy, Histology and Embryology
The histology and embryology of oral tissues, gross anatomy of the head and neck, tooth morphology, and individual tooth identification. Lab required. Prerequisites: BIOL 2401 and BIOL 2402; both with a grade of "C" or better. Major Requirement: AAS - Dental Hygiene. 2 credit hours. (W)

DHYG 1207  General and Dental Nutrition
General nutrition and nutritional biochemistry emphasizing the effect nutrition has on oral health. Prerequisite: DHYG 1431 (or DHYG 1331) with a grade of “C” or better. Major Requirement: AAS - Dental Hygiene. 2 credit hours. (W)

DHYG 1211  Periodontology
Normal and diseased periodontium including the structural, functional, and environmental factors. Emphasis on etiology, pathology, treatment modalities, and therapeutic and preventive periodontics. Prerequisites: DHYG 1227 and DHYG 1261; both with a grade of "C" or better. Major Requirement: AAS - Dental Hygiene. 2 credit hours. (W)

DHYG 1215  Community Dentistry
The principles and concepts of community public health and dental health education emphasizing community assessment, educational planning, implementation, and evaluation including methods and materials used in teaching dental health education in various community settings. Additionally, this course includes rotation schedule into the community (4 hours weekly). Lab required. Prerequisites: DHYG 1227, DHYG 1261 and ENGL 1301; all with a grade of C or better. Major Requirement: AAS - Dental Hygiene. 2 credit hours. (W)

DHYG 1219  Dental Materials
Physical and chemical properties of dental materials including the application and manipulation of the various materials used in dentistry. Lab required. Prerequisite:
DHYG 1431 with a grade of "C" or better. Major Requirement: AAS - Dental Hygiene. 2 credit hours. (W)

DHYG 1227  Preventive Dental Hygiene Care
The role of the dental hygienist as a therapeutic oral health care provider with emphasis on concepts of disease management, health promotion, communication, and behavior modification. Lab required. Prerequisites: DHYG 1201 and DHYG 1431, both with a grade of "C" or better. Major Requirement: AAS - Dental Hygiene. 2 credit hours. (W)

DHYG 1235  Pharmacology for the Dental Hygienist
Classification of drugs and their uses, actions, interactions, side effects, contraindications with emphasis on dental applications. Prerequisite: DHYG 1431 with a grade of "C" or better. Major Requirement: AAS - Dental Hygiene. 2 credit hours. (W)

DHYG 1239  General and Oral Pathology
Disturbances in human body development, diseases of the body, and disease prevention measures with emphasis on the oral cavity and associated structures. Lab required. Prerequisites: DHYG 1227 and DHYG 1261; both with a grade of C or better. Major Requirement: AAS - Dental Hygiene. 2 credit hours. (W)

DHYG 1261  Clinical I-Dental Hygienist
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. Prerequisites: DHYG 1201 and DHYG 1261; both with a grade of "C" or better. Major Requirement: AAS - Dental Hygiene. 2 credit hours. (W)

DHYG 1301  Orofacial Anatomy, Histology and Embryology
The histology and embryology of oral tissues, gross anatomy of the head and neck, tooth morphology, and individual tooth identification. Lab required. Prerequisites: BIOL 2401 and BIOL 2402; both with a grade of “C” or better. Major Requirement: AAS - Dental Hygiene. 3 credit hours. (W)

DHYG 1304  Dental Radiology
Fundamentals of oral radiography, including techniques, interpretation, quality assurance, and ethics. Lab required. Corequisite: DHYG 1201, or consent of Program Director. Major Requirement: AAS - Dental Hygiene. 3 credit hours. (W)

DHYG 1311  Periodontology
Normal and diseased periodontium including the structural, functional, and environmental factors. Emphasis on etiology, pathology, treatment modalities, and therapeutic and preventive periodontics.

DHYG 1319  Dental Materials
Physical and chemical properties of dental materials including the application and manipulation of the various materials used in dentistry. Lab required. Prerequisites: CHEM 1405 and DHYG 1331. Major Requirement: AAS - Dental Hygiene. 3 credit hours. (W)

DHYG 1331  Preclinical Dental Hygiene
Foundational knowledge for performing clinical skills on patients with emphasis on procedures and rationale for performing dental hygiene care. Introduction to ethical principles as they apply to dental hygiene care. Lab required. Prerequisites: BIOL 2401 and BIOL 2402, and CHEM 1405. Major Requirement: AAS-Dental Hygiene. 3 credit hours. (W)

DHYG 1339  General and Oral Pathology
Disturbances in human body development, diseases of the body, and disease prevention measures with emphasis on the oral cavity and associated structures. Prerequisites: DHYG 1227 and DHYG 1261. Major Requirement: AAS-Dental Hygiene. 3 credit hours. (W)

DHYG 1431  Preclinical Dental Hygiene
Foundational knowledge for performing clinical skills on patients with emphasis on procedures and rationale for performing dental hygiene care. Introduction to ethical principles as they apply to dental hygiene care. Lab required. Prerequisites: BIOL 2401 and BIOL 2402; both with a grade of "C" or better. Major Requirement: AAS - Dental Hygiene. 3 credit hours. (W)

DHYG 2102  Applied Community Dentistry
Application of the principles and concepts of community public health and dental health education emphasizing community assessment, educational planning, implementation, and evaluation including methods and materials used in teaching dental health education in various community settings. Lab required. Prerequisite: DHYG 1215 with a grade of "C" or better. Major Requirement: AAS - Dental Hygiene. 3 credit hours. (W)

DHYG 2153  Dental Hygiene Practice
Emphasis on the laws governing the practice of dentistry and dental hygiene, moral standards, and the ethical standards established by the dental hygiene profession. Practice settings for the dental hygienist, office operations, and preparation for employment. Prerequisite: Admitted to the Dental Hygiene Program. Major Requirement: AAS - Dental Hygiene. 1 credit hour. (W)

DHYG 2201  Dental Hygiene Care I
Dental hygiene care for the medically or dentally compromised patient including supplemental

Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
DHYG 2202  Applied Community Dentistry
Application of the principles and concepts of community public health and dental health education emphasizing community assessment, educational planning, implementation, and evaluation including methods and materials used in teaching dental health education in various community settings. Lab required. Prerequisite: DHYG 1215 with a grade of C or better. Major Requirement: AAS - Dental Hygiene. 2 credit hours. (W)

DHYG 2231  Dental Hygiene Care II
A continuation of Dental Hygiene Care I. Dental hygiene care for the medically or dentally compromised patient including advanced instrumentation techniques. Lab required. Prerequisites: DHYG 2201 and DHYG 2361; both with a grade of “C” or better. Major Requirement: AAS - Dental Hygiene. 2 credit hours. (W)

DHYG 2361  Clinical II - Dental Hygienist
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. Additionally, this course is 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. Onsite clinical instruction, supervision, evaluation, and placement are the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Prerequisites: DHYG 1227 and DHYG 1261; both with a grade of C or better. Corequisite: DHYG 2201, or consent of Program Director. Major Requirement: AAS - Dental Hygiene. 3 credit hours. (W)

DHYG 2363  Clinical III-Dental Hygienist
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. Prerequisites: DHYG 2201 and DHYG 2361; both with a grade of C or better. Corequisite: DHYG 2231. Major Requirement: AAS - Dental Hygiene. 3 credit hours. (W)

DHYG 2375  Strategies of Oral Medicine
Case presentation that emphasizes the integration of dental hygiene sciences, critical thinking and the application of evidence based research on an advanced level. Presentations by students include patient case studies and literature reviews for class discussion. Patient case studies integrate knowledge from the areas of research, pharmacology, periodontology, pathology, emergency care, ethics, nutrition, dental radiology and clinical courses that demonstrate the highest quality of care for each patient. Prerequisites: DHYG 1235, DHYG 2201, and DHYG 2361. Major Requirement: AAS-Dental Hygiene. 3 credit hours. (W)

DMSO 1110  Introduction to Sonography
An introduction to the profession of sonography and the role of the sonographer. Emphasis on medical terminology, ethical/legal aspects, written and verbal communication, and professional issues relating to registry, accreditation, professional organizations and history of the profession. 1 credit hour. (W)

DMSO 1166  Practicum 2 - Diagnostic Medical Sonography/Sonographer and Ultrasound Technician
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisite: DMSO 1266. 1 credit hour. (W)

DMSO 1202  Basic Ultrasound Physics
Basic acoustical physics and acoustical waves in human tissue. Emphasis on ultrasound transmission in soft tissues, attenuation of sound energy, parameters affecting sound transmission, and resolution of sound beams. Lab required. 2 credit hours. (W)

DMSO 1266  Practicum 1 - Diagnostic Medical Sonography/Sonographer and Ultrasound Technician
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. 2 credit hours. (W)

DMSO 1334  Abdominopelvic Sonography
Normal anatomy and physiology of the abdominal and pelvic cavities as related to scanning techniques, transducer selection, and scanning protocols. Lab required. 3 credit hours. (W)

DMSO 1355  Sonographic Pathophysiology
Pathology and pathophysiology of the abdominal structures visualized with ultrasound. Includes abdomen, and pelvis. Lab required. 3 credit hours. (W)

DMSO 1366  Practicum 3 - Diagnostic Medical Sonography/Sonographer and Ultrasound Technician
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisite: DMSO 1166. 3 credit hours. (W)
DMSO 2130  Advanced Ultrasound and Review  
Knowledge, skills, and professional values within a legal and ethical framework addressing emerging technologies and professional development. 1 credit hour. (W)

DMSO 2243  Advanced Ultrasound Physics  
Theory and application of ultrasound principles. Includes advances in ultrasound technology. Lab required. Prerequisite: DMSO 1202. 2 credit hours. (W)

DMSO 2253  Sonography of Superficial Structures  
Detailed study of normal and pathological superficial structures as related to scanning techniques, patient history and laboratory data, transducer selection, and scanning protocols. Lab required. 2 credit hours. (W)

DMSO 2267  Practicum 5 - Diagnostic Medical Sonography/Sonographer and Ultrasound Technician  
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisite: DMSO 2367. 2 credit hours. (W)

DMSO 2341  Sonography of Abdominopelvic Pathology  
Pathologies and disease states of the abdomen and pelvis as related to scanning techniques, patient history and laboratory data, transducer selection, and scanning protocols. Emphasizes endocavitary sonographic anatomy and procedures including pregnancy. Lab required. 3 credit hours. (W)

DMSO 2342  Sonography of High Risk Obstetrics  
Maternal disease and fetal abnormalities. Includes scanning techniques, patient history and laboratory data, transducer selection, and scanning protocols. Lab required. 3 credit hours. (W)

DMSO 2367  Practicum 4 - Diagnostic Medical Sonography/Sonographer and Ultrasound Technician  
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisite: DMSO 2367. 2 credit hours. (W)

DMSO 2405  Sonography of Obstetrics/Gynecology  
Detailed study of the pelvis and obstetrics/gynecology as related to scanning techniques, patient history and laboratory data, transducer selection, and scanning protocols. Lab required. 4 credit hours. (W)

DRAM 1120  Theatre Practicum I  
Practicum in theater open to all students with emphasis on technique and procedures with experience gained in play productions. Additionally, this course is a practicum in theatre with emphasis on performance techniques and procedures, including a performance role in a college production. Flexible enrollment. Prerequisite: Consent of Instructor. 1 credit hour. (A) Note: Students may take DRAM 1120, DRAM 1121, DRAM 2120, and DRAM 2121 for a combined total of no more than 4 credit hours.

DRAM 1121  Theatre Practicum II  
Practicum in theater open to all students with emphasis on technique and procedures with experience gained in play productions. Additionally, this course is a practicum in theatre with emphasis on theatre techniques and procedures, including technical responsibilities in the production of a college play. Flexible enrollment. Prerequisite: Consent of Instructor. 1 credit hour. (A) Note: Students may take DRAM 1120, DRAM 1121, DRAM 2120, and DRAM 2121 for a combined total of no more than 4 credit hours.

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. Prerequisite: Meet TSI standard for INRW 0315; or equivalent. 3 credit hours. (A)

DRAM 1322  Stage Movement  
Principles, practices, and exercises in body techniques and stage movement; emphasis on character movement and body control. Lab required. 3 credit hours. (A)

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. Lab required. 3 credit hours. (A)

DRAM 1341  Makeup  
Design and execution of makeup for the purpose of developing believable characters. Includes discussion of basic makeup principles and practical experience of makeup application. Lab required. 3 credit hours. (A)

DRAM 1342  Introduction to Costume  
Principles and techniques of costume design and construction for theatrical productions. Lab required. 3 credit hours. (A)

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. Lab required. 3 credit hours. (A)

**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. Lab required. Prerequisite: DRAM 1351 or consent of Instructor. 3 credit hours. (A)

**DRAM 2120 Theatre Practicum III**
Practicum in theater open to all students with emphasis on technique and procedures with experience gained in play productions. Additionally, this course is a continuation of DRAM 1120, and is a practicum in theatre with emphasis on advanced performance techniques and procedures; as well as specialized training in practical skill areas related to performance. Flexible enrollment. Prerequisite: Consent of Instructor. 1 credit hour. (A) Note: Students may take DRAM 1120, DRAM 1121, DRAM 2120, and DRAM 2121 for a combined total of no more than 4 credit hours.

**DRAM 2121 Theatre Practicum IV**
Practicum in theater open to all students with emphasis on technique and procedures with experience gained in play productions. Additionally, this course is a continuation of DRAM 1121, and is a practicum in theatre with emphasis on advanced theatre techniques and procedures; as well as specialized training in practical skill areas related to performance technology. Flexible enrollment. Prerequisite: Consent of Instructor. 1 credit hour. (A) Note: Students may take DRAM 1120, DRAM 1121, DRAM 2120, and DRAM 2121 for a combined total of no more than 4 credit hours.

**DRAM 2331 Stagecraft II**
Continued 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. Lab required. 3 credit hours. (A)

**DRAM 2336 Voice for the Theater**
Application of the performer's use of the voice as a creative instrument of effective communication. Encourages an awareness of the need for vocal proficiency and employs techniques designed to improve the performer's speaking ability. 3 credit hours. (A)

**DRAM 2351 Acting III**
Development of basic skills and techniques of acting including increased sensory awareness, ensemble performing, character analysis, and script analysis. Emphasis on the mechanics of voice, body, emotion, and analysis as tools for the actor. Lab required. 3 credit hours. (A)

**DRAM 2361 History of Theater I**
Study of the history of the theater from primitive times through the Renaissance. Prerequisite: Meet TSI standard for INRW 0315; or equivalent. 3 credit hours. (A)

**DRAM 2362 History of Theater II**
Study of the history of the theater from the Renaissance through today. Prerequisite: Meet TSI requirement for INRW 0315; or equivalent. 3 credit hours. (A)

**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. Additionally, this course covers the period of 1890 to 1949. Lab required. 3 credit hours. (A) Note: Students may take either DRAM 2366 or COMM 2366, but not both.

**DRAM 2389 Academic Co-op Drama**
Integrates on campus study with practical hands-on work experience in drama. In conjunction with class seminars, the student will set specific goals and objectives in the study of drama. Contact the Cooperative Work Experience Office. 3 credit hours. (A)

**DSAE 1340 Diagnostic Electrocardiography**
Cardiac testing including the techniques and interpretation of patient physical assessment. Covers electrocardiography, stress testing, Holter monitoring, vital signs, and cardiovascular pharmacology. Lab required. 3 credit hours. (W)

**DSVT 1300 Principles of Vascular Technology**
Introduction to non-invasive vascular technology modalities. Includes 2D imaging, Doppler, plethysmography, and segmental pressures. Emphasis on performing basic venous and arterial imaging and non-imaging exams. Lab required. 3 credit hours. (W)

**DSVT 2200 Vascular Technology Applications**
Non-invasive vascular technology. Includes 2-D imaging, Doppler, plethysmography, and segmental pressures. Emphasizes protocols for performing basic venous and arterial imaging and non-imaging exams. Lab required. Prerequisite: DSVT 1300 2 credit hours. (W)

**ECON 1301 Introduction to Economics**
A survey of microeconomic and macroeconomic principles of non-business majors. Microeconomic topics will include supply and demand, consumer behavior, price and output decisions by firms under various market conditions.
structures, factor markets, market failures, international trade, and exchange rates. Macroeconomic topics will include national income, unemployment, inflation, business cycles, aggregate supply and demand, monetary and fiscal policy, and economic growth. 3 credit hours. (A)

**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. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**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. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**ECON 2389 Academic Co-op Economics**
Integrates on-campus study with practical hands-on work experience in economics. In conjunction with class seminars, the student will set specific goals and objectives in the study of economics. Contact the Cooperative Work Experience Office. 3 credit hours. (A)

**ECRD 1111 Electrocardiography**
Fundamentals of cardiovascular anatomy and physiology. Includes basic electrocardiography procedures, interpretation of basic dysrhythmias, and appropriate treatment modalities. Prerequisite/Concurrent enrollment: DSAE 1340. 1 credit hour. (W)

**EDUC 1300 Learning Framework**
A study of the: 1) research and theory in the psychology of learning, cognition, and motivation; 2) factors that impact learning; and 3) application of learning strategies. Theoretical models of strategic learning, cognition, and motivation serve as the conceptual basis for the introduction of college-level student academic strategies. Students 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. 3 credit hours. (A) Note: Students may only take one of the following: EDUC 1200, EDUC 1300, PSYC 1100 or PSYC 1300.

**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. The course provides students with opportunities to participate in early field observations at all levels of P-12 schools with varied and diverse student populations and provides students with support from college and school faculty, preferably in small cohort groups, for the purpose of introduction to and analysis of the culture of schooling and classrooms. Course content should be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards; and the course must include a minimum of 16 contact hours of field experience in P-12 classrooms. Lab required. Prerequisite: Meet TSI standard for INRW 0315; or equivalent. 3 credit hours. (A)

**EDUC 2301 Introduction to 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 populations. Lab required. Prerequisite: Meet TSI standard for INRW 0315; or equivalent. 3 credit hours. (A)

**EECT 1348 Digital Signal Processing (DSP)**
A study of the architecture and applications of digital signal processors (DSP) including mathematical signal processing techniques. Lab required. 3 credit hours. (W)

**EECT 1371 Voice-over-Internet Protocol (CCNA VOICE)**
Voice over Internet Protocol (VoIP) adds voice to existing data and video transmission networks enriching and unifying all our communication systems over a common media. It offers many benefits: lower telephony operational costs, greater flexibility, and offers the potential for a variety of present and future enhanced applications not possible on earlier communications systems. This course provides a thorough overview of the legacy Public Switched Telephone Network (PSTN), Internet Protocol (IP), and IP Telephony (IPT), including their protocols and its integration with data and video networks. VoIP I helps individuals to prepare for the
Cisco CCNA Voice and CVOICE certification. This class requires extensive hands-on labs. Lab required. 3 credit hours. (W)

EECT 2337 Wireless Telephony Systems
Principles of wireless/cellular telephony systems to include call processing, hand-off, site analysis, antenna radiation patterns, commonly used test/maintenance equipment, and access protocol. Lab required. 3 credit hours. (W)

EECT 2380 Cooperative Education - Electrical, Electronic and Communications Engineering 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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

EECT 2439 Communications Circuits
A study of communications systems with emphasis on amplitude modulation, frequency modulation, phase modulation, and digital pulse modulation. Discussion of several types of modulators, demodulators, receivers, transmitters, and transceivers. Lab required. Prerequisites: CETT 1425 and CETT 2471. 4 credit hours. (W)

EMSP 1160 Clinical-Emergency Medical Technician (EMT Paramedic)-Basic
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: Consent of Program Director. 1 credit hour. (W)

EMSP 1161 Clinical-Emergency Medical Technician (EMT Paramedic)-Advanced 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. Prerequisite: Consent of Program Director. 1 credit hour. (W)

EMSP 1162 Clinical-Emergency Medical Technician (EMT Paramedic)-Advanced 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. Prerequisite: Consent of Program Director. 1 credit hour. (W)

EMSP 1355 Trauma Management
Knowledge and skills in the assessment and management of patients with traumatic injuries. Lab required. 3 credit hours. (W)

EMSP 1356 Patient Assessment and Airway Management
Knowledge and skills required to perform patient assessment, airway management, and artificial ventilation. Lab required. Prerequisite: Consent of Program Director. 3 credit hours. (W)

EMSP 1371 Introduction to Emergency Medical Technician (EMT)
Introduction to Emergency Medical Services including: history, organization and function, legal aspects, and ethics. Overview of human anatomy and physiology, patient assessment, airway control, and infection control techniques. Prerequisite: Consent of Program Director. Corequisites: EMSP 1160 and EMSP 1501. 3 credit hours. (W)

EMSP 1438 Introduction to Advanced Practice
Fundamental elements associated with emergency medical services to include preparatory practices, pathophysiology, medication administration, and related topics. Lab required. Prerequisites: EMSP 1160 and EMSP 1371 and EMSP 1501, or EMT-Basic certification, or consent of Program Director. 4 credit hours. (W)

EMSP 1501 Emergency Medical Technician
Preparation for certification as an Emergency Medical Technician (EMT). Lab required. Prerequisite: Consent of Program Director. Corequisite: EMSP 1160. 5 credit hours. (W)

EMSP 2143 Assessment Based Management
A summarative experience covering comprehensive, assessment-based patient care management for the paramedic level. Additionally, it includes specific care when dealing with pediatric, adult, geriatric, and special needs patients. 1 credit hour. (W)

EMSP 2160 Clinical-Emergency Medical (EMT Paramedic)-Advanced 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. 1 credit hour. (W)

EMSP 2206 Emergency Pharmacology
A study of drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages. Lab required. 2 credit hours. (W)
EMSP 2267 Practicum-Emergency Medical (EMT Paramedic)
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. 2 credit hours. (W)

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. Lab required. Prerequisites: EMSP 1438, EMSP 1355 and EMSP 1356. 3 credit hours. (W)

EMSP 2330 Special Populations
Knowledge and skills necessary to assess and manage ill or injured patients in diverse populations to include neonatology, pediatrics, geriatrics, and other related topics. Lab required. Prerequisite: Consent of Program Director. 3 credit hours. (W)

EMSP 2444 Cardiology
Assessment and management of patients with cardiac emergencies. Includes single and multi-lead ECG interpretation. Lab required. 4 credit hours. (W)

EMSP 2534 Medical Emergencies
Knowledge and skills in the assessment and management of patients with medical emergencies, including medical overview, neurology, gastroenterology, immunology, pulmonology, urology, hematology, endocrinology, toxicology, and other related topics. Lab required. 5 credit hours. (W)

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. Lab required. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

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. Lab required. Prerequisite: ENGL 1301. 3 credit hours. (A)

ENGL 2307 Creative Writing I
Practical experience in the techniques of imaginative writing. May include fiction, non-fiction, poetry, screenwriting, or drama. Additionally, this course does not satisfy the college requirements for a sophomore literature course. Prerequisite: ENGL 1302. 3 credit hours. (A)

ENGL 2311 Technical and 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. Prerequisite: ENGL 1301. 3 credit hours. (A)

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. Prerequisite: ENGL 1302 or ENGL 2311. 3 credit hours. (A)

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 among a diverse group of authors for what they reflect and reveal about the evolving American experience and character. Prerequisite: ENGL 1302 or ENGL 2311. 3 credit hours. (A)

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. Prerequisite: ENGL 1302 or ENGL 2311. 3 credit hours. (A)

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. Prerequisite: ENGL 1302 or ENGL 2311. 3 credit hours. (A)
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. Prerequisite: ENGL 1302 or ENGL 2311. 3 credit hours. (A)

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. Prerequisite: ENGL 1302 or ENGL 2311. 3 credit hours. (A)

ENGL 2342 Introduction to Literature I - Short Story and Novel
Study of short stories, novels, and nonfiction. Analysis and evaluation of major writers, their techniques, and their contributions to our literary heritage. Prerequisite: ENGL 1302 or ENGL 2311. 3 credit hours. (A)

ENGL 2343 Introduction to Literature II - Poetry and Drama
Study of poetry and drama and of mythology as it relates to these genres. Analysis of our classical heritage, origins of drama, development of contemporary drama and film, and elements and types of poetry. Prerequisite: ENGL 1302 or ENGL 2311. 3 credit hours. (A)

ENGL 2389 Academic Co-op English
Integrates on-campus study with practical hands-on work experience in English. In conjunction with class seminars, the student will set specific goals and objectives in the study of English. Contact the Cooperative Work Experience Office. Prerequisites: Consent of Associate Dean and meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

ENGR 1201 Introduction to Engineering
An introduction to the engineering profession with emphasis on technical communication and team-based engineering design. Prerequisite: MATH 1314 or equivalent academic preparation. 2 credit hours. (A)

ENGR 2301 Engineering Mechanics I
Basic theory of engineering mechanics, using calculus, involving the description of forces, moments, and couples acting on stationary engineering structures; equilibrium in two and three dimensions; free-body diagrams; friction; centroids; centers of gravity; and moments of inertia. Prerequisites: MATH 2414 and PHYS 2425. 3 credit hours. (A)

ENGR 2302 Engineering Mechanics II
Basic theory of engineering mechanics, using calculus, involving the motion of particles, rigid bodies, and systems of particles; Newton's Laws; work and energy relationships; principles of impulse and momentum; application of kinetics and kinematics to the solution of engineering problems. Prerequisite: ENGR 2301. 3 credit hours. (A)

ENGR 2305 Electrical Circuits I Laboratory
Laboratory experiments supporting theoretical principles presented in ENGR 2305 involving DC and AC circuit theory, network theorems, time, and frequency domain circuit analysis. Introduction to principles and operation of basic laboratory equipment; laboratory report preparation. Prerequisites: MATH 2414 and PHYS 2425. Prerequisite/Concurrent enrollment: MATH 2320. Corequisite: ENGR 2305. 1 credit hour. (A)

ENGR 2306 Introduction to Digital Systems Laboratory
Basic laboratory experiments supporting theoretical principles presented in ENGR 2306 involving design, construction, and analysis of combinational and sequential digital circuits and systems, including logic gates, adders, multiplexers, decoders, encoders, arithmetic logic units, latches, flip-flops, registers, and counters; preparation of laboratory reports. Prerequisite: MATH 1314. Corequisite: ENGR 2306. 1 credit hour. (A)
logic gates; Boolean Algebra and logic simplification; Karnaugh maps; combinational logic; functions of combinational Logic; flip-flops and related devices; counters; shift registers; sequential logic; memory and storage. Prerequisite: MATH 1314. Corequisite: ENGR 2106. 3 credit hours. (A)

ENGR 2308 Engineering Economics
Methods used for determining the comparative financial desirability of engineering alternatives. Provides the student with the basic tools required to analyze engineering alternatives in terms of their worth and cost, an essential element of engineering practice. The student is introduced to the concept of the time value of money and the methodology of basic engineering economy techniques. The course will address some aspects of sustainability and will provide the student with the background to enable them to pass the Engineering Economy portion of the Fundamentals of Engineering exam. Prerequisite: MATH 2413. 3 credit hours. (A)

ENGR 2332 Mechanics of Materials
Stresses, deformations, stress-strain relationships, torsions, beams, shafts, columns, elastic deflections in beams, combined loading, and combined stresses. Behavior phenomena such as fracture, fatigue, and creep are introduced. Prerequisite: ENGR 2301. 3 credit hours. (A).

ENGT 1401 Circuit Analysis I
Fundamental concepts of electrical science covering potential, current and power in DC circuits. Fundamental laws and relationships applied to the analysis of circuits and networks: capacitance, inductance and magnetism; single-frequency concepts; the use of computer software in design and analysis of circuits. Lab required. Prerequisite/Concurrent enrollment: MATH 2412 equivalent or higher level. 4 credit hours. (A)

ENTC 1323 Strength of Materials
Introduces the relationship between externally applied forces and internally induced stresses and the resulting deformations in structural members. Lab required. 3 credit hours. (W)

ENTC 2380 Cooperative Education-Engineering Technology, 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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

ENVR 1401 Environmental Science I
Lecture: A survey of the forces, including humans, that shape our physical and biologic environment, and how they affect life on Earth. Introduction to the science and policy of global and regional environmental issues, including pollution, climate change, and sustainability of land, water, and energy resources. Lab: Activities will cover methods used to collect and analyze environmental data. Lab required. Prerequisite: Meet TSI standard for MATH 0310, and TSI college-readiness standard for Reading and Writing or equivalent. 4 credit hours. (A)
Note: Students may take either ENVR 1401 or GEOL 1305 but not both.

ENVR 1402 Environmental Science II
Continued interdisciplinary study of both natural (biology, chemistry, geology) and social (economics, politics, ethics) sciences as they apply to the environment. Focus on energy issues, global warming, ozone loss, land use, conservation and management, deforestation, biodiversity, the history of environmental law and regulation and local environmental problems. Lab required. Prerequisite: ENVR 1401. 4 credit hours. (A)

ESLC 305 ESL Oral Communication, Intermediate
Develops listening and speaking skills in speakers of languages other than English and prepares them to function in educational, vocational and/or personal English-speaking contexts. Additionally, emphasis on developing non-native speakers' intermediate listening and speaking skills to facilitate natural communication. Oral skills are developed through individual presentations and interactions in dyads, and in small and large groups. Aural skills are developed through classroom interaction, outside assignments, and video and audio clips designed to enhance non-native speakers' skills in understanding both formal and informal speech styles of English. Focus is given to students' spoken grammar, pronunciation, vocabulary, and exposure to U.S. culture. Lab required. Prerequisite: Meet TSI standard for ESLC 0305; or equivalent. 3 credit hours. (D)

ESLC 310 ESL Oral Communication, Advanced
Develops listening and speaking skills in speakers of languages other than English and prepares them to function in educational, vocational and/or personal English-speaking contexts. Additionally, emphasis on developing non-native speakers' advanced oral communication and listening competencies. Students practice natural communication regarding abstract concepts in classroom activities by working in dyads and in small and large groups while formal speaking skills are focused upon through delivery of oral presentations. Students participate in advanced level listening activities through interaction both in and out of the classroom and the use of video and audio tapes. Focus is given to students' spoken grammar, pronunciation, vocabulary and
exposure to U.S. culture. Lab required. Prerequisite: ESLC 0305, or meet TSI standard for ESLC 0310; or equivalent. 3 credit hours. (D)

ESLC 320 ESL Oral Communication, Pronunciation/Accent Reduction
Develops listening and speaking skills in speakers of languages other than English and prepares them to function in educational, vocational and/or personal English-speaking contexts. Additionally, emphasis on teaching aspects of spoken English, including stress and intonation, individual phonemes, and awareness of connected and reduced speech. Addresses pronunciation problems of specific language groups. Attention to productive and receptive skills is facilitated through classroom activities, student work in dyads and small and large groups, audio and video taping, and individualized feedback of Instructor. Lab required. Prerequisite: ESLC 0305 or consent of Associate Dean, or meet TSI standard for ESLC 0305 and ESLR 0305; or equivalent. 3 credit hours. (D)

ESLG 305 Grammar for Non-Native Speakers, Intermediate I
Focuses on Standard English grammar usage for academic purposes. Open only to non-native speakers. Additionally, instruction for non-native speakers of English in all verb tenses (to include past, present, future in simple progressive and perfective forms), passive voice and modals. Course content supports ESLW 0305 objectives for grammar usage. Lab required. Prerequisite: Meet TSI standard for ESLG 0305; or equivalent. 3 credit hours. (D)

ESLG 310 Grammar for Non-Native Speakers, Intermediate II
Focuses on Standard English grammar usage for academic purposes. Open only to non-native speakers. Additionally, a high-intermediate English grammar course designed for non-native speakers of English for instruction in nouns, noun clauses, gerunds, and infinitives. Course content supports ESLW 0310 objectives for grammar usage. Lab required. Prerequisite: ESLG 0305, or meet TSI standard for ESLG 0310; or equivalent. 3 credit hours. (D)

ESLG 315 Grammar for Non-Native Speakers, Advanced
Focuses on Standard English grammar usage for academic purposes. Open only to non-native speakers. Additionally, an advanced English grammar course designed for non-native speakers of English and focused on noun clauses, adjective clauses, adjective phrases, adverb clauses, adverbal phrases, and conditionals. Course content supports ESLW 0215 objectives for grammar usage and successful transition into English

Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
ESLV 310  ESL Reading and Vocabulary, Idioms
Develops English reading proficiency and vocabulary for academic, career, or personal purposes in speakers of languages other than English and prepares them to function in a multicultural, multilingual society. Additionally, instruction in idiomatic American English for second language learners. Increases familiarity with idiomatic English to facilitate comprehension and productive use of idioms in spoken and written discourse. Lab required. Prerequisites: ESLC 0305 and ESLR 0305, or consent of Associate Dean. 3 credit hours. (D) Note: ESLR 0215, ESLR 0305, ESLR 0310, and ESLV 0310 may be taken for a combined total of no more than 9 credit hours.

ESLV 310  ESL Reading and Vocabulary, Idioms
Develops English reading proficiency and vocabulary for academic, career, or personal purposes in speakers of languages other than English and prepares them to function in a multicultural, multilingual society. Additionally, instruction in idiomatic American English for second language learners. Increases familiarity with idiomatic English to facilitate comprehension and productive use of idioms in spoken and written discourse. Lab required. Prerequisites: ESLC 0305 and ESLR 0305, or consent of Associate Dean. 3 credit hours. (D) Note: ESLR 0215, ESLR 0305, ESLR 0310, and ESLV 0310 may be taken for a combined total of no more than 9 credit hours.

ESLW 215  Writing for Non-Native Speakers, Advanced
Focuses on strategies and techniques of writing and composition. Open only to non-native speakers. Additionally, instruction in advanced essay writing designed to prepare non-native students to enter ENGL 1301. Trains students to write academically acceptable papers in various rhetorical modes with a primary focus on argumentation. Focuses on mechanics of writing, common problems that ESL speakers encounter, research, and documentation. Lab required. Prerequisites: ESLR 0310 and ESLW 0310, or meet TSI standard for ESLR 0215 and ESLW 0215; or equivalent. Corequisite: ESLR 0215. 2 credit hours. (D)

ESLW 305  Writing for Non-Native Speakers, Intermediate I
Focuses on strategies and techniques of writing and composition. Open only to non-native speakers. Additionally, instruction in intermediate writing skills for non-native speakers. Focuses on sentence-level writing and paragraph development. Introduces students to pre-academic, experiential writing. Trains students to develop and organize ideas in description and process modes. Lab required. Prerequisites: Meet TSI standard for ESLR 0305 and ESLW 0305; or equivalent. Corequisite: ESLR 0305. 3 credit hours. (D)

ESLW 310  Writing for Non-Native Speakers, Intermediate II
Focuses on strategies and techniques of writing and composition. Open only to non-native speakers. Additionally, instruction in high-intermediate writing skills for non-native speakers. Focuses on multi-paragraph essays. Introduces students to academic writing. Trains students to develop and organize ideas in a variety of rhetorical modes. Lab required. Prerequisites: ESLR 0305 and ESLW 0305; or meet TSI standard for ESLR 0310 and ESLW 0310; or equivalent. Corequisite: ESLR 0310. 3 credit hours. (D)

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 II, III, IV, V, VI, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. Lab required. Prerequisite: Admission to the Program. 3 credit hours. (W)

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, II, IV, V, VI, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. Lab required. Prerequisite: FIRS 1407. 3 credit hours. (W)

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, II, III, V, VI, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. Lab required. Prerequisite: FIRS 1313. 3 credit hours. (W)

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, II, III, IV, V, VI, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. Lab required. Prerequisite: FIRS 1319. 3 credit hours. (W)

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, II, III, IV, V, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. Lab required. Prerequisite: FIRS 1323. 3 credit hours. (W)

FIRS 1407  Firefighter Certification II
One in a series of courses in basic preparation for a new firefighter. Should be taken in conjunction with Firefighter Certification I, III, IV, V, VI, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. Lab required. Prerequisite: FIRS 1301, or consent of Program Director. 4 credit hours. (W)

FIRS 1433  Firefighter Certification VII
One in a series of courses in basic preparation for a new firefighter. Should be taken in conjunction with Firefighter Certification I, II, III, IV, V, and VI to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. Lab required. Prerequisite: FIRS 1301, or consent of Program Director. 4 credit hours. (W)

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the Texas Commission on Fire Protection (TCFP)
curriculum for Basic Structural Fire Suppression, Course
#100. Lab required. Prerequisite: FIRS 1329. 4 credit
hours. (W)

FIRT 1301  Fundamentals of Fire Protection
Orientation to the fire service, career opportunities, and
related fields. This course meets Fire and Emergency
Services Higher Education (FESHE) Model Curriculum
core requirements. 3 credit hours. (W)

FIRT 1315  Hazardous Materials I
The chemical characteristics and behavior of various
materials. Storage, transportation, handling hazardous
emergency situations, and the most effective methods of
hazard mitigation. 3 credit hours. (W)

FIRT 1327  Building Construction in the Fire Service
Components of building construction that relate to life
safety. Includes relationship of construction elements and
building design impacting fire spread in structures. 3
credit hours. (W)

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. Must be a certified firefighter to enroll in this course. Prerequisite: Consent of Program Director. 3 credit hours. (W)

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 the relationships
between the fire service and outside agencies. 3 credit
hours. (W)

FIRT 1442  Fire Officer I
Meets the curriculum requirements of the Texas
Commission on Fire Protection (TCFP) for Fire Officer I
certification. 4 credit hours. (W)

FIRT 1443  Fire Officer II
Meets the curriculum requirements of the Texas
Commission on Fire Protection (TCFP) for Fire Officer II
certification. Prerequisites: FIRT 1442 and FIRT 2305,
or consent of Program Director. 4 credit hours. (W)

FIRT 2305  Fire Instructor I
Preparation of fire and emergency services personnel to
deliver instruction from a prepared lesson plan. Includes
the use of instructional aids and evaluation instruments to
meet the curriculum requirements of the Texas
Commission on Fire Protection (TCFP) for Fire
Instructor I certification. Prerequisite: Student must show
proof of Basic Firefighter Certification from the Texas
Commission on Fire Protection (TCFP), or consent of
Program Director. 3 credit hours. (W)

FIRT 2307  Fire Instructor II
Development of individual lesson plans for a specific
topic including learning objectives, instructional aids, and
evaluation instruments. Includes techniques for
supervision and coordination of activities of other
instructors to meet the curriculum requirements of the
Texas Commission on Fire Protection (TCFP) for Fire
Instructor II certification. Prerequisite: FIRT 2305 or
consent of Program Director. 3 credit hours. (W)

FIRT 2309  Firefighting Strategies and Tactics I
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. Must be a certified firefighter to
enroll in this course. Prerequisite: Consent of Program
Director. 3 credit hours. (W)

FIRT 2351  Company Fire Officer
A capstone course covering fire ground operations and
supervisory practices. Includes performance evaluation of
incident commander, safety officer, public information
officer, and shift supervisor duties. 3 credit hours. (W)

FLMC 1301  History of Animation Techniques
A historical perspective of two-dimensional (2-D) and
three-dimensional (3-D) animation. This class teaches
students traditional forms of animation including cell,
stop-motion and zoetropes. Students will also learn the
history and evolution of the animation art form. Students
will produce original animations utilizing traditional
techniques as projects. Lab required. 3 credit hours. (W)

FLMC 1304  Lighting for Film or Video
Fundamentals of lighting techniques for film or video
production with respect to lighting tools, composition and
camera motion to support dynamic storytelling. Prerequisite: ARTV 1351. Lab required. 3 credit hours. (W)

FLMC 1331  Video Graphics and Visual Effects I
A course in the applications of computers for video
production. Design of computer graphic workstations
and development of a rationale for selecting software,
hardware, and peripherals. Lab required. Prerequisite:
ARTC 1325. Prerequisite/Concurrent enrollment: ARTV
1371. 3 credit hours. (W)

FLMC 2305  Film-Style 3-D Animation Production
Techniques in 3-D animation for film-style production. Lab required. Prerequisite: ARTV 1341 or consent of
Instructor. 3 credit hours. (W)
FLMC 2331 Video Graphics and Visual Effects II
Advanced concepts of designing vector and raster graphics, executing rendering techniques, designing and producing three dimensional (3-D) materials, and selecting hardware, software, and peripherals for video production. Lab required. Prerequisite: FLMC 1331. 3 credit hours. (W)

FREN 1411 Beginning French I
Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture. Lab required. 4 credit hours. (A)

FREN 1412 Beginning French II
Continuation of FREN 1411. Lab required. Prerequisite: FREN 1411 or consent of Associate Dean. 4 credit hours. (A)

FREN 2311 Intermediate French I
Continued development of the four basic language skills with increased attention to reading and writing. Instruction enhanced by slides, tapes, and other audio-visual aids. Prerequisite: FREN 1412 or consent of Associate Dean. 3 credit hours. (A)

FREN 2312 Intermediate French II
Continuation of FREN 2311. Prerequisite: FREN 2311 or consent of Associate Dean. 3 credit hours. (A)

GAME 1303 Introduction to Game Design and 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. Lab required. Prerequisite: ARTV 1345 or consent of Instructor or Associate Dean. 3 credit hours. (W)

GAME 1304 Level Design
Introduction to the tools and concepts used to create levels for games and simulations. Incorporates level design, architecture theory, concepts of critical path and flow, balancing, play testing, and storytelling. Includes utilization of toolsets from industry titles. Lab required. Prerequisite: GAME 1303. 3 credit hours. (W)

GAME 1314 Character Sculpting
Creation of original characters from the drawing stage to sculpting clay status. Explores a variety of poses using clay. Lab required. Prerequisite: ARTV 1345. 3 credit hours. (W)

GAME 2309 Video Game Art II
A study of industry-used, game-art techniques and its applications of game art assets. Utilizes tools and advanced techniques in the creation of assets for a game engine. Lab required. Prerequisite: ARTV 2345 or consent of Instructor. 3 credit hours. (W)

GAME 2325 3-D Animation II - Character Set-Up
Character animation for application interfaces. Prerequisite: ARTV 1341. Lab required. 3 credit hours. (W)

GAME 2336 Lighting, Shading and Texture
Advanced application of lighting, shading, and texture techniques to increase system performance for digital games and simulation models. Lab required. Prerequisite: ARTV 2345 or consent of Instructor. 3 credit hours. (W)

GAME 2341 Game Scripting
Scripting languages with emphasis on game concepts and simulations. Lab required. Prerequisite: GAME 1303 or consent of Instructor. 3 credit hours. (W)

GAME 2359 Game and Simulation Group Project
Creation of a game and/or simulation project utilizing a team approach. Includes the integration of design, art, audio, programming, and quality assurance. Lab required. Prerequisite: GAME 1303. 3 credit hours. (W)

GAME 2386 Internship-Animation, Interactive Technology, Video Graphics and Special Effects
A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Prerequisite: ARTV 1341. 3 credit hours. (W)

GEOG 1301 Physical Geography
This course introduces students to the processes that drive Earth's physical systems. Students will explore the relationships among these physical systems, with emphasis on weather and climate, water, ecosystems, geologic processes and landform development, and human interactions with the physical environment. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (W)

GEOG 1302 Human Geography
This course introduces students to fundamental concepts, skills, and practices of human geography. Place, space, and scale serve as a framework for understanding patterns of human experience. Topics for discussion may include globalization, population and migration, culture, diffusion, political and economic systems, language, religion, gender, and ethnicity. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
**GEOG 1303 World Regional Geography**
This course is an introduction to the world's major regions seen through their defining physical, social, cultural, political, and economic features. These regions are examined in terms of their physical and human characteristics and their interactions. The course emphasizes relations among regions on issues such as trade, economic development, conflict, and the role of regions in the globalization process. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**GEOL 1305 Environmental Science - Natural Disasters**
A survey of the forces, including humans, that shape our physical and biologic environment, and how they affect life on Earth. Introduction to the science and policy of global and regional environmental issues, including pollution, climate change, and sustainability of land, water, and energy resources. Prerequisite: Meet TSI standard for MATH 0310, and TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A) Note: Students may take either ENVR 1401 or GEOL 1305 but not both.

**GEOL 1401 Earth Sciences for Non Science Majors I**
Lecture: Survey of geology, meteorology, oceanography, and astronomy. Lab: Activities will cover methods used to collect and analyze data in geology, meteorology, oceanography, and astronomy. Lab required. Prerequisites: Meet TSI standard for MATH 0310, and TSI college-readiness standard for Reading and Writing; or equivalent. 4 credit hours. (A)

**GEOL 1402 Earth Sciences for Non Science Majors II**
Lecture: Extension of the study of geology, astronomy, meteorology and oceanography, focusing on natural resources, hazards and climate variability. Lab: Activities will focus on methods used to collect and analyze data related to natural resources, hazards and climate variability. Lab required. Prerequisite: GEOL 1401 or GEOL 1403. 4 credit hours. (A)

**GEOL 1403 Physical Geology**
Lecture: Introduction to the study of the materials and processes that have modified and shaped the surface and interior of Earth over time. These processes are described by theories based on experimental data and geologic data gathered from field observations. Lab: Laboratory activities will cover methods used to collect and analyze earth science data. Lab required. Prerequisites: Meet TSI standard for MATH 0310, and TSI college-readiness standard for Reading and Writing; or equivalent. 4 credit hours. (A)

**GEOL 1404 Historical Geology**
Lecture: A comprehensive survey of the history of life and major events in the physical development of Earth as interpreted from rocks and fossils. Lab: Laboratory activities will introduce methods used by scientists to interpret the history of life and major events in the physical development of Earth from rocks and fossils. Lab required. Prerequisite: GEOL 1403. 4 credit hours. (A)

**GEOL 1445 Oceanography**
A study of the various aspects of the ocean, including origins of the ocean, earth's ocean, plate tectonics, ocean sediments, the chemistry of seawater, oceans and climate, currents, waves, tides, coastal features, oceanic ecosystems, protection of coastal areas, and resources of the oceans. Lab required. Prerequisite: Meet TSI standard for MATH 0310, and TSI college-readiness standard for Reading and Writing; or equivalent. 4 credit hours. (A)

**GEOL 1447 Introduction to Meteorology**
An examination of the Earth's atmosphere, global climate, and associated environmental factors. Includes lab exercises in weather tracking on Weather-Net computer system. Lab required. Prerequisite: Meet TSI standard for MATH 0310, and TSI college-readiness standard for Reading and Writing; or equivalent. 4 credit hours. (A)

**GEOL 2389 Academic Co-op Geology**
Integrates on-campus study with practical hands-on work experience in geology. In conjunction with class seminars, the student will set specific goals and objectives in the study of geology. Contact the Cooperative Work Experience Office. 3 credit hours. (A)

**GERM 1411 Beginning German I**
Introduction to the basic skills of speaking, reading, writing, and listening; designed for students with little or no previous language training. Includes attention to selected aspects of German civilization. Instruction enhanced by the use of tapes, slides, and video cassettes.Lab required. 4 credit hours. (A)

**GERM 1412 Beginning German II**
Continuation of GERM 1411 with an emphasis on the reading of elementary texts. Lab required. Prerequisite: GERM 1411 or consent of Associate Dean. 4 credit hours. (A)

**GERM 1411 Beginning German I**
Continuation of GERM 1411 with an emphasis on the reading of elementary texts. Lab required. Prerequisite: GERM 1411 or consent of Associate Dean. 4 credit hours. (A)

**GERM 2311 Intermediate German I**
Continued development of the four basic language skills with increased attention to reading and writing. Instruction enhanced by tapes, slides, and other audio-visual aids. Prerequisite: GERM 1412 or consent of Associate Dean. 3 credit hours. (A)
GERM 2312  Intermediate German II  
Continuation of GERM 2311. Prerequisite: GERM 2311, 
or consent of Associate Dean. 3 credit hours. (A)

GISC 1301  Cartography and Geography in 
Geographical Information Systems (GIS) and Global 
Positioning Systems 
Introduction to the principles of cartography and 
geography. Emphasis on global reference systems and the 
use of satellites for measurements and navigation. Lab 
required. Prerequisite/Concurrent enrollment: GISC 1411 
(or 1311). 3 credit hours. (W)

GISC 1411  Introduction to Geographic Information 
Systems (GIS) 
Introduction to basic concepts of vector GIS using 
several industry specific software programs. It also 
includes nomenclature of cartography and geography. 
Additionally, students will learn to display map data, 
change symbology, classify features and rasters, use 
dynamic labeling, join and relate tables, define 
projections, dissolve features, clip layers, create a 
geodatabase, and build a GIS model. Lab required. 4 
credit hours. (W)

GISC 1421  Introduction to Raster-Based Geographic 
Information Systems (GIS) 
Instruction in GIS data sets including raster-based 
information such as images or photographs, acquisition 
of such data, and processing and merging with vector 
data. Prerequisite/Concurrent enrollment: GISC 1411 
(or 1311). 4 credit hours. (W)

GISC 2231  Advanced Problems in Geographic 
Information Systems (GIS) 
Seminar/Capstone course designed for the final semester 
of a degree or certificate in Geographic Information 
Systems (GIS). Projects will include individual and group 
studies of GIS applications using the skills acquired in 
previous courses. The student will produce a professional 
project and present the results to a panel consisting of 
peers, instructors, or practicing GIS professionals. Lab 
required. Prerequisites: GISC 2402 and GISC 2420. 
2 credit hours. (W)

GISC 2281  Cooperative Education-Cartography/GIS 
Career-related activities encountered in the student's area 
of specialization offered through an individualized 
agreement among the college, employer, and student. 
Under the supervision of the college and the employer, 
the student combines classroom learning with work 
experience. Includes a lecture component. Prerequisite: 
GISC 2420. 2 credit hours. (W)

GISC 2335  Programming for Geographic 
Information Systems (GIS) 
Focuses on the use of programming languages to 
customize and expand the capability of GIS applications. 
Instruction will include object-oriented and component 
programming. Students will also design their own 
Graphical User Interface (GUI). Lab required. 
Prerequisites: COSC 1315 and GISC 1411 (or 1311). 
3 credit hours. (W)

GISC 2402  Geographic Information Systems (GIS) 
Design with Raster Analysis 
Raster/remote sensing principles, technologies, and 
applications. Emphasizes processing raster imagery into 
useful information to be used in a GIS. Includes 
georeferencing and image classification. Student final 
project will be demonstrating raster and remote sensing 
techniques. Prerequisite: GISC 1421. 4 credit hours. (W)

GISC 2420  Intermediate Geographic Information 
Systems (GIS) 
This course focuses on the study of spatial data structures 
and the display, manipulation, and analysis of geographic 
information. Students will study the technical aspects 
involved in spatial data handling, analysis, and modeling. 
Instruction will include theories and procedures 
associated with the implementation and management of 
GIS projects. A variety of GIS software packages will be 
used in the laboratory. Lab required. Prerequisite: GISC 
1411 (or 1311). 4 credit hours. (W)

GOVT 2107  Federal and Texas Constitutions 
A study of the United States and state constitutions with 
special emphasis on Texas. Prerequisites: By permission 
only, and meet TSI college-readiness standard for 
Reading and Writing; or equivalent. Enrollment limited to 
students who have already completed a minimum of six 
(6) credit hours of GOVT courses but have not satisfied 
the statutory requirement for study of the federal and 
state constitutions. Ensures compliance with TEC 51.301. 
1 credit hour. (A)

GOVT 2304  Introduction to Political Science 
Introductory survey of the discipline of political science 
focusing on the scope and methods of the field, and the 
substantive topics in the discipline including the 
theoretical foundations of politics, political interaction, 
political institutions and how political systems function. 
Prerequisites: Consent of Associate Dean, and meet TSI 
college-readiness standard for Reading and Writing; or 
equivalent. 3 credit hours. (A)

GOVT 2305  Federal Government (Federal 
constitution and 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. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**GOVT 2306 Texas Government (Texas constitution and topics)**
Origin and development of the Texas Constitution, structure and powers of the state and local government, federalism and inter-governmental relations, political participation, the election process, public policy and the political culture of Texas. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**GOVT 2311 Mexican-American Politics**
This course explores the impact of Mexican-Americans on U.S. politics and political institutions and public policy. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**GOVT 2389 Academic Co-op Government**
Integrates on-campus study with practical hands-on work experience in government. In conjunction with class seminars, the student will set specific goals and objectives in the study of government. Contact the Cooperative Work Experience Office. Prerequisites: Consent of Associate Dean, and meet TSI college-readiness standard for Writing; or equivalent. 3 credit hours. (A)

**GRPH 1359 Vector Graphics for Production**
A study and use of vector graphics for production. 3 credit hours. (W)

**GRPH 1380 Cooperative Education-Pre-Press/Desktop Publishing and Digital Imaging Design**
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. Contact the Cooperative Work Experience Office. Prerequisite: Consent of Associate Dean. 3 credit hours. (W)

**HAMG 1313 Front Office Management**
Functions of front office operations as they relate to customer service. Includes a study of front office interactions with other departments in the lodging operation. Prerequisite: HAMG 1321. 3 credit hours. (W)

**HAMG 1321 Introduction to Hospitality Industry**
An exploration of the elements and career opportunities within the multiple segments of the hospitality industry. 3 credit hours. (W)

**HAMG 1324 Hospitality Human Resources Management**
Principles and procedures of human resource management in the hospitality industry. Prerequisite: HAMG 1321. 3 credit hours. (W)

**HAMG 1340 Hospitality Legal Issues**
A course in legal and regulatory requirements that impact the hospitality industry. Topics include Occupational Safety and Health Administration (OSHA), labor regulations, tax laws, tip reporting, franchise regulations, and product liability laws. 3 credit hours. (W)

**HAMG 2301 Principles of Food and Beverage Operations**
An overview of food and beverage management in various hospitality environments. Emphasizes cost controls from procurement to marketing and sales. Prerequisite: HAMG 1321. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

**HAMG 2305 Hospitality Management and Leadership**
An overview of management and leadership in the hospitality industry with an emphasis on management philosophy, policy formation, communications, motivation, and team building. Prerequisites: HAMG 1324, HAMG 1340, HAMG 2301, HAMG 2307 and TRVM 2301; or consent of Associate Dean. 3 credit hours. (W)

**HAMG 2307 Hospitality Marketing and Sales**
Identification of the core principles of marketing and sales and their impact on the hospitality industry. Prerequisite: HAMG 1321. 3 credit hours. (W)

**HAMG 2332 Hospitality Financial Management**
Methods and applications of financial management within the hospitality industry. Primary emphasis on sales accountability, internal controls, and report analysis. Prerequisite: HAMG 1321. 3 credit hours. (W)

**HAMG 2337 Hospitality Facilities Management**
Identification of hospitality building systems and facilities; to include sustainability and risk management. Prerequisite: HAMG 1321. 3 credit hours. (W)

**HAMG 2380 Cooperative Education-Hospitality Administration/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. Contact the
Cooperative Work Experience Office. Prerequisites: CHEF 1305, HAMG 1313, HAMG 1324, HAMG 1340, HAMG 2337, RSTO 1325 and TRVM 2301; or consent of Associate Dean. 3 credit hours. (W)

HART 1256 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. Lab required. 2 credit hours. (W)

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. Lab required. 3 credit hours. (W)

HART 1307 Refrigeration Principles
An introduction to the refrigeration cycle, heat transfer theory, temperature/pressure relationship, refrigerant handling, refrigeration components, and safety. Lab required. 3 credit hours. (W)

HART 1375 Solar Cell and Array Certification Training
Review of Solar Cell and Array concepts and principles in preparation for sitting for a certification examination administered by an outside organization or agency. The course includes National and Local Electrical Code requirements. Lab required. Prerequisites: CETT 1303 and MATH 1314 equivalent or higher level, or consent of Associate Dean. 3 credit hours. (W)

HART 1403 Air Conditioning Control Principles
A basic study of HVAC and refrigeration controls; troubleshooting of control components; emphasis on use of wiring diagrams to analyze high and low voltage circuits; a review of Ohm’s law as applied to air conditioning controls and circuits. Lab required. Prerequisite/Concurrent enrollment: HART 1301. 4 credit hours. (W)

HART 1441 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. Lab required. Prerequisite/Concurrent enrollment: HART 1307. 4 credit hours. (W)

HART 1445 Gas and Electric Heating
Study of the procedures and principles used in servicing heating systems including gas fired furnaces and electric heating systems. Lab required. Prerequisite/Concurrent enrollment: HART 1301. 4 credit hours. (W)

HART 2268 Practicum (or Field Experience) - Heating, Air Conditioning and Refrigeration Technology/Technician
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Additionally, this capstone course is to be taken in the final semester of the HVAC degree. Prerequisite/Concurrent enrollment: HART 2345 or consent of Discipline Lead. 2 credit hours. (W)

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. Lab required. Prerequisite/Concurrent enrollment: HART 1307. 3 credit hours. (W)

HART 2372 Alternative Energy Perspectives, Energy Sources, Energy Storage, and Energy Distribution
The course covers principles of alternative/renewable energy technologies (e.g. Solar Electrical Energy Generation, Solar Thermal Energy Generation, Wind Energy Generation, and Geo-Thermal Energy Generation). Each alternative is placed in the proper context of the energy equation. Traditional energy sources (e.g. coal, oil, natural gas, hydropower, nuclear) are described and contrasted so that the student sees costs and benefits of both alternative and traditional energy sources. Energy Storage and Energy Distribution is covered as it pertains to each energy technology. Lab required. Prerequisite: MATH 1314 or consent of Associate Dean. 3 credit hours. (W)

HART 2431 Advanced Electricity for HVAC
Advanced electrical instruction and skill building in installation and servicing of air conditioning and refrigeration equipment including detailed instruction in motors and power distribution motors, motor controls, and application of solid state devices. Lab required. Prerequisites: HART 1301 and HART 1403. 4 credit hours. (W)

HART 2436 Air Conditioning Troubleshooting
An advanced course in application of troubleshooting principles and use of test instruments to diagnose air conditioning and refrigeration components and system problems including conducting performance tests. Lab required. Prerequisites: HART 1301, HART 1307, HART 1403, and HART 1441. 4 credit hours. (W)
HART 2438 Air Conditioning Installation and Startup
A study of air conditioning system installation, refrigerant piping, condensate disposal, and air cleaning equipment with emphasis on startup and performance testing. Lab required. Prerequisite/Concurrent enrollment: HART 1307. 4 credit hours. (W)

HART 2442 Commercial Refrigeration
Theory and practical application in the maintenance of commercial refrigeration; medium, and low temperature applications and ice machines. Lab required. Prerequisite/Concurrent enrollment: HART 1307. 4 credit hours. (W)

HART 2449 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. Lab required. Prerequisite: HART 1403. 4 credit hours. (W)

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. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

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/Reconstruction era to the present. United States History II examines industrialization, immigration, world wars, the Great Depression, Cold War and post-Cold War eras. Themes that may be addressed in United States History II include: American culture, religion, civil and human rights, technological change, economic change, immigration and migration, urbanization and suburbanization, the expansion of the federal government, and the study of U.S. foreign policy. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

HIST 2301 Texas History
A survey of the political, social, economic, cultural, and intellectual history of Texas from pre-Columbian era to the present. Themes that may be addresses 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. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

HIST 2311 Western Civilization I
A survey of the social, political, economic, cultural, religious, and intellectual history of Europe and the Mediterranean world from human origins to the 17th century. Themes that should be addressed in Western Civilization I include cultural legacies of Mesopotamia, Egypt, Greece, Rome, Byzantium, Islamic civilizations, and Europe through the Middle Ages, Renaissance, and Reformations. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

HIST 2312 Western Civilization II
A survey of the social, political, economic, cultural, religious, and intellectual history of Europe and the Mediterranean world from the 17th century to the modern era. Themes that should be addressed in Western Civilization II include absolutism and constitutionalism, growth of nation states, the Enlightenment, revolutions, classical liberalism, industrialization, imperialism, global conflict, the Cold War, and globalism. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

HIST 2321 World Civilizations I
A survey of the social, political, economic, cultural, religious, and intellectual history of the world from the emergence of human cultures through the 15th century. The course examines major cultural regions of the world in Africa, the Americas, Asia, Europe, and Oceania and their global interactions over time. Themes include the emergence of early societies, the rise of civilizations, the development of political and legal systems, religion and philosophy, economic systems and trans-regional networks of exchange. The course emphasizes the development, interaction and impact of global exchange. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

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. Prerequisite: Meet TSI college-readiness
HIST 2327  Mexican-American History I
This course is a survey of the political, economic, social and cultural history of Mexicans in North America from the pre-Colombian Era through 1850, with emphasis on the Mexican-American War with the United States. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

HIST 2328  Mexican-American History II
This course is a survey of the political, economic, social and cultural history of Mexicans in North America from 1850 to present, with emphasis on the Mexican-American cultural identity and the Civil Rights Movement in the United States. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

HIST 2381  African-American History
Historical, economic, social, and cultural development of minority groups with an emphasis on the experiences of peoples of African descent in the United States from the colonial era to the present. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

HIST 2389  Academic Co-op History
Integrates on-campus study with practical hands-on work experience in history. In conjunction with class seminars, the student will set specific goals and objectives in the study of history. Contact the Cooperative Work Experience Office. Prerequisite: Consent of Associate Dean. 3 credit hours. (A)

HITT 1160  Clinical I - Health Information/Medical Records Technology
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: HITT 1301. 1 credit hour. (W)

HITT 1301  Health Data Content and Structure
Introduction to systems and processes for collecting, maintaining, and disseminating primary and secondary health related information including content of health record, documentation requirements, registries, indices, licensing, regulatory agencies, forms, and screens used in electronic and paper medical records. Prerequisite/Concurrent enrollment: HITT 1305. 3 credit hours. (W)

HITT 1303  Medical Terminology II
A continuation of the study of medical terms through work origin and structure, abbreviations and symbols, surgical and diagnostic procedures, and medical specialties. Lab required. Prerequisite: HITT 1305. 3 credit hours. (W)

HITT 1305  Medical Terminology I
Study of medical terms through word origin and structure. Introduction to abbreviations and symbols, surgical and diagnostic procedures, and medical specialties. 3 credit hours. (W)

HITT 1311  Health Information Systems
Introduction to health IT standards, health-related data structures, software applications and enterprise architecture in health care and public health. Lab required. 3 credit hours. (W)

HITT 1341  Coding and Classification Systems
Fundamentals of coding rules, conventions, and guidelines using clinical classification systems. The student is recommended to complete BIOL 2404 prior to registering for this course, but not required. Lab required. Prerequisite: HITT 1305. Prerequisite/Concurrent enrollment: HITT 1301. 3 credit hours. (W)

HITT 1345  Health Care Delivery Systems
Examination of delivery systems including organization, financing, accreditation, licensure, and regulatory agencies. This course covers alternative health care delivery systems. Lab required. 3 credit hours. (W)

HITT 1353  Legal and Ethical Aspects of Health Information
Concepts of privacy, security, confidentiality, ethics, health care legislation, and regulations relating to the maintenance and use of health information. Prerequisite: HITT 1305. 3 credit hours. (W)

HITT 2249  RHIT Competency Review
Review of Health Information Technology (HIT) competencies, skills, and knowledge. Prerequisite/Concurrent enrollment: HITT 2361 or consent of Program Director. 2 credit hours. (W)

HITT 2328  Introduction to Public Health
A survey of how health care and public health services are organized and delivered in the U.S. Covers public policy, relevant organizations and their interrelationships, professional roles, legal and regulatory issues, and payment systems. Includes health reform initiatives in the U.S. 3 credit hours. (W)

HITT 2339  Health Information Organization and Supervision
Principles of organization and supervision of human, financial, and physical resources. Also covers health information for electronic records. Lab required. Prerequisites: HITT 1301 and HITT 1305. 3 credit hours. (W)
HITT 2346 Advanced Medical Coding
Advanced concepts of ICD and CPT coding rules, conventions and guidelines in complex case studies. Investigation of government regulations and changes in health care reporting. Electronic encoder use covered and information about ICD-10. Lab required. Prerequisites: BIOL 2404, HITT 1305 and HITT 1341. 3 credit hours. (W)

HITT 2361 Clinical II-Health Information/Medical Records Technology
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. Students should take this course in their final semester. Prerequisites: HITT 1160 and consent of Program Director. 3 credit hours. (W)

HITT 2435 Coding and Reimbursement Methodologies
Advanced coding techniques with emphasis on case studies, health records, and federal regulations regarding prospective payment systems and methods of reimbursement. The student is recommended to complete BIOL 2404 prior to registering for this course, but not required. Lab required. Prerequisite: HITT 1341. 4 credit hours. (W)

HITT 2443 Quality Assessment and Performance Improvement
Study of quality standards and methodologies in the health information management environment. Topics include licensing, accreditation, compilation and presentation of data in statistical formats, quality management and performance improvement functions, utilization management, risk management, and medical staff data quality issues. Approaches to assessing patient safety issues and implementation of quality management and reporting through electronic systems. Lab required. Prerequisite: HITT 1301, and meet TSI college-readiness standard for Mathematics; or equivalent. 4 credit hours. (W)

HITT 2471 Pathophysiology and Pharmacology
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. A study of drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages. Lab required. 4 credit hours. (W)

HITT 2472 Portfolio Development
Preparation and enhancement of portfolio to meet professional standards, development of presentation skills, and improvement of job-seeking techniques. Lab required. Prerequisites: ITSE 2309 and MATH 1342. 4 credit hours. (W)

HPRS 1191 Special Topics in Health Professions and Related Sciences, General
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. 1 credit hour. (W)

HPRS 1204 Basic Health Profession 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. Lab required. 2 credit hours. (W)

HPRS 1206 Essentials of Medical Terminology
A study of medical terminology, word origin, structure, and application. Lab required. 2 credit hours. (W)

HPRS 1271 Introduction to the Healthcare System
An overview of roles of various members of the healthcare system and their educational requirements, and issues affecting the delivery of healthcare. Additional concepts explored include the healthcare system, the continuum of care, levels of care, length of stay, healthcare providers, legal and ethical aspects of healthcare, reimbursement, healthcare policy determination and health insurance and managed care. 2 credit hours. (W)

HPRS 1272 Microbiology for Health Professions
An introduction to the nature of microorganisms, microbial diversity, the importance of microorganisms and acellular agents in the biosphere, and the role microorganisms have in disease. Emphasis is on medical microbiology and infectious diseases. Lab required. Prerequisites: BIOL 2401 and BIOL 2402; both with a grade of C or better. 2 credit hours. (W)

HPRS 1303 End of Life Issues
Discussion of grief, loss, and end of life issues. Prepares caregivers to function in settings where communication skills are utilized to provide psychosocial support to persons and their families. 3 credit hours. (W)
HPRS 1310 Introduction to Pharmacology  
A study of drug classifications, actions, therapeutic uses, adverse effects, and routes of administration. Does NOT include dosage calculations. 3 credit hours. (W)

HPRS 1370 Central Sterile Processing II  
This course explores two subsections of the IAHCMM Certification program: A) Inventory Control-prepares the student with organizational skills needed to control, track and distribute inventory through the use of different techniques in inventory control and distribution, as well as the use of bar codes and radio frequency identification to track inventories. B) Sterile Storage and Distribution-introduces the basic procedures of packaging processes through a comparison of reusable and disposable packaging materials, basic package closure methods, and factors, which affect shelf-life and stock rotation. Lab required. 3 credit hours. (W)

HPRS 1470 Central Sterile Processing I  
This course will teach subsections of the IAHCMM Certification program related to: A) Introduction to Central Service-an introduction to the central service role, surgical supplies, basic and specialty surgical instruments, and packaging and sterilization. B) Infection Control and Occupational Safety-related to the principles and practice of infection control and OSHA guidelines along with common safety and hazards protocols. C) Regulations and Standards-teaches the difference between the regulations and voluntary and regulatory standards, the role and responsibilities of federal agencies that impact Central Services, and the important aspects of the regulations and standards they administer. Lab required. 4 credit hours. (W)

HPRS 1471 Central Sterile Processing III  
An exploration of the subsections of the IAHCMM Certification program: A) Instrument and Instrument Identification-identifying surgical instruments by name and purpose, examination of the process by which surgical instruments are manufactured and prepared for the sterilization process. B) Endoscopic Instruments-proper care, handling and processing of endoscopic instruments. C) Decontamination-describe how reusable equipment, instruments, and supplies are cleaned and decontaminated by means of manual or mechanical cleaning processes and chemical disinfection and the proper use of Personal Protective Equipment (PPE) and Standard Precautions. D) Preparation and Handling-relates to basic principles of various packaging materials and closure methods used for sterilization preparation as they relate to the Association of Advancement of Medical Instrument (AAMI) standards. E) Sterilization-relates sterilization procedures and theory including high and low temperature sterilization, sterilization equipment, types of sterilizers, various cycles, quality assurance concepts, documentation, standards, policies and procedures. Lab required. 4 credit hours. (W)

HPRS 1561 Clinical-Health Services/Allied Health/Health Sciences, General  
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. This course is an exploration of teamwork and the application of practical principles in the role of Central Sterile Processing Tech through "hands on" experience. 5 credit hours. (W)

HPRS 2232 Health Care Communications  
Methods of communication with clients, client support groups, healthcare professionals, and external agencies. 2 credit hours. (W)

HPRS 2300 Pharmacology for Health Professions  
A study of drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages. Prerequisites: SRGT 1271 and SRGT 1409. Corequisites: SRGT 1441 and SRGT 1461. Major Requirement: AAS -Surgical Technology. 3 credit hours. (W)

HPRS 2301 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. 3 credit hours. (W)

HPRS 2374 Trends in Healthcare  
An examination of the changes in healthcare from the aspect of technology, deliver, and other trends. 3 credit hours. (W)

HRPO 2301 Human Resources Management  
Behavioral and legal approaches to the management of human resources in organizations. 3 credit hours. (W)

HRPO 2303 Employment Practices  
A study of employment issues including techniques for human resource forecasting, selection, and placement including interview techniques, pre-employment testing and other predictors. Topics include recruitment methods, the selection process, Equal Employment Opportunity (EEO), EEO recordkeeping, and Affirmative Action Plans. 3 credit hours. (W)

HRPO 2304 Employee Relations  
An examination of policies, practices, and issues required to build strong employee relations. Topics include communications, employee conduct rules, performance appraisal methods, Title VII, Family Medical Leave Act, Fair Labor Standards Act, and Americans with Disabilities Act updates. 3 credit hours. (W)

HRPO 2306 Benefits and Compensation  
An overview of employee compensation systems. Topics include compensation systems, direct and indirect compensation, internal and external determination of compensation, benefits administration, managing and
evaluating for effectiveness, legal and regulatory issues, pay equity, job analysis affecting job compensation and competencies. 3 credit hours. (W)

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. Prerequisite: BMGT 1327. 3 credit hours. (W)

HUMA 1301 Introduction to 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. Additionally, this course provides a broad overview of cultural traditions and the variety of aesthetic and intellectual works through which they express their values and aspirations. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

HUMA 1302 Introduction to Humanities II
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. Additionally, this course specifically pursues a concentrated exploration of particular cultural traditions or persistent cultural concepts or practices through critical engagement with selected aesthetic and intellectual works. Prerequisite: Meet TSI college-readiness standard for Reading and Writing, or equivalent. 3 credit hours. (A)

IBUS 1341 Global Supply Chain Management
International purchasing or sourcing. Includes the advantages and the barriers of purchasing internationally, global sourcing, procurement technology, and purchasing processes. Emphasizes issues of contract administration, location, and evaluation of foreign suppliers, total cost approach, exchange fluctuations, customs procedures, and related topics. 3 credit hours. (W)

IBUS 1354 International Marketing Management
Analysis of international marketing strategies using market trends, costs, forecasting, pricing, sourcing, and distribution factors. Development of an international marketing plan. 3 credit hours. (W)

IBUS 2332 Global Business Simulation
A simulation of a global environment. Students will engage in business practice and theory. The simulation may include researching foreign business cultures and importing and exporting products. Emphasizes participation in all business decisions related to running a simulated company. 3 credit hours. (W)

IBUS 2341 Intercultural Management
Cross-cultural comparisons of management and communications processes. Emphasizes cultural ethnic geographic distinctions and antecedents that affect individual, group, and organizational behavior. May include sociocultural demographics, economics, technology, legal issues, negotiations, and processes of decision making in the international cultural environment. 3 credit hours. (W)

IFWA 1310 Nutrition and Menu Planning
Application of principles of nutrition in planning menus for the food service industry. This includes various types of commercial, industrial and institutional food service entities. 3 credit hours. (W)

IFWA 1319 Meat Identifying and Processing
A study of the identification and characteristics of wholesale and retail cuts of meat; hotel, restaurant, and institutional cuts of meat; U.S.D.A quality grades; quality control; and the Federal Meat Inspection Regulation. Lab required. Prerequisites: CHEF 1301, CHEF 1305, and CHEF 2331. 3 credit hours. (W)

IMED 1316 Web Design I
Instruction in web design and related graphic design issues including mark-up languages, web sites and browsers. Lab required. Prerequisite: ARTC 1302 and ARTC 1325, or consent of Instructor. 3 credit hours. (W)

IMED 1341 Interface Design
Skill development in the interface design process including selecting interfaces that are relative to a project’s content and delivery system. Emphasis on aesthetic issues such as iconography, screen composition, colors, and typography. Lab required. Prerequisite: ITSE 1311 or consent of Instructor. 3 credit hours. (W)

IMED 2309 Internet Commerce
An overview of the Internet as a marketing and sales tool with emphasis on developing a prototype for electronic commerce. Lab required. Prerequisite: ITSE 1311 or consent of Instructor or Associate Dean. 3 credit hours. (W)

IMED 2315 Web Design II
A study of mark-up language advanced layout techniques for creating web pages. Emphasis on identifying the target audience and producing web sites according to accessibility standards, cultural appearance, and legal issues. Lab required. Prerequisite: IMED 1316. 3 credit hours. (W)
IMED 2359  Interactive Web Elements
Production of projects using current web development tools that may incorporate dynamic data, web graphics, animation, video and audio streaming. Lab required. Prerequisite: IMED 2315 or consent of Instructor. 3 credit hours. (W)

INDS 1301 Basic Elements of Design
A study of basic design concepts with projects in shape, line, value, texture, pattern, spatial illusion, and form. Lab required. 3 credit hours. (W)

INDS 1315 Materials, Methods and Estimating
A study of materials, methods of construction and installation, and estimating for interior design applications. Lab required. Prerequisite: INDS 1301 or consent of Associate Dean. 3 credit hours. (W)

INDS 1341 Color Theory and Applications
A study of color theory and its applications to interior design. Actual interior design will be given that will involve applying various color systems, with emphasis on Munsell. The student will learn mixing techniques to gain desired hue; value and chroma (intensities) for solving design color schemes. Color psychology and phenomena will be investigated. The students will be introduced to elements and principles of design and will learn to achieve balance, rhythm, emphases, harmony, and variety through the use of color. Additive and subtractive color mixing, and relationship of light will be examined. Lab required. 3 credit hours. (W)

INDS 1345 Commercial Design I
A study of design principles applied to furniture layout and space planning for commercial interiors. Lab required. Prerequisites: INDS 1371 and INDS 2313. 3 credit hours. (W)

INDS 1349 Fundamentals of Space Planning
The study of residential and light commercial spaces, including programming, codes, standards, space planning, drawings and presentations. Lab required. 3 credit hours. (W)

INDS 1351 History of Interiors I
An historical survey of design in architecture, interiors, furnishings, and decorative elements from the ancient cultures through the Italian Renaissance time period. Lab required. 3 credit hours. (W)

INDS 1352 History of Interiors II
A multi-cultural historical survey of design in architecture, interiors, furnishings, and decorative elements from the post-Renaissance period to present time. Lab required. 3 credit hours. (W)

INDS 1371 Introduction to Green Design
A general study of Green Design and sustainable environment. Explore the basic principles of Green/Sustainable Design including passive solar, alternative energy, green water technology, recycling, green building certification outline, and interior air quality in built environment. Lab required. 3 credit hours. (W)

INDS 1372 Computer-Aided Drafting for Interior Designers
An introduction to computer-aided drafting. Emphasis is placed on setup; general knowledge of CAD software; reading basic blueprint; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects, adding text and dimensions, using layers, coordinating systems; and plot/print to scale; interior furniture layouts. Lab required. 3 credit hours. (W)

INDS 1373 Green Interiors
Course introduces students to Green interior design and built environment. Emphasis is placed on: analyzing Indoor Air Quality, green interior material and finishes, green cleaning materials, and providing plans and solutions for creating a healthier interior environment. Lab required. Prerequisite: INDS 1371. 3 credit hours. (W)

INDS 2280 Cooperative Education - Interior Design
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. Contact the Cooperative Work Experience Office. 2 credit hours. (W)

INDS 2313 Residential Design I
The study of residential spaces, including the identification of client needs, programming, standards, space planning, drawings, and presentations. Lab required. Prerequisites: DFTG 1309, INDS 1301, and INDS 1341. 3 credit hours. (W)

INDS 2315 Lighting for Interior Designer
Fundamentals of lighting design, including lamps, luminaries, lighting techniques, and applications for residential and commercial projects. Lab required. 3 credit hours. (W)

INDS 2330 Interior Design Building Systems
An overview of building materials, mechanical systems, and construction techniques as applied to interior design. Discussion of codes, project sequencing and the interpretation of detailed working drawings. Lab required. Prerequisite: INDS 1345 or consent of Associate Dean. 3 credit hours. (W)

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Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
INDS 2374 Sustainable Living
The course provides an introduction to sustainable thinking toward Green Built Environment. Emphasis is placed on: analyzing the Indoor Environment Quality, the effects of Indoor Air Quality on health and the well-being of the occupants. The course strives to evaluate the relationship between humans and natural resources. Lab required. Prerequisites: INDS 1301 and INDS 1371. 3 credit hours. (W)

INDS 2380 Cooperative Education - Interior Design
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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

INEW 2330 Comprehensive Software Project: Planning and Design
A comprehensive application of skills learned in previous courses in a simulated workplace. Covers the development, testing, and documenting of a complete software and/or hardware solution. This course may be used as a capstone course for a certificate or degree. Prerequisite: Consent of Instructor. 3 credit hours. (W)

INEW 2334 Advanced Web Programming
Web programming using industry-standard languages and data stores. Lab required. Prerequisite: ITSE 2302 or consent of Department. 3 credit hours. (W)

INEW 2338 Advanced Java Programming
A continuation of Java programming techniques such as servlets, and advanced graphical functions. Topics cover the Java 2 Platform, Enterprise Edition (J2EE) which defines the standard for developing component-based multi-tier enterprise applications. The focus of this class will be on development of Java Servlets and Java Server Pages (JSPs). Prerequisite: COSC 1337 or ITSE 2317 or consent of Associate Dean. 3 credit hours. (W)

INEW 2340 Object-Oriented Design
A study of large system analysis and design concepts from the object-oriented perspective. Includes determining required objects and their interfaces. Also covers relationships between objects. Lab required. Prerequisite: COSC 1337 or COSC 1437 or consent of Associate Dean. 3 credit hours. (W)

INRW 300 Introduction to Integrated Reading and Writing
Integration of critical reading and academic writing skills. Successful completion of INRW 0315 fulfills TSI requirements for reading and/or writing. Additionally, this is a combined lecture/lab, performance-based course designed to develop students' reading and academic writing skills. Emphasizing grammar, sentence structure, and paragraph development, the course introduces the student to the writing process and the essay as well as fundamental components of college reading. Lab required. Prerequisite: TSI placement in Adult Basic Education Levels 3-6 for Developmental Reading/Writing. Consult the Testing Center Director if you have questions about an assessment. 3 credit hours. (D)

INRW 315 Integrated Reading/Writing II
Integration of critical reading and academic writing skills. Successful completion of this course fulfills TSI requirements for reading and/or writing. Additionally, this is a performance-based course designed to develop students' critical reading and academic writing skills. The focus of the course will be on applying critical reading skills for organizing, analyzing, and retaining material and developing written work appropriate to the audience, purpose, situation, and length of the assignment. The course integrates preparation in basic academic reading skills with basic skills in writing a variety of academic essays. Prerequisite: INRW 0405 or meet TSI standard for INRW 0315; or equivalent. If you do not meet placement requirements, check with the instructor to request consent. 3 credit hours. (D)

INRW 405 Integrated Reading/Writing I
Integration of critical reading and academic writing skills. Successful completion of INRW 0315 fulfills TSI requirements for reading and/or writing. Additionally, seeks to improve students' academic reading and writing skills through extensive integrated instruction emphasizing skills and techniques related to vocabulary, grammar, comprehension, paragraph elements, essay structure, and critical analysis that apply to both reading and writing. Students will demonstrate comprehension of varied texts through written responses, progressing from advanced paragraphs to short essays. The required lab component will target students' individual skills. Lab required. Prerequisite: INRW 0300 or meet TSI standard for INRW 0405; or equivalent. Consult the Testing Center Director if you have questions about an assessment. 4 credit hours. (D)

INTC 1307 Instrumentation Test Equipment
Theory and application of instrumentation test equipment. Emphasizes accuracy, limitations of instruments, and calibration techniques. Lab required. Prerequisite: CETT 1409 or consent of Instructor or Discipline Lead. 3 credit hours. (W)

ITAL 1411 Beginning Italian I
Introduction to the basic skills of speaking, reading, writing, and listening. Intended for students with little or
no previous training in Italian. Lab required. 4 credit hours. (A)

**ITAL 1412 Beginning Italian II**  
Continuation of ITAL 1411. Lab required. Prerequisite: ITAL 1411 or consent of Associate Dean.  
4 credit hours. (A)

**ITCC 1314 CCNA 1: Introduction to Networks**  
Formerly ITCC 1371 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. Additionally, describes the use of OSI and TCP layered models to examine the nature and roles of protocols and services at the applications, network, data link, and physical layers. Covers the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations. Explains IPv6 network addresses, design considerations for IPv6, managing IOS configuration files, and Integrated Routing Services. Students build simple LAN topologies by applying basic principles of cabling; perform basic configurations of network devices, including routers and switches; and implementing IP addressing schemes. Use common show commands to establish baseline performance and troubleshooting. Lab required. Prerequisite/Concurrent enrollment: ITNW 1358. 3 credit hours. (W)

**ITCC 1340 CCNA 2: Routing and Switching Essentials**  
Formerly ITCC 1374 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. Additionally, students analyze, configure, verify, and troubleshoot the primary routing protocols and OSPF. Recognize and correct common routing issues and problems. Model and analyze routing processes. This course describes the architecture, components, and operation of switches, and explains the principles of switching, VLANs and Inter-VLAN routing. The essentials of security, address translation and DHCP are also described. Use discovery protocols to map a network topology. Configure Syslog in a small to medium-sized business network. Maintain router and switch configuration and IOS files. Lab required. Prerequisite: ITCC 1314. 3 credit hours. (W)

**ITCC 2312 CCNA 3: Scaling Networks**  
Formerly ITCC 2371 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. Additionally, this course helps students develop an in-depth understanding of how switches operate and are implemented in the LAN environment for small and large networks, how routers operate and are implemented in the LAN environment for small and large networks. Detailed explanations of LAN switch operations, Rapid Spanning Tree Protocol (RSTP), router operations, DHCP, Link Aggregation, EIGRP, Multi-Area OSPF, and IOS File Management and wireless network operations. Analyze, configure, verify, and troubleshoot RSTP, DHCP, Link Aggregation, EIGRP, Multi-Area OSPF and wireless networks. Lab required. Prerequisite: ITCC 1340. 3 credit hours. (W)

**ITCC 2313 CCNA 4: Connecting Networks**  
Formerly ITCC 2372 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. Additionally, it also describes the principles of traffic control, Borderless Networks, Virtualization, Collaboration, Tunneling, IPsec VPN, Syslog Operation, SNMP Operation and provides an overview of the services and protocols at the data link layer for wide-area access. Describes user access technologies and devices and describe how to implement and configure Point-to-Point Protocol (PPP), Point-to-Point Protocol over Ethernet (PPPoe), DSL, and Frame Relay. WAN security concepts, tunneling, and VPN basics are introduced. Discusses the special network services required by converged applications and an introduction to quality of service (QoS). Lab required. Prerequisite: ITCC 2312. 3 credit hours. (W)

**ITCC 2341 CCNA Security**  
Formerly ITCC 2370 Overall security processes with particular emphasis on hands-on skills in the following areas: security policy design and management; security technologies, products, and solutions; and secure router design, installation, configuration, and maintenance; AAA and VPN implementation using routers and firewalls. Additionally, the Cisco CCNA Security curriculum is taken in preparation for the Implementing Cisco IOS Network Security (IINS) Certification Exam (640-453) leading to the Cisco CCNA Security Certification. Through in-class lecture and lab sections, expertise is developed in Protocol Sniffers/Analyzers, TCP/IP and common desktop utilities, Cisco IOS software, Cisco VPN clients, and Packet Tracer (PT). Lab required. Prerequisite: ITCC 1340 or CCENT (ICND1) Certification and consent of Associate Dean. 3 credit hours. (W)

**ITCC 2354 CCNP R&S ROUTE**  
Formerly ITCC 2374 How to implement, monitor, and maintain routing services in an enterprise network. How to plan, configure, and verify the implementation of

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Please refer to [http://www.collin.edu/academics/programs/index.html](http://www.collin.edu/academics/programs/index.html) for the most current information.
complete enterprise LAN and WAN routing solutions using a range of routing protocols in IPv4 and IPv6 environments. Configuration of secure routing solutions to support branch offices and mobile workers. Lab required. Prerequisite: ITCC 2313 or CCNA Certification and consent of Associate Dean. 3 credit hours. (W)

**ITCC 2355 CCNP R&S SWITCH**
Formerly ITCC 2375 How to implement, monitor, and maintain switching in converged enterprise campus networks. How to plan, configure, and verify the implementation of complex enterprise switching solutions. How to secure integration of VLANs, WLANs, voice and video into campus networks. Lab required. Prerequisite: ITCC 2313 or CCNA Certification and consent of Associate Dean. 3 credit hours. (W)

**ITCC 2356 CCNP R&S TSHOOT**
Formerly ITCC 2376 How to monitor and maintain complex, enterprise and switched IP networks. Skills learned include the planning and execution of regular network maintenance, as well as support and troubleshooting using technology-based processes and best practices based on systematic and industry recognized approaches. Lab required. Prerequisites: ITCC 2354 and ITCC 2355 or consent of Associate Dean. 3 credit hours. (W)

**ITMT 1371 Configuring and Supporting Microsoft Windows 10 (70-698)**
Addresses the implementation and desktop support needs of customers that are planning to deploy and support Microsoft Windows 10 in a variety of stand-alone and network operating system environments. In-depth, hands-on training for Information Technology (IT) professionals responsible for the planning, implementation, management, and support of Windows 10. Lab required. Prerequisite: ITNW 1358 or consent of Associate Dean. 3 credit hours. (W)

**ITMT 1372 Installation, Storage, and Computing with Windows Server 2016**
A course in Windows Server 2016 installation. Lab required. Prerequisite: ITNW 1358 or ITCC 1314. 3 credit hours. (W)

**ITMT 1373 Networking with Windows Server 2016**
A course in Windows Server 2016 networking including implementing Domain Name System (DNS), implementing DHCP, implementing IP Address Management (IPAM), implementing network connectivity and remote access solutions, implementing core and distributed network solutions, implementing an advanced network infrastructure, preparation options (MS 70-741). Lab required. Prerequisite: ITMT 1372. 3 credit hours. (W)

**ITMT 1374 Identity with Windows Server 2016**
Install and configure Active Directory Domain Services (AD DS), manage and maintain AD DS, create and manage Group Policy, implement Active Directory Certificate Services (AD CS, implement identity federation and access solutions (MS 70-742). Lab required. Prerequisite: ITMT 1372. 3 credit hours. (W)

**ITMT 2304 Implementing an Advanced Server Infrastructure**
This course covers managing and maintaining a server infrastructure, planning and implementing a highly available enterprise infrastructure, planning and implementing a server virtualization infrastructure, and designing and implementing identity and access solutions. Additionally, this course is a preparation for the MS 70-414 professional exam. Lab required. Prerequisite: ITMT 1372 or ITMT 2370. 3 credit hours. (W)

**ITMT 2305 Designing and Implementing a Server Infrastructure**
This course covers planning and deploying a server infrastructure; designing and implementing network infrastructure services; designing and implementing network access services and Active Directory infrastructure. Additionally, this course is preparation for the MS 70-413 professional exam. Lab required. Prerequisite: ITMT 1372 or ITMT 2370. 3 credit hours. (W)

**ITNW 1351 Fundamentals of Wireless LANs**
Design, plan, implement, operate, and troubleshoot Wireless Local Area Networks (WLANs). Includes WLAN design, installation, and configuration; and WLAN security issues and vendor interoperability strategies. Lab required. 3 credit hours. (W)

**ITNW 1358 Network+**
Assists individuals in preparing for Computing Technology Industry Association (CompTIA) Network+ certification exam and career as a network professional. Additionally, prepares individuals for a career as a Network Engineer in the Information Technology support industry. Includes the various responsibilities and tasks required for service engineer to successfully perform in a specific environment. Lab required. 3 credit hours. (W)

**ITNW 1359 Cloud+ Computing Essentials**
A study of the main cloud computing principles, concepts, and architecture from a technical and an enterprise perspective in terms of moving to and governing the three types of cloud environments (private, public and hybrid). Lab required. Prerequisite: ITCC 1371 or ITNW 1358. 3 credit hours. (W)
ITNW 1378 Wireless Network Administration
A continuation of the Fundamentals of Wireless LANs class covering radio frequency technologies, antenna concepts, Wireless LAN Hardware and Software, wireless standards, and basic site surveys. Lab required. Prerequisite: ITNW 1351. 3 credit hours. (W)

ITNW 2371 Wireless Network Security
This course covers security concepts and implementations on wireless LAN systems. Course includes wireless LAN discovery, intrusion and attack techniques, protocol analysis, and intrusion prevention. Lab required. Prerequisite: ITNW 1378. 3 credit hours. (W)

ITNW 2372 Wireless Network Design
An in-depth wireless LAN design course covering requirement analysis, site surveys, WLAN design and deployment, and design validation. Lab required. Prerequisite: ITNW 2371. 3 credit hours (W)

ITNW 2373 Information Storage Management (EMC)
The Information Storage Management course teaches the skills required in designing Storage Systems using Storage Networking Technologies and Virtualization concepts, Business Continuity approaches, and Storage Security and Management strategies. Lab required. Prerequisites: ITMT 1371 and ITNW 1358. 3 credit hours. (W)

ITNW 2374 Emerging Wireless Technology
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. Lab required. Prerequisites: ITNW 1370, ITNW 2371, and ITSC 1342. 3 credit hours. (W)

ITNW 2375 VMware vSphere: Installation, Configuration, and Management
A study of Virtualization in computer network technology. The course covers the installation, configuration, and management of VMware vSphere, which consists of VMware vSphere ESXi and VMware vCenter Server. Lab required. Prerequisites: ITCC 1374 or ITCC 1340 and ITMT 2371 or ITMT 1373, or consent of Associate Dean. 3 credit hours. (W)

ITNW 2376 Advanced Topics in Computer Systems Networking and Collaborative Technologies
This course assimilates leading edge skills, knowledge, and advances in technologies relevant to the local industry needs. Lab required. 3 credit hours. (W)

ITNW 2378 Fundamentals of IoT
This course covers standards, devices, protocols, and security concepts necessary to design, deploy, and troubleshoot IoT solutions. Lab required. Prerequisites: ITNW 1370, ITNW 2371, and ITSC 1342. 3 credit hours. (W)

ITNW 2380 Cooperative Education - Computer Systems Networking and Telecommunications
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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

ITSC 1305 Introduction to PC Operating Systems
Introduction to personal computer operating systems including installation, configuration, file management, memory and storage management, control of peripheral devices, and use of utilities. The Windows operating system will be compared to that of the Mac OS and a popular Linux distribution from the end-user perspective. Hands-on lab experience for each operating system is provided. 3 credit hours. (W)

ITSC 1309 Integrated Software Applications I-MS Office
Introduction to business productivity software suites using word processing, spreadsheets, databases, and/or presentation software. Lab required. Prerequisite/Concurrent enrollment: POFT 1329. 3 credit hours. (W)

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. Lab required. Prerequisite: ITNW 1358 or consent of Associate Dean. 3 credit hours. (W)

ITSC 1342 Shell Programming - Scripting
Reading, writing, and debugging shell scripts. Development of scripts to automate frequently executed sequences of commands. Covers conditional logic, user interaction, loops, and menus to enhance the productivity and effectiveness of the user. Intended for programmers who are familiar with operating environments and reading and writing various shell scripts. Lab required. Prerequisite: ITCC 1314. 3 credit hours. (W)

ITSC 2339 Personal Computer Help Desk Support
Diagnosis and solution of user hardware and software related problems with on-the-job and/or simulated projects. Lab required. Prerequisites: ITNW 1358 and ITSC 1305, or consent of Instructor. 3 credit hours. (W)
ITSC 2380  Cooperative Education-Computer and 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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

ITSE 1301  Web Design Tools - Graphics
Designing and publishing Web documents according to World Wide Web Consortium (W3C) standards. Emphasis on optimization of graphics and images and exploration of the tools available for creating and editing Web documents. Includes in-depth technical investigation of digital imaging on the computer using image editing and/or image creation software. Manipulation, creation, and editing of digital images for a wide assortment of output. Will explore use of industry standard web editing and graphics software packages such as Adobe Photoshop and Adobe Dreamweaver. 3 credit hours. (W)

ITSE 1306  PHP Programming
Introduction to PHP, including the design of web-based applications, arrays, strings, regular expressions, file input/output, e-mail and database interfaces, stream and network programming, debugging, and security. Emphasizes hands-on programming skills necessary to develop secure and reliable PHP based web applications. Lab required. Prerequisite: COSC 1315 or ITSE 1311 or consent of Associate Dean. 3 credit hours. (W)

ITSE 1311  Beginning Web Programming
Skills development in web programming including mark-up and scripting languages. Additionally, the course focuses on use of HTML and CSS to create web sites and includes an introduction to JavaScript. Lab required. 3 credit hours. (W)

ITSE 1330  Introduction to C# Programming
A study of C# syntax including data types, control structures, functions, syntax, and semantics of the language, classes, class relationships, and exception handling. Lab required. Prerequisite: COSC 1315 or COSC 1436 or consent of Department. 3 credit hours. (W)

ITSE 1332  Introduction to Visual Basic.NET Programming
A study of Visual Basic.NET (VB.NET) syntax including data types, control structures, functions, syntax, and semantics of the language, classes, class relationships, and exception handling. An introduction to programming using the Visual Basic.NET language. 3 credit hours. (W)

ITSE 1333  Mobile Applications Development
An overview of different mobile platforms and their development environments. Lab required. Prerequisite: ITSE 1330 and ITSE 2302 or consent of Department. 3 credit hours. (W)

ITSE 1359  Introduction to Scripting Languages - Python
Introduction to scripting languages including basic data types, control structures, regular expressions, input/output, and textual analysis. Lab required. 3 credit hours. (W)

ITSE 1371  iOS Programming Fundamentals (Swift)
Course covers the basics of the Swift language and the use of development tools for iOS application programming. Lab required. Prerequisite: COSC 1315 or COSC 1436 or ITSE 1332 or consent of Instructor. 3 credit hours. (W)

ITSE 1373  Android Mobile Programming I
This course introduces mobile application development for the Android platform. Students will learn how to design, develop, test, and debug mobile Android applications. Topics include the Android Software Development Kit (SDK), design principles, application structure, and current issues in programming mobile devices. Prerequisite: COSC 1337 or consent of Associate Dean. 3 credit hours. (W)

ITSE 1374  Mobile Web
Course explores creating mobile web sites using HTML, CSS and JavaScript. Course will also explore creation of hybrid mobile applications for one or more mobile platforms. Lab required. Prerequisite: ITSE 1311 or consent of Instructor. 3 credit hours. (W)

ITSE 1380  Cooperative Education -Computer Programming/Programmer, 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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

ITSE 1393  Special Topics in Computer Systems Analysis
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. Lab required. 3 credit hours. (W)
Business Intelligence
An introduction to Business Intelligence analysis and reporting. The topics of study will include creating a data source, dimensional model, dimensions and measures, attribute relationships and user-defined hierarchies, calculated members, aggregations, and analysis reports using Excel. Prerequisites: ITSE 2309 and ITSW 1304 or consent of Associate Dean.

ITSE 2302 Intermediate Web Programming
Techniques for web development. Includes server-side and client-side scripting. Additionally, students design and implement fully interactive web sites using HTML5, CSS, and JavaScript. Lab required. Prerequisite: ITSE 1311 or consent of Associate Dean. 3 credit hours. (W)

ITSE 2309 Database Programming - SQL
Database development using database programming techniques emphasizing database structures, modeling, and database access. Lab required. 3 credit hours. (W)

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. Lab required. Prerequisite: Consent of Department. 3 credit hours. (W)

ITSE 2313 Web Authoring
Instruction in designing and developing web pages that incorporate text, graphics, and other supporting elements using current technologies and authoring tools. Lab required. Prerequisite: ITSE 1311 or consent of Instructor. 3 credit hours. (W)

ITSE 2338 C# Database Development with ADO.NET and LINQ
C# applications to access data from a database. Emphasizes Object-Oriented Programming (OOP) and database programming with ADO.NET. Prerequisite: ITSE 1330 or consent of Associate Dean. 3 credit hours. (W)

ITSE 2343 Advanced Mobile Programming
Programming for mobile devices including file access methods, data structures, modular programming, program testing and documentation. Lab required. Prerequisite: ITSE 1333 or consent of Department. 3 credit hours. (W)

ITSE 2347 Advanced Database Programming
Database development using complex database programming techniques emphasizing multiple interrelated files, menu design, security implementation, and multiple access. Additionally, Advanced SQL Query Design, SQL Analytic functions, Database design, and Data Warehousing will be emphasized. Lab required. Prerequisite: ITSE 2309. 3 credit hours. (W)

ITSE 2353 Advanced C# Programming
C# programming using advanced features of the .NET Framework. Lab required. Prerequisite: ITSE 1311 and ITSE 1330 or consent of Department. 3 credit hours. (W)

ITSE 2354 Advanced Oracle PL/SQL
Advanced use of Oracle SQL. Topics include hierarchical queries, set based queries, correlated subqueries, scripting, and scripting generation. Prerequisite: ITSE 2309. Lab required. 3 credit hours. (W)

ITSE 2370 Descriptive Analytics
An introduction to principles and techniques in data analysis for problem solving and decision making used in business and industry. Lab required. Prerequisites: ITSE 2309, ITSW 1304, and MATH 1342. 3 credit hours. (W)

ITSE 2374 Web and Mobile Application Development
A comprehensive application of skills learned in previous courses. Covers the development, testing, documenting, coding and implementation of a website, web or mobile application. This course may be used as a capstone course for a certificate or degree. Lab required. Prerequisite/Concurrent Enrollment: INEW 2334 or ITSE 2313 or ITSE 2343 or consent of Department. 3 credit hours. (W)

ITSE 2380 Cooperative Education-Computer Programming/Programmer, 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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

ITSE 2383 Advanced C# Programming
C# programming using advanced features of the .NET Framework. Lab required. Prerequisite: ITSE 1311 and ITSE 1330 or consent of Department. 3 credit hours. (W)

ITSE 2384 Advanced Oracle PL/SQL
Advanced use of Oracle SQL. Topics include hierarchical queries, set based queries, correlated subqueries, scripting, and scripting generation. Prerequisite: ITSE 2309. Lab required. 3 credit hours. (W)

ITSE 2387 Advanced Descriptive Analytics
An introduction to principles and techniques in data analysis for problem solving and decision making used in business and industry. Lab required. Prerequisites: ITSE 2309, ITSW 1304, and MATH 1342. 3 credit hours. (W)

ITSE 2388 Advanced Web and Mobile Application Development
A comprehensive application of skills learned in previous courses. Covers the development, testing, documenting, coding and implementation of a website, web or mobile application. This course may be used as a capstone course for a certificate or degree. Lab required. Prerequisite/Concurrent Enrollment: INEW 2334 or ITSE 2313 or ITSE 2343 or consent of Department. 3 credit hours. (W)

ITSE 2389 Cooperative Education-Computer Programming/Programmer, 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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

ITSW 1304 Introduction to Spreadsheets-Excel
Instruction in the concepts, procedures, and application of electronic spreadsheets. 3 credit hours. (W)

ITSW 1307 Introduction to Database-Access
Introduction to database theory and the practical applications of a database. Emphasis on database design, custom reports, file management, and application creation. 3 credit hours. (W)

ITSW 1310 Introduction to Presentation Graphics Software
Instruction in the utilization of presentation software to produce multimedia presentations. Graphics, text, sound, animation and/or video may be used in presentation development. Lab required. 3 credit hours. (W)
ITSW 1380  Cooperative Education-Data Processing and Data Processing 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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

ITSW 2370  SAS Programming
Introduction to the principles and techniques of using the SAS Programming Application Language. Lab required. Prerequisite: ITSE 2309. 3 credit hours. (W)

ITSW 2380  Cooperative Education-Data Processing and Data Processing 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. Contact the Cooperative Work Experience Office. Prerequisite: ITSW 1380 or consent of Associate Dean. 3 credit hours. (W)

ITSW 2472  Portfolio Development
Preparation and enhancement of portfolio to meet professional standards, development of presentation skills, and improvement of job-seeking techniques. Lab required. Prerequisites: ITSE 2309 and MATH 1342. 4 credit hours. (W)

ITSY 1300  Fundamentals of Information Security (Security +)
An introduction to information security including vocabulary and terminology, ethics, the legal environment, and risk management. Identification of exposures and vulnerabilities and appropriate countermeasures are addressed. The importance of appropriate planning, policies and controls is also discussed. Lab required. Prerequisite: ITNW 1358. 3 credit hours. (W)

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. Lab required. Prerequisite: ITMT 1371 or ITNW 1358. 3 credit hours. (W)

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. Lab required. Prerequisite: ITSY 2300 or consent of Associate Dean. 3 credit hours. (W)

ITSY 2341  Security Management Practices
In-depth coverage of security management practices, including asset evaluation and risk management; cyber law and ethics issues; policies and procedures; business recovery and business continuity planning; network security design; and developing and maintaining a security plan. Lab required. Prerequisite: ITSY 2300 or consent of Associate Dean. 3 credit hours. (W)

ITSY 2342  Incident Response and 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; implementing and modifying security measures. Prerequisite: ITSY 2300 or consent of Associate Dean. 3 credit hours. (W)

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. Prerequisite: ITSY 2342 or consent of the Associate Dean. Lab required. 3 credit hours. (W)

ITSY 2572  Certified Information Systems Security Professional (CISSP) Common Body of Knowledge Domain Instruct
An in-depth study of the 10 domains which make up the Common Body of Knowledge (CBK) of information security professionals. The course is designed to instruct individuals to implement solid security practices, perform risk analysis, identify necessary countermeasures, and help the enterprise as a whole protect its facility, network, systems, and information. Prerequisites: ITSY 1300 and ITSY 2300, or equivalent experience and consent of Associate Dean. 5 credit hours. (W)

ITSY 2575  Certified Information Security Manager (CISM)
An in depth study of the five domains covered on the ISACA* - CISM professional certification exam. Each domain (Information Security Governance, Information Risk Management, Information Security Program Development, Information Security Program Management, and Incident Management and Response) covers the knowledge and tasks that cybersecurity professionals are expected to know how to perform in the workplace. *Previously known as Information Systems Audit and Control Association. Prerequisite:
ITSY 1300 or ITSY 2300 or equivalent experience and consent of Associate Dean. 5 credit hours. (W)

**JAPN 1411 Beginning Japanese I**
Introduction to the basic skills of speaking, reading, writing, and listening with attention to selected aspects of Japanese culture; designed for students with little or no previous language training. Instruction is enhanced by the use of tapes, slides, and video cassettes. Lab required. 4 credit hours. (A)

**JAPN 1412 Beginning Japanese II**
A continuation of JAPN 1411. Lab required. Prerequisite: JAPN 1411 or consent of Associate Dean. 4 credit hours. (A)

**JAPN 2311 Intermediate Japanese I**
Continuing development of the four basic skills of speaking, reading, writing, and listening, emphasizing conversational and reading skills. Designed for students who have completed Beginning Japanese II. Additional Kanji structures are introduced. Also includes attention to selected aspects of Japanese culture. Lab required. Prerequisite: JAPN 1412 or consent of Associate Dean. 3 credit hours. (A)

**JAPN 2312 Intermediate Japanese II**
Continued development of four basic language skills with emphasis on conversation and reading skills. Additional Kanji and grammar structures are introduced. Includes attention to selected aspects of Japanese culture. Lab required. Prerequisite: JAPN 2311 or consent of Associate Dean. 3 credit hours. (A)

**KINE 1100 Beginning Weight Training**
Introduction to weight training and body building; learn the basic techniques for strength development and cardiovascular conditioning. Various weight machines, free weights and aerobic machines are used to establish an individual fitness program. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**KINE 1106 Walking and Fitness**
Improve cardiovascular fitness, muscle tone, and flexibility through a vigorous walking and conditioning program. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**KINE 1111 Beginning Basketball**
Develops basic skills and strategies through knowledge of the history, rules, and terminology and through participation in game situations. 1 credit hour. (A) Note:
**KINE 1123  Beginning Golf**  
Stresses basic skills, history, terminology and scoring of golf. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**KINE 1125  Bowling**  
Teaches ball selection, stance, four-step approach, rules, and scoring procedures. Emphasis on game situations. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**KINE 1126  Self-Defense**  
Basic understanding and practical application of fundamental self-defense techniques through physical conditioning. Includes balance, focus, breath control, block and counter, avoiding attack, striking, thrusting and kicking. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**KINE 1127  Beginning Karate**  
Introduction to basic techniques, formal exercises, and sparring techniques for the beginner. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**KINE 1129  Beginning Hatha Yoga**  
Practice of yogic postures, or "asana," defined as the physical positioning that coordinates breathing with moving and holding still for the purpose of both stretching and strengthening parts of the body. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**KINE 1131  Beginning Swimming**  
Non-swimmers and beginners are taught basic swimming skills and strokes. Emphasizes personal safety skills and confidence in the water. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**KINE 1136  Water Aerobics**  
Fitness level is improved through exercises in the water. A non-impact style of exercises that utilizes water resistance for increasing muscular strength, endurance, and cardiovascular fitness. Swimming skills are not necessary. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**KINE 1137  Swimming Conditioning**  
Fitness level is improved through swimming strokes and water exercises. Different swimming programs enhance muscular strength, endurance and cardiovascular fitness. Prerequisite: Consent of Instructor. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**KINE 1140  Beginning Aerobic Dance**  
Aerobic exercise and step training incorporating light weights. Includes interval training, which adds a new variation to aerobic endurance and flexibility. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**KINE 1142  Varsity Condition I**  
Presentation of current scientific and technical information related to a particular activity with emphasis on developing health and skill related fitness, as well as fundamental skills. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**KINE 1144  Varsity Sports I**  
This course offers development of skills and personal potential for student athletes interested in improving their performance or preparing for further competition at the upper collegiate level. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**KINE 1147  Beginning Aerobic Kickboxing/Karate**  
Cardiovascular and body conditioning are acquired through the use of karate and martial arts techniques set to music and integrating punching bags. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**KINE 1148  Introduction to Team Sports**  
Develops the basic skills and strategies through the knowledge of the history, rules, and terminology. Students will participate in game situations. Three of the following activities will be elected for instruction: Basketball, Flag Football, Soccer, Softball, or Volleyball. 1 credit hour.
credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**KINE 1164 Introduction to Physical Fitness and Wellness**

This course will provide an overview of the lifestyle necessary for fitness and health. Student will participate in physical activities and assess their fitness status. Students will be introduced to proper nutrition, weight management, cardiovascular health, flexibility, and strength training. Additionally, this course introduces basic concepts of fitness, nutrition, health promotion, and disease prevention. Includes the study and practices of activities and principles that promote fitness and wellness. 1 credit hour. (A)

**KINE 1301 Foundations of Kinesiology**

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. 3 credit hours (A)

**KINE 1304 Personal/Community Health**

This course provides an introduction to the fundamentals, concepts, strategies, applications, and contemporary trends related to understanding personal and/or community health issues. This course also focuses on empowering various populations with the ability to practice healthy living, promote healthy lifestyles, and enhance individual well-being. 3 credit hours (A)

**KINE 1306 First Aid**

Instruction and practice for emergency care. Designed to enable students to recognize and avoid hazards within their environment, to render intelligent assistance in case of accident or sudden illness, and to develop skills necessary for the immediate and temporary care of the victim. Successful completion of the course may enable the student to receive a certificate from a nationally recognized agency, the American Heart Association. 3 credit hours. (A)

**KINE 1308 Sports Officiating**

The purpose of the course is to study officiating requirements for sports and games with an emphasis on mechanics, rule interpretation, and enforcement. 3 credit hours. (A)

**KINE 1336 Introduction to Sports Management**

The course will introduce basic principles of administration, marketing, management, and operations in relation to the various careers in sports management. An overview of the sports industry will be introduced. 3 credit hours. (A)

**KINE 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. Lab required. 3 credit hours. (A)

**KINE 2100 Intermediate Weight Training**

Formerly PHED 1102 Designed for the individual who has experience in basic weight training skills and wants to increase their knowledge of training techniques and conditioning. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 2100-2144 range; however, the same course cannot be taken more than twice.

**KINE 2106 Beginning Jogging and Fitness**

Formerly PHED 1104 Develops cardiovascular endurance, flexibility and strength through jogging, stretching and weight training. Physical fitness assessment leads to development of an individual fitness program. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 2100-2144 range; however, the same course cannot be taken more than twice.

**KINE 2111 Intermediate Basketball**

Designed for the individual who has experienced basketball skills and wants to increase their development and knowledge of basketball. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 2100-2144 range; however, the same course cannot be taken more than twice.

**KINE 2112 Intermediate Soccer**

Basic skills and techniques are refined beyond the beginner level. Analysis and practice of strategies, safety, offensive and defensive patterns of play and competitive activities are covered. Course emphasis is placed on the development and preparation for participation on an intercollegiate team. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 2100-2144 range; however, the same course cannot be taken more than twice.

**KINE 2115 Intermediate Archery**

Formerly PHED 1119 Investigates intermediate level techniques for refinement of basic archery shooting skills and participation in competitive target shooting. The class is designed to help students learn more advanced techniques in the sport of archery through hands-on application of using the bow and arrow through lecture, demonstration, and practice of archery skills. 1 credit
hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 2100-2144 range; however, the same course cannot be taken more than twice.

**KINE 2117 Intermediate Tennis**
Formerly PHED 1118 Develops and improves each skill level in serving, forehand and backhand drives, lobs and volleys. Performance strategies for both singles and doubles are drilled. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 2100-2144 range; however, the same course cannot be taken more than twice.

**KINE 2120 Intermediate Racquetball**
Formerly PHED 1121 Drills in serving, forehand and backhand drives, kill shots, Z shots and lobs help develop strategies for singles and doubles play. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 2100-2144 range; however, the same course cannot be taken more than twice.

**KINE 2129 Intermediate Hatha Yoga**
Formerly PHED 1129 The refinement of the asanas (postures) covered in PHED 1129, with emphasis on breath work. Introduces more advanced asanas; emphasis on integrating yoga into daily routines at home and work. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 2100-2144 range; however, the same course cannot be taken more than twice.

**KINE 2139 High Intensity Interval Training**
A training technique that involves giving all-out anaerobic effort (80 - 95% of estimated maximal heart rate) through quick, intense bursts of exercise, followed by short, active rest periods (40 - 50% of estimate maximal heart rate). This type of training allows for a higher post-exercise oxygen consumption, thus using more energy (burning more calories from fat) post-exercise. By utilizing equipment such as medicine balls, kettlebells, jump ropes, dumbbells, stability balls, tension bands, etc., maximum cardiac output and a higher VO2 max can be achieved. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 2100-2144 range; however, the same course cannot be taken more than twice.

**KINE 2142 Varsity Condition II**
Presentation of current scientific and technical information related to a particular activity with emphasis on developing advanced health and skill related fitness, as well as fundamental skills. Prerequisite: KINE 1142. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 2100-2144 range; however, the same course cannot be taken more than twice.

**KINE 2144 Varsity Sports II**
This course offers advanced development of skills and personal potential for student athletes interested in improving their performance or preparing for further competition at the upper collegiate level. Prerequisite: KINE 1144. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of KINE course numbers in the 2100-2144 range; however, the same course cannot be taken more than twice.

**KINE 2356 Care and 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, intermediate and long-term care of injuries, and administration procedures in athletic training. 3 credit hours. (A)

**LGLA 1303 Legal Research**
Presents legal research techniques emphasizing the paralegal's role. 3 credit hours. (W)

**LGLA 1305 Legal Writing**
Fundamentals of legal writing techniques including case and fact analysis, citation formats, and legal writing styles emphasizing the paralegal's role in legal writing. 3 credit hours. (W)

**LGLA 1307 Introduction to Law and the Legal Professions**
Overview of the law and the legal professions including legal concepts, systems, and terminology; substantive areas of law and the federal and state judicial systems; ethical obligations and regulations; professional trends and issues with emphasis on the paralegal's role. 3 credit hours. (W)

**LGLA 1323 Employment Law**
Presents the fundamental concepts of employment law, including employment contracts, at-will employment, governmental regulations, and discrimination issues, emphasizing the paralegal's role in employment law. Prerequisite: LGLA 1307 or consent of department. 3 credit hours. (W)

**LGLA 1342 Federal Civil Litigation**
Fundamental concepts and procedures of federal civil litigation including pretrial, trial, and post-trial phases of litigation emphasizing the paralegal's role in the federal civil litigation process. 3 credit hours. (W)

**LGLA 1343 Bankruptcy**
Fundamental concepts of bankruptcy law and procedure are presented including individual and business
LGLA 1344 Texas Civil Litigation
Fundamental concepts and procedures of Texas civil litigation including pretrial, trial, and post-trial phases of litigation emphasizing the paralegal's role in the Texas civil litigation process. Prerequisites: LGLA 1303, LGLA 1342, and LGLA 2303, or consent of Associate Dean. 3 credit hours. (W)

LGLA 1345 Civil Litigation
Presents fundamental concepts and procedures of civil litigation including pretrial, trial, and post-trial phases of litigation and emphasizes paralegal's role in civil litigation. 3 credit hours. (W)

LGLA 1351 Contracts
Presents fundamental concepts of contract law including formation, performance, and enforcement of contracts under the common law and the Uniform Commercial Code with emphasis on the paralegal's role in contract law. 3 credit hours. (W)

LGLA 1353 Wills, Trusts, and Probate Administration
Fundamental concepts of the law of wills, trusts, and probate administration emphasizing the paralegal's role. 3 credit hours. (W)

LGLA 1355 Family Law
Fundamental concepts of family law including formal and informal marriages, divorce, annulment, marital property, and the parent-child relationship with emphasis on the paralegal's role in family law. 3 credit hours. (W)

LGLA 1370 Introduction to Legal Conventions
Conventions of legal communication, including grammatical conventions, diction, style, legal citation form, proofreading skills, and editing skills, with emphasis on the paralegal's role. 3 credit hours. (W)

LGLA 1380 Cooperative Education-Legal Assistant/Paralegal
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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

LGLA 2303 Torts and Personal Injury Law
Fundamental concepts of tort and personal injury law including intentional torts, negligence, and strict liability are presented with emphasis on the paralegal's role in tort and personal injury law. 3 credit hours. (W)

LGLA 2307 Law Office Management
Fundamental principles and structure of management, administration, and substantive systems in the law office including law practice technology as applied to paralegals. 3 credit hours. (W)

LGLA 2309 Real Property
Presents fundamental concepts of real property law including the nature of real property, rights and duties of ownership, land use, voluntary and involuntary conveyances, and the recording of and searching for real estate documents emphasizing the paralegal's role in real property law. 3 credit hours. (W)

LGLA 2311 Business Organizations
Basic concepts of business organizations including law of agency, sole proprietorships, partnerships, corporations, and other emerging business entities with emphasis on the paralegal's role. Prerequisite: LGLA 1307 or LGLA 2333 or consent of Associate Dean. 3 credit hours. (W)

LGLA 2313 Criminal Law and Procedure
Fundamental concepts of criminal law and procedure from arrest to final disposition including principles of federal and state law emphasizing the role of the paralegal in the criminal justice system. 3 credit hours. (W)

LGLA 2323 Intellectual Property
Presents the fundamentals of intellectual property law, including creation, procurement, preparation, and filing documents related to patents, copyrights, trademarks, and the processes of intellectual property litigation. Emphasizes the paralegal's role in intellectual property law. 3 credit hours. (W)

LGLA 2333 Advanced Legal Document Preparation
Use of office technology skills in preparation of legal documents by paralegals based on hypothetical situations drawn from various areas of law. 3 credit hours. (W)

LGLA 2339 Certified Paralegal Exam Review
A review of the mandatory and optional topics covered in the Certified Paralegal Examination administered by the National Association of Legal Assistants. Prerequisites: LGLA 1305 and LGLA 1342. 3 credit hours. (W)

LMGT 1319 Introduction to Business Logistics
A systems approach to managing activities associated with traffic, transportation, inventory management, warehousing, packaging, order processing, and materials handling. 3 credit hours. (W)

LMGT 1325 Warehouse and Distribution Center Management
Emphasis on physical distribution and total supply chain management. Includes warehouse operations.
management, hardware and software operations, bar
codes, organizational effectiveness, just-in-time, and
continuous replenishment. 3 credit hours. (W)

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

LMGT 2388 Internship: Logistics and Materials
Management
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. 3 credit hours. (W)

MATH 0302 Pre-algebra
With an emphasis on developing critical thinking skills, a
study of arithmetic operations with rational numbers, an
introduction to algebraic expressions, geometric
properties, and basic linear equations. Lab required.
Prerequisite: Meet TSI standard for MATH 0302; or
equivalent. 3 credit hours. (D)

MATH 0305 Beginning Algebra
With an emphasis on developing critical thinking skills, a
study of algebraic vocabulary, concepts, and notation,
functions, linear equations, systems of linear equations,
polynomial expressions, and quadratic expressions and
equations. Lab required. Prerequisite: MATH 0302, or
meet TSI standard for MATH 0305; or equivalent. 3
credit hours. (D)

MATH 0310 Intermediate Algebra
A study of relations and functions, inequalities, algebraic
expressions and equations (absolute value, polynomial,
rational, radical), with a special emphasis on linear and
quadratic expressions and equations. Lab required.
Prerequisite: MATH 0305 or MATH 0406, or meet TSI
standard for MATH 0310; or equivalent. 3 credit hours. (D)

MATH 0314 College Algebra Support
This course is a support for students enrolled in College
Algebra. It will assist in the study of functions and
equations. Prerequisite: MATH 0305 or MATH 0406, or
meet TSI standard or placement for MATH 0310; or
equivalent. Corequisite: MATH 1314. 3 credit hours. (D)

MATH 0324 Mathematics for Business and Social
Sciences Support
This course is a support for students enrolled in Mathematics for Business and Social Sciences. It will
assist in the study of functions and equations.
Prerequisite: MATH 0305 or MATH 0406, or meet TSI
standard or placement for MATH 0310; or equivalent.
Corequisite: MATH 1324. 3 credit hours. (D)

MATH 0332 Contemporary Mathematics Support
Intended for non-STEM (Science, Technology,
Engineering and Mathematics) majors. Concepts and
processes that support introductory treatments of sets
and logic, financial mathematics, probability and statistics.
Development of number sense, proportional reasoning,
estimation, technology and communication are supported
through this course. Prerequisite: MATH 0302, or meet
TSI standard for MATH 0305; or equivalent. Corequisite:
MATH 1332. 3 credit hours. (D)

MATH 0342 Elementary Statistical Methods
Support
A support course for Elementary Statistical Methods with
emphasis on real numbers and graphing techniques in
real-world problems. Prerequisite: MATH 0302, or meet
TSI standard for MATH 0305; or equivalent. Corequisite:
MATH 1342. 3 credit hours. (D)

MATH 0406 Introductory Algebra
With an emphasis on developing critical thinking skills, a
study of arithmetic operations with rational numbers, an
introduction to algebraic vocabulary, concepts, and
notation, and geometric properties, functions, linear
equations, systems of linear equations, polynomial
expressions, and quadratic expressions and equations. Lab
required. Prerequisite: Meet TSI standard for MATH
0406; or equivalent. 4 credit hours. (D)

MATH 1314 College Algebra
In-depth study and applications of polynomial, rational,
rational, radical, exponential and logarithmic functions, and
systems of equations using matrices. Additional topics
such as sequences, series, probability, and conics may be
included. Graphing calculator required. Lab required.
Prerequisite: Meet TSI college-readiness standard for
Mathematics; or equivalent. 3 credit hours. (A) Note:
Students may take either MATH 1314 or MATH 1414
but not both.

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. Graphing calculator required.
Prerequisite: MATH 1314 or MATH 1414; or equivalent. 3
credit hours. (A)
MATH 1324 Mathematics for Business and 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. Graphing calculator required. Lab required. Prerequisite: Meet TSI college-readiness standard for Mathematics; or equivalent. 3 credit hours. (A)

MATH 1325 Calculus for Business and 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. Graphing calculator required. Lab required. Prerequisite: MATH 1314, or MATH 1324, or MATH 1414; or equivalent. 3 credit hours. (A)

MATH 1332 Contemporary Mathematics (Quantitative Reasoning)
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. Additionally, this course is NOT intended to prepare students for calculus, business, or engineering courses. Prerequisite: Meet TSI college-readiness standard for Mathematics; or equivalent. 3 credit hours. (A)

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. Graphing calculator required. Lab required. Prerequisite: Meet TSI college-readiness standard for Mathematics; or equivalent. 3 credit hours. (A)

MATH 1350 Mathematics for Teachers I (Fundamentals of Mathematics 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. Prerequisite: MATH 1314 or MATH 1414; or equivalent. 3 credit hours. (A) Note: This course is intended for students pursuing the AAT degree with an emphasis on middle grades 4-8 and early childhood through grade 6.

MATH 1351 Mathematics for Teachers II (Fundamentals of Mathematics 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. Prerequisite: MATH 1350, MATH 1314, or MATH 1414; or equivalent. 3 credit hours. (A) Note: This course is designed specifically for students who seek middle grade (4 through 8) teacher certification.

MATH 1376 Calculus for Business and Economics II
Continuation of Math 1325. In this course, application of differential equations, functions of several variables, Lagrange Multipliers, Least Squares Modeling, multiple integrals and infinite series will be covered. Basic concepts are related to multivariable calculus. Graphing calculator required. Lab required. Prerequisite: MATH 1325. 3 credit hours. (A) Note: This course will transfer to a specific 2+2 baccalaureate program. Please check with your advisor to learn whether the course will transfer to the four-year program of your choice. There is an additional fee for this course.

MATH 1414 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. Graphing calculator required. Prerequisite: Meet TSI college-readiness standard for Mathematics; or equivalent. 4 credit hours. (A) Note: Students may take either MATH 1314 or MATH 1414 but not both.

MATH 2305 Discrete Mathematics
A course designed to prepare math, computer science, and engineering majors for a background in abstraction, notation, and critical thinking for the mathematics most directly related to computer science. Topics include: logic, relations, functions, basic set theory, countability and counting arguments, proof techniques, mathematical induction, combinatorics, discrete probability, recursion, sequence and recurrence, elementary number theory, graph theory, and mathematical proof techniques. Graphing calculator required. Prerequisite: MATH 2413. 3 credit hours. (A)

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. Graphing calculator required. Prerequisite: MATH 2413. 3 credit hours. (A)

**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, and boundary value problems; application of differential equations to real-world problems. Graphing calculator required. Lab required. Prerequisite: MATH 2414. 3 credit hours. (A)

**MATH 2373 Matrices, Vectors, and Linear Programming**

Not for science majors. A study of matrices, vectors, determinants, inverses, system of linear equations, and linear programming with applications. Scientific calculator required. Prerequisite: MATH 1314 or MATH 1414; or equivalent. 3 credit hours. (A) Note: This course will transfer to the four-year program of your choice. There is an additional fee for this course.

**MATH 2412 Pre-Calculus Math**

In-depth combined study of algebra, trigonometry, and other topics for calculus readiness. Graphing calculator required. Lab required. Prerequisite: MATH 1314 or the equivalent preparation. 4 credit hours. (A)

**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 area. Graphing calculator required. Lab included. Prerequisite: MATH 2412; or equivalent. 4 credit hours. (A)

**MATH 2414 Calculus II**

Differentiation and integration of transcendental functions; parametric equations and polar coordinates; techniques of integration; sequences and series; improper integrals. Graphing calculator required. Lab included. Prerequisite: MATH 2413. 4 credit hours. (A)

**MATH 2415 Calculus III**

Advanced topics in calculus, including vectors and vector-valued functions, partial differentiation, Lagrange multipliers, multiple integrals, and Jacobians; application of the line integral, including Green's Theorem, the Divergence Theorem, and Stokes' Theorem. Graphing calculator required. Lab included. Prerequisite: MATH 2414. 4 credit hours. (A)

**MILS 1141 Foundations of Leadership**

Fundamental concepts of leadership in a profession in both classroom and outdoor laboratory environments. The study of time management skills, basic drill and ceremony, physical fitness, rappelling, leadership reaction course, first aid, making presentations and marksmanship. Concurrent enrollment in MILS 1180 leadership lab and mandatory participation in independent physical fitness training, plus optional participation in a weekend field training exercise. 1 credit hour. (A)

**MILS 1142 Introduction to Leadership**

Application of principles of leadership through participation in physically and mentally challenging exercises with upper-division ROTC students. Course focuses on communication skills, organizational ethics, and study and time management techniques. Concurrent enrollment in MILS 1180 leadership lab and mandatory participation in individual physical fitness training, plus optional participation in a weekend field training exercise. 1 credit hour. (A)

**MILS 1180 Leadership Laboratory**

Practical laboratory of applied leadership and skills. Student-planned, organized and conducted training, oriented toward leadership development. Laboratory topics include marksmanship, small unit tactics, multi-tiered programs focused on individual skill levels. Uniform and equipment provided, no fee. May be repeated for credit. 1 credit hour. (A)

**MILS 2251 Individual/Team Development**

Introduction to individual and team aspects of military tactics in small unit operations. Includes use of radio communications, making safety assessments, movement techniques, planning for team safety/security, and pre-execution checks. Concurrent enrollment in MILS 1180
leadership lab and mandatory participation in individual physical fitness training, plus optional participation in a weekend field training exercise. 2 credit hours. (A)

**MRKG 1301 Customer Relationship Management**
General principles of customer relationship management including skills, knowledge, attitudes, and behaviors. 3 credit hours. (W)

**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. 3 credit hours. (W)

**MRKG 2312 e-Commerce Marketing**
Explore electronic tools utilized in marketing, focus on marketing communications in developing customer relationships. 3 credit hours. (W)

**MRKG 2333 Principles of Selling**
Overview of the selling process. Identification of the elements of the communication process between buyers and sellers. Examination of the legal and ethical issues of organizations which affect salespeople. 3 credit hours. (W)

**MRKG 2348 Marketing Research and Strategies**
Practical experiences in analyzing marketing studies using data-driven decision-making processes. Includes interrelationships among marketing mix. 3 credit hours. (W)

**MRKG 2349 Advertising and Sales Promotion**
Integrated marketing communications. Includes advertising principles and practices. Emphasizes multimedia of persuasive communication including buyer behavior, budgeting, and regulatory constraints. 3 credit hours. (W)

**MRKG 2381 Cooperative Education-Marketing/Marketing 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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

**MUAP 1101 Secondary Applied Music-Violin**
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

**MUAP 1105 Secondary Applied Music-Viola**
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

**MUAP 1109 Secondary Applied Music-Cello**
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

**MUAP 1113 Secondary Applied Music-Double Bass**
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

**MUAP 1115 Secondary Applied Music-Electric Bass**
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

Please refer to [http://www.collin.edu/academics/programs/index.html](http://www.collin.edu/academics/programs/index.html) for the most current information.
prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1117 Secondary Applied Music-Flute
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1121 Secondary Applied Music-Oboe
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1125 Secondary Applied Music-Bassoon
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1129 Secondary Applied Music-Clarinet
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1133 Secondary Applied Music-Saxophone
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1137 Secondary Applied Music-Trumpet
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1141 Secondary Applied Music-French Horn
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1145 Secondary Applied Music-Trombone
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN...
MUAP 1149 Secondary Applied Music-Baritone
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1153 Secondary Applied Music-Tuba
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1157 Secondary Applied Music-Percussion
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1158 Secondary Applied Music-Drum Set
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1161 Secondary Applied Music-Guitar
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1162 Secondary Applied Music-Jazz Guitar
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1163 Secondary Applied Music-Steel String Guitar
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1165 Secondary Applied Music-Organ
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

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MUAP 1169 Secondary Applied Music-Piano
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1170 Secondary Applied Music-Jazz Piano
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1177 Secondary Applied Music-Harp
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1181 Secondary Applied Music-Voice
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1187 Secondary Applied Music-Composition
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1188 Secondary Applied Music-Electroacoustic Composition
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1189 Secondary Applied Music-Songwriting
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1190 Secondary Applied Music-Arranging
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.
credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 1191 Secondary Applied Music Conducting
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 25-minute lesson per week. Students must remain enrolled in 1 credit hour of a MUEN course, attend weekly Departmental recitals for the semester, and participate in a jury. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). 1 credit hour. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-MUAP 2291.

MUAP 2201 Concentration Applied Music-Violin
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2205 Concentration Applied Music-Viola
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2209 Concentration Applied Music-Cello
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of MUEN class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2213 Concentration Applied Music-Double Bass
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2215 Concentration Applied Music-Electric Bass
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area
of the student’s concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2225 Concentration Applied Music-Bassoon
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student’s concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2229 Concentration Applied Music-Clarinet
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student’s concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.
MUAP 2233 Concentration Applied Music-Saxophone
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUSEN course and at least 4 (four) credit hours to be selected from MUSI, MUSEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A)
Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2237 Concentration Applied Music-Trumpet
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUSEN course and at least 4 (four) credit hours to be selected from MUSI, MUSEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A)
Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2249 Concentration Applied Music-Baritone
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUSEN course and at least 4 (four) credit hours to be selected from MUSI, MUSEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A)

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Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2253 Concentration Applied Music-Tuba
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2257 Concentration Applied Music-Percussion
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2258 Concentration Applied Music-Drum Set
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2261 Concentration Applied Music-Guitar
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2262 Concentration Applied Music-Jazz Guitar
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

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**MUAP 2263 Concentration Applied Music-Steel Guitar**
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

**MUAP 2265 Concentration Applied Music-Organ**
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

**MUAP 2269 Concentration Applied Music-Piano**
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

**MUAP 2270 Concentration Applied Music-Jazz Piano**
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

**MUAP 2277 Concentration Applied Music-Harp**
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one)
Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2281 Concentration Applied Music-Voice
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student’s concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering.
Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hour of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A)
Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2287 Concentration Applied Music-Composition
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering.
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Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2288 Concentration Applied Music-Electroacoustic Composition
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering.
Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hour of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A)
Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2289 Concentration Applied Music-Songwriting
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering.
Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hour of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A)
Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2290 Concentration Applied Music-Arranging
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in

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1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUAP 2291 Concentration Applied Music- Conducting
Individual instruction in voice, instrument, composition, or conducting. Additionally, private instruction in the area of the student's concentration, consisting of one 50-minute lesson per week. Students must remain enrolled in 1 (one) credit hour of a MUEN course and at least 4 (four) credit hours to be selected from MUSI, MUEN, MUSB, or MUSC courses. All MUAP students must attend weekly Departmental recitals for the semester (in addition to their weekly lesson), perform in 1 (one) Departmental recital, and participate in a jury at the end of the semester. For full-time Music majors only. Contact the Music Department for permission prior to registering. Prerequisite: Audition. Corequisites: Remain enrolled in at least one credit hour of MUEN class(es). Remain enrolled in at 4 credit hours of Performing Arts classes (Music, Dance, Theatre), including at least one credit hours of MUSC, MUSI or MUSC class(es). Full-time enrollment (12 credit hour minimum) status. 2 credit hours. (A) Note: Students may receive credit for up to 20 credit hours of any combination of MUAP courses. This includes MUAP 1101-2291.

MUEN 1122 Symphonic Wind Ensemble
Examples of major instrumental ensembles may include but are not limited to concert band, marching band, collaborative piano, jazz band, and orchestra. Additionally, study and performance of traditional and contemporary symphonic wind literature. Students participate in weekly rehearsals and perform on scheduled concerts. Basic instrumental proficiency is required. Lab required. Prerequisite: Audition. 1 credit hour. (A) Note: Students may take MUEN 1121 and MUEN 1122 for a combined total of no more than 8 credit hours.

MUEN 1131 New Music Ensemble
Examples of small instrumental ensembles may include but are not limited to wind, string, percussion, piano, and mixed ensembles in various styles. Additionally, performs experimental, avant garde, electronic, and contemporary music for mixed media ensemble including compositions by student composers. Lab required. Prerequisite: Audition. 1 credit hour. (A) Note: Students may take MUEN 1131, MUEN 1132, MUEN 1133, MUEN 1134, MUEN 1135, MUEN 1136, MUEN 1137, MUEN 1138, MUEN 1139, and MUEN 1140 for a combined total of no more than 8 credit hours.

MUEN 1132 Keyboard Ensemble
Examples of small instrumental ensembles may include but are not limited to wind, string, percussion, piano, and mixed ensembles in various styles. Additionally, traditional piano literature for multiple performers and arrangements for electronic keyboard ensemble. Several performances each semester. Lab required. Prerequisite: Audition. 1 credit hour. (A) Note: Students may take MUEN 1131, MUEN 1132, MUEN 1133, MUEN 1134, MUEN 1135, MUEN 1136, MUEN 1137, MUEN 1138, MUEN 1139, and MUEN 1140 for a combined total of no more than 8 credit hours.

MUEN 1133 Woodwind Ensemble
Examples of small instrumental ensembles may include but are not limited to wind, string, percussion, piano, and mixed ensembles in various styles. Additionally, a small group of woodwinds performs traditional classical repertoire. Lab required. Prerequisite: Audition. 1 credit hour. (A) Note: Students may take MUEN 1131, MUEN 1132, MUEN 1133, MUEN 1134, MUEN 1135, MUEN 1136, MUEN 1137, MUEN 1138, MUEN 1139, and MUEN 1140 for a combined total of no more than 8 credit hours.

MUEN 1134 Brass Ensemble
Examples of small instrumental ensembles may include but are not limited to wind, string, percussion, piano, and mixed ensembles in various styles. Additionally, a small group of brass players perform traditional classical repertoire. Lab required. Prerequisite: Audition. 1 credit hour. (A) Note: Students may take MUEN 1131, MUEN
MUEN 1132, MUEN 1133, MUEN 1134, MUEN 1135, MUEN 1136, MUEN 1137, MUEN 1138, MUEN 1139, and MUEN 1140 for a combined total of no more than 8 credit hours.

MUEN 1135 Expressions Combo
Examples of small instrumental ensembles may include but are not limited to wind, string, percussion, piano, and mixed ensembles in various styles. Additionally, expressions Combo is a small ensemble (4-6) of musicians who serve as the rhythm selection for the Expressions Vocal Jazz ensemble. In addition to rehearsing and performing with Expressions, the combo also prepares its own arrangements and performs as an independent ensemble. Typical repertoire includes bebop, Latin, and fusion standards. This ensemble may have several performances each semester. This group may have an annual tour. Lab required. Prerequisite: Audition. 1 credit hour. (A) Note: Students may take MUEN 1131, MUEN 1132, MUEN 1133, MUEN 1134, MUEN 1135, MUEN 1136, MUEN 1137, MUEN 1138, MUEN 1139, and MUEN 1140 for a combined total of no more than 8 credit hours.

MUEN 1136 Harp Ensemble
Example of small instrumental ensembles may include but are not limited to wind, string, percussion, piano, and mixed ensembles in various styles. Additionally, this is a study and performance of traditional and contemporary symphonic harp ensemble literature. Students participate in weekly rehearsals and perform on scheduled concerts. Basic instrumental proficiency is required. Lab required. Prerequisite: Audition. 1 credit hour. (A) Note: Students may take MUEN 1131, MUEN 1132, MUEN 1133, MUEN 1134, MUEN 1135, MUEN 1136, MUEN 1137, MUEN 1138, MUEN 1139, and MUEN 1140 for a combined total of no more than 8 credit hours.

MUEN 1137 Guitar Ensemble
Examples of small instrumental ensembles may include but are not limited to wind, string, percussion, piano, and mixed ensembles in various styles. Additionally, a small group of guitarists performs traditional classical repertoire. Lab required. Prerequisite: Audition. 1 credit hour. (A) Note: Students may take MUEN 1131, MUEN 1132, MUEN 1133, MUEN 1134, MUEN 1135, MUEN 1136, MUEN 1137, MUEN 1138, MUEN 1139, and MUEN 1140 for a combined total of no more than 8 credit hours.

MUEN 1138 Percussion Ensemble
Examples of small instrumental ensembles may include but are not limited to wind, string, percussion, piano, and mixed ensembles in various styles. Additionally, a small group of percussion players performs jazz and traditional repertoire. Lab required. Prerequisite: Audition. 1 credit hour. (A) Note: Students may take MUEN 1131, MUEN 1132, MUEN 1133, MUEN 1134, MUEN 1135, MUEN 1136, MUEN 1137, MUEN 1138, MUEN 1139, and MUEN 1140 for a combined total of no more than 8 credit hours.

MUEN 1139 String Ensemble
Examples of small instrumental ensembles may include but are not limited to wind, string, percussion, piano, and mixed ensembles in various styles. Additionally, a small group of string players performs traditional classical repertoire. Lab required. Prerequisite: Audition. 1 credit hour. (A) Note: Students may take MUEN 1131, MUEN 1132, MUEN 1133, MUEN 1134, MUEN 1135, MUEN 1136, MUEN 1137, MUEN 1138, MUEN 1139, and MUEN 1140 for a combined total of no more than 8 credit hours.

MUEN 1140 Jazz Combo
Examples of small instrumental ensembles may include but are not limited to wind, string, percussion, piano, and mixed ensembles in various styles. Additionally, participation in a small jazz ensemble concentrating on jazz and commercial music performance styles. Ensemble consists of 4-9 instrumental/vocal members. Repertoire includes instrumental and vocal music typical of small jazz groups. A number of performances both on and off campus are given each semester. Lab required. Prerequisite: Audition or consent of Instructor. 1 credit hour. (A) Note: Students may take MUEN 1131, MUEN 1132, MUEN 1133, MUEN 1134, MUEN 1135, MUEN 1136, MUEN 1137, MUEN 1138, MUEN 1139, and MUEN 1140 for a combined total of no more than 8 credit hours.

MUEN 1141 Collin Chorale
Any large chorale ensemble. Additionally, this mixed choral ensemble studies and performs a wide variety of music representing the choral literature. This ensemble may have several performances each semester. This group may have an annual tour and open to all interested students. Lab required. Prerequisite: Consent of Instructor. 1 credit hour. (A) Note: Student may take MUEN 1141 and MUEN 1142 for a combined total of no more than 8 credit hours.

MUEN 1142 Expressions Vocal Jazz Ensemble
Any large chorale ensemble. Additionally, this group works on a wide variety of jazz styles throughout the year. They also work in conjunction with a jazz combo allowing them to experience solo jazz singing. This select ensemble of 10-16 singers has several performances each semester. This group may have an annual tour. Lab required. Prerequisite: Audition. 1 credit hour. (A) Note: Student may take MUEN 1141 and MUEN 1142 for a combined total of no more than 8 credit hours.

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MUEN 1151 A Capella Pop Group
Examples of small vocal ensembles may include but are not limited to glee club, madrigals, opera/musical theater, commercial and folk. Additionally, this is a study of opera through performances of scenes and full productions. Emphasis is placed on the musical and dramatic qualities of performance, preparation of character, and aspects of language diction from the selected production. Audition required. Lab required. Prerequisite: Audition. 1 credit hour. (A) Note: Students may take MUEN 1151, MUEN 1152, MUEN 1153, and MUEN 1154 for a combined total of no more than 8 credit hours.

MUEN 1152 Opera Theatre Ensemble
Example of small vocal ensembles may include but are not limited to glee club, madrigals, opera/musical theater, commercial, and folk. Additionally, this is a study of opera through performances of scenes and full productions. Emphasis is placed on the musical and dramatic qualities of performance, preparation of character, and aspects of language diction from the selected production. Audition required. Lab required. Prerequisite: Audition. 1 credit hour. (A) Note: Students may take MUEN 1151, MUEN 1152, MUEN 1153, and MUEN 1154 for a combined total of no more than 8 credit hours.

MUEN 1153 Chamber Choir
Example of small vocal ensembles may include but are not limited to glee club, madrigals, opera/musical theater, commercial, and folk. Additionally, a select audition-only choir devoted to performance of an eclectic repertory of choral literature for mixed voices (S.A.T.B.). This course will focus on the development of vocal technique, performance practices, and will culminate with several performances throughout the year both on and off campus. This group may have an annual tour. Repertoire consists of advanced collegiate music. Lab required. Prerequisite: Consent of Instructor. 1 credit hour. (A) Note: Student may take MUEN 1151, MUEN 1152, MUEN 1153, and MUEN 1154 for a combined total of no more than 8 credit hours.

MUEN 1154 Musical Theatre Ensemble
Examples of small vocal ensembles may include but are not limited to glee club, madrigals, opera/musical theater, commercial, and folk. Additionally, this is a study of musical theatre through performances of scenes and small-scale productions. Emphasis is placed on the musical and dramatic qualities of performance, preparation of character, and aspects of language diction from the selected production. Lab required. Prerequisite: Audition. 1 credit hour. (A) Note: Students may take MUEN 1151, MUEN 1152, MUEN 1153, and MUEN 1154 for a combined total of no more than 8 credit hours.

MUSB 1305 Survey of the Music Business
An overview of the music industry including songwriting, live performance, the record industry, music merchandising, contracts and licenses, and career opportunities. 3 credit hours. (W)

MUSB 1341 Concert Promotion and Venue Management
Concert promotion and venue management. Includes considerations in purchasing a club, concert promotion and advertising, talent buying, city codes, insurance, Texas Alcoholic Beverage Commission Regulation, performance rights organization licenses, personnel management and concert production and administration. Lab required. Prerequisite: MUSB 1305. 3 credit hours. (W)

MUSB 2301 Music Marketing
Methods of music distribution, retailing, and wholesaling. Includes identifying a target market, image building, distribution (brick and mortar vs. digital delivery), pricing, advertising, and marketing mix. 3 credit hours. (W)

MUSB 2345 Live Music and Talent Management
An examination of the role, scope, and activities of the talent manager including establishing the artist/manager relationship; planning the artist's career; and developing goals, strategies, and tactics with an overall view of the live music business. Lab required. Prerequisite: MUSB 1305. 3 credit hours. (W)

MUSB 2350 Commercial Music Project
The primary objective of this course is to apply the skills learned in other Commercial Music courses. This is a hands-on project oriented course aimed at helping students create a portfolio of their work. Artists and their music will be the focus. Each student must design and complete his/her own project with instructor approval. Lab required. Prerequisite: Consent of Associate Dean. 3 credit hours. (W)

MUSB 2355 Legal Aspects of the Entertainment Industry
Copyright law and the various agreements used in the entertainment industry. Emphasizes contracts used by music publishers, record companies, artist managers, record producers, film and television producers, and booking agencies. Prerequisite: MUSB 1305. 3 credit hours. (W)

MUSB 2380 Cooperative Education-Music Management
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
MUSC 1209 Conducting Class
Introduction to the art of conducting including regular and irregular beat patterns, subdivision, and beat pattern varieties applied to musical literature and practical experiences. Lab required. 2 credit hours. (W)

MUSC 1313 Commercial Music Theory I
Introduction to chord progressions, song forms, and harmonic techniques used in commercial music. Topics include modern chord notation and chord voicings. Prerequisite: MUSI 1303. 3 credit hours. (W)

MUSC 1321 Songwriting I
Introduction to the techniques of writing marketable songs including the writing of lyrics and melodies, setting lyrics to music, developing lyrical and musical "hooks," analyzing the marketplace, and developing a production plan for a song demo. 3 credit hours. (W)

MUSC 1323 Audio Electronics
Basic concepts in electricity, Ohm's Law, circuit analysis and troubleshooting. Includes soldering techniques, and equipment maintenance. Lab required. 3 credit hours. (W)

MUSC 1327 Audio Engineering I
The tools, personnel and standard workflow of a recording studio. Topics include fundamentals of sound and overview of tracking, editing, and mixing audio. Lab required. 3 credit hours. (W)

MUSC 1331 MIDI I
Exploration of Musical Instrument Digital Interface (MIDI) systems and applications. Includes the MIDI language and applications in the studio environment using software-based sequencing programs. Lab required. 3 credit hours. (W)

MUSC 1333 Synthesis I
An exploration of sound synthesis. Includes additive, subtractive, and modulation-based synthesizers. Lab required. 3 credit hours. (W)

MUSC 1405 Live Sound I
An overview of the field of live sound. Includes principles of live sound and the theory and interconnection of the components of a sound reinforcement system. Lab required. Prerequisite: MUSC 1327. 4 credit hours. (W)

MUSC 2313 Commercial Music Theory II
Continuation of Commercial Music Theory I. Emphasizes harmonic and melodic analysis, extended chord theory, and modal and altered scales. Prerequisite: MUSC 1313 or consent of Instructor. 3 credit hours. (W)

MUSC 2314 Improvisation Theory I
Chordal structures of commercial music genres. Emphasizes extemporaneous performance. 3 credit hours. (W)

MUSC 2330 Commercial Music Arranging and Composition
Presentation of techniques for arranging and composing projects in the commercial music industry. Lab required. 3 credit hours. (W)

MUSC 2345 Synthesis II
Advanced sound synthesis. Includes hybrid synthesis and digital sampling. Lab required. Prerequisite: MUSC 1333. 3 credit hours. (W)

MUSC 2351 Audio for Video
Advanced audio techniques for video production. Includes synchronization, automated mixdown, audio post production for video, and editing techniques. Lab required. Prerequisite: ARTV 1343 or MUSC 1327. 3 credit hours. (W)

MUSC 2355 MIDI II
Advanced MIDI concepts and techniques. Includes synchronizing MIDI and audio and advanced sequencer operation. Prerequisite: MUSC 1331 with a grade of "B" or better; or consent of Instructor. Lab required. 3 credit hours. (W)

MUSC 2356 Songwriting II
Continuation in the development of techniques for writing marketable songs including the writing of lyrics and melodies, setting lyrics to music, developing lyrical and musical "hooks," analyzing the marketplace, and developing a production plan for a song demo. Prerequisite: MUSC 1321, or consent of Instructor. 3 credit hours. (W)

MUSC 2403 Live Sound II
Overview of stage monitor systems. Includes monitor systems set-up and operation and stage management. Also covers interactivity between sound management, performance quality, and audience experience. Lab required. Prerequisite: MUSC 1405. 4 credit hours. (W)

MUSC 2427 Audio Engineering II
Implementation of the recording process, including microphones, audio console, multi-track recorder, and signal processing devices. Lab required. Prerequisite: MUSC 1327 with a grade of "B" or better; or consent of Instructor. 4 credit hours. (W)

MUSC 2447 Audio Engineering III
Advanced techniques in recording and manipulation of audio. Includes digital audio editing, recording techniques, and signal processing. Prerequisite: MUSC 2427 with a
grade of “B” or better; or consent of Instructor. Lab required. 4 credit hours. (W)

**MUSC 2448 Audio Engineering IV**
Continued enhancement of recording, mixing, arranging, and editing. Includes the role of the producer in session planning, communication, budgeting, business aspects, technical considerations, and music markets. Prerequisite: MUSC 2447 with a grade of “B” or better; or consent of Instructor. Lab required. 4 credit hours. (W)

**MUSC 2453 Live Sound III**
Advanced concepts of live sound engineering for front-of-house mix. Includes techniques required to build and maintain a live sound mix for an audience. Lab required. Prerequisite: MUSC 2403. 4 credit hours. (W)

**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. Lab required. Prerequisite: MUSI 1303. 1 credit hour. (A)

**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. Lab required. Prerequisite: MUSI 1116. 1 credit hour. (A)

**MUSI 1161 International Phonetic Alphabet (IPA) for singers**
A study of the International Phonetic Alphabet (IPA) and its application to singing in English, Italian, German, and French. Prerequisite: MUSI 1303. 1 credit hour. (A)

**MUSI 1181 Piano Class I**
Beginning class instruction in the fundamentals of keyboard technique. Additionally, emphasis is given on the practical application of music theory involving harmonization, transposition and related keyboard skills. Lab required. Prerequisite: MUSI 1303. 1 credit hour. (A)
Note: Student may take MUSI 1181, MUSI 1182, MUSI 2181, and MUSI 2182 for a combined total of no more than 4 credit hours.

**MUSI 1182 Piano Class II**
Advanced beginning class instruction in the fundamentals of keyboard technique. Additionally, this is a continuation of MUSI 1181. Development of two-octave minor scales, arpeggios, diatonic chord progressions, and piano repertoire. Lab required. Prerequisite: MUSI 1181. 1 credit hour. (A) Note: Student may take MUSI 1181, MUSI 1182, MUSI 2181, and MUSI 2182 for a combined total of no more than 4 credit hours.

**MUSI 1183 Voice Class**
Class instruction in the fundamentals of singing including breathing, tone production, and diction. Designed for students with little or no previous voice training. Does not apply to a music major degree. Lab required. 1 credit hour. (A)

**MUSI 1192 Guitar Class**
Class instruction in the fundamental guitar playing, including technique, music-reading, fretboard theory, melodic and harmonic realizations. Lab required. 1 credit hour. (A)

**MUSI 1303 Fundamentals of Music**
Introduction to the basic elements of music theory, including scales, intervals, keys, triads, elementary ear training, notation, meter, and rhythm. Course does not apply to a music major degree. 3 credit hours. (A)

**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. Additionally, this course conducts an overview of music history that includes the study of Western art music - the six major eras, composers, their works and musical styles. Emphasis is given to vocabulary and critical listening skills needed to develop an eclectic taste in music. Music majors must take MUSI 1307. Prerequisite: Meet TSI standard for INRW 0315; or equivalent. 3 credit hours. (A)

**MUSI 1307 Music Literature**
A survey of the styles and forms of music as it developed from the middle ages to the present. This course will familiarize the student with cultural context, terminology, genres, and notation. Additionally, study of selected works in music literature chosen from the six major eras of Western art music history. Includes musical styles, forms, and composers from the Medieval period to the present. Critical listening skills and technical musical terms are emphasized in this course. Required for all music majors. Prerequisite: MUSI 1303. 3 credit hours. (A)

**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. 3 credit hours. (A)

**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. Optional correlated study at the keyboard. Additionally,
investigation of music modes, transposition, cadences and non-harmonic tones, phrase structure, musical textures, and four-part voice leading. Prerequisite: MUSI 1303 or consent of Instructor. 3 credit hours. (A)

MUSI 1312 Music Theory II
The study of analysis and writing of tonal melody and diatonic harmony, including 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. Prerequisite: MUSI 1311. 3 credit hours. (A)

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. Lab required. Prerequisite: MUSI 2116. 1 credit hour. (A) Note: Student may take MUSI 2116 and MUSI 2117 for a combined total of no more than 4 credit hours.

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. Lab required. Prerequisite: MUSI 2116. 1 credit hour. (A) Note: Student may take MUSI 2116 and MUSI 2117 for a combined total of no more than 4 credit hours.

MUSI 2181 Piano Class III
Intermediate class instruction of keyboard technique. Additionally, this is a continuation of MUSI 1182. Development of three-octave scales and arpeggios, accompaniment patterns, intermediate and 20th century piano repertoire, advanced sight reading skills. Lab required. Prerequisite: MUSI 1182. 1 credit hour. (A) Note: Student may take MUSI 1181, MUSI 1182, MUSI 2181, and MUSI 2182 for a combined total of no more than 4 credit hours.

MUSI 2182 Piano Class IV
Advanced class instruction of keyboard technique. Additionally, this is a continuation of MUSI 2181. Culmination of skills including scales and arpeggios four-octaves hands together, advanced chord progressions, repertoire, and sight reading. Prepares music majors for piano barrier exams. Lab required. Prerequisite: MUSI 2181. 1 credit hour. (A) Note: Student may take MUSI 1181, MUSI 1182, MUSI 2181, and MUSI 2182 for a combined total of no more than 4 credit hours.

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. Additionally, study of music theory from late Renaissance polyphony through Baroque counterpoint and continuing with the chromatic harmonies of the Classic period as found within Sonata Allegro and Rondo formal structures. Prerequisite: MUSI 1312. 3 credit hours. (A)

MUSI 2312 Music Theory IV
Continuation of advanced chromaticism and survey of analytical and compositional procedures in post-tonal music. Optional correlated study at the keyboard. Prerequisite: MUSI 2311. 3 credit hours. (A)

MUSI 2389 Academic Cooperative
An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of music. Contact the Cooperative Work Experience Office. 3 credit hours. (A)

MUSP 1104 Applied Commercial Music: Bass Guitar
Private instruction in the bass guitar, with goals related to commercial music. Consists of one 100-minute lesson per week. Students must remain enrolled in three or more credit hours of Music courses (MUSB, MUSC, MUSI, MUSP) as well as one ensemble course. Students must also attend weekly Departmental recitals for the semester, and perform for a jury at the end of the semester. Prerequisite: Audition and consent of Instructor. 1 credit hour. (W)

MUSP 1105 Applied Commercial Music: Commercial Guitar
Private instruction in commercial guitar, with goals related to commercial music. Consists of one 100-minute lesson per week. Students must remain enrolled in three or more credit hours of Music courses (MUSB, MUSC, MUSI, MUSP) as well as one ensemble course. Students must also attend weekly Departmental recitals for the semester, and perform for a jury at the end of the semester. Prerequisite: Audition and consent of Instructor. 1 credit hour. (W)

MUSP 1110 Applied Commercial Music: Piano
Private instruction in piano, with goals related to commercial music. Consists of one 100-minute lesson per week. Students must remain enrolled in three or more credit hours of Music courses (MUSB, MUSC, MUSI, MUSP) as well as one ensemble course. Students must also attend weekly Departmental recitals for the semester, and perform for a jury at the end of the semester. Prerequisite: Audition and consent of Instructor. 1 credit hour. (W)
MUSP 1113 Introductory Group Piano I  
Fundamentals of playing various accompaniment patterns with chords. Includes reading standard notation, basic scales, and learning introductory improvisational skills. Lab required. 1 credit hours. (W)

MUSP 1114 Introductory Group Piano II  
Continuation of playing various accompaniment patterns with chords. Includes reading standard notation, scales, and learning improvisational skills. Lab required. Prerequisite: MUSP 1113 or consent of Instructor. 1 credit hour. (W)

MUSP 1117 Applied Commercial Music: Percussion  
Private instruction in percussion, with goals related to commercial music. Consists of one 100-minute lesson per week. Students must remain enrolled in three or more credit hours of Music courses (MUSB, MUSC, MUSI, MUSP) as well as one ensemble course. Students must also attend weekly Departmental recitals for the semester, and perform for a jury at the end of the semester. Prerequisite: Audition and consent of Instructor. 1 credit hour. (W)

MUSP 1127 Applied Commercial Music: Voice  
Private instruction in voice, with goals related to commercial music. Consists of one 100-minute lesson per week. Students must remain enrolled in three or more credit hours of Music courses (MUSB, MUSC, MUSI, MUSP) as well as one ensemble course. Students must also attend weekly Departmental recitals for the semester, and perform for a jury at the end of the semester. Prerequisite: Audition and consent of Instructor. 1 credit hour. (W)

MUSP 1151 Small Commercial Music Ensemble: Recording  
Participation in a small recording ensemble concentrating on commercial music performance styles. Prerequisite: Audition and consent of Instructor. 1 credit hour. (W)

MUSP 1153 Small Commercial Music Ensemble: Rock  
Participation in a rock ensemble concentrating on commercial music performance styles. Prerequisite: Audition and consent of Instructor. 1 credit hour. (W)

MUSP 1202 Introductory Group Voice  
Introduction to Speech Level Singing philosophy and technique with goals related to commercial voice. Emphasizes sight singing and harmony singing applicable to commercial background singing. Prerequisite: Audition and consent of Instructor. 2 credit hours. (W)

MUSP 2230 Advanced Applied Commercial Music: Voice  
Advanced private instruction in voice, with goals related to commercial music. Consists of one 150-minute lesson per week. Students must remain enrolled in three or more credit hours of music courses (MUSB, MUSC, MUSI, MUSP) as well as one ensemble course. Students must also attend weekly Departmental recitals for the semester, and perform for a jury at the end of the semester. Lab required. Prerequisite: Audition and consent of Instructor. 2 credit hours. (W)

MUSP 2233 Advanced Applied Commercial Music: Bass Guitar  
Advanced private instruction in bass guitar, with goals related to commercial music. Consists of one 150-minute lesson per week. Students must remain enrolled in three or more credit hours of music courses (MUSB, MUSC, MUSI, MUSP) as well as one ensemble course. Students must also attend weekly Departmental recitals for the semester, and perform for a jury at the end of the semester. Lab required. Prerequisite: Audition and consent of Instructor. 2 credit hours. (W)

MUSP 2235 Advanced Applied Commercial Music: Piano  
Advanced private instruction in piano, with goals related to commercial music. Consists of one 150-minute lesson per week. Students must remain enrolled in three or more credit hours of music courses (MUSB, MUSC, MUSI, MUSP) as well as one ensemble course. Students must also attend weekly Departmental recitals for the semester, and perform for a jury at the end of the semester. Lab required. Prerequisite: Audition and consent of Instructor. 2 credit hours. (W)

MUSP 2237 Advanced Applied Commercial Music: Commercial Guitar  
Advanced private instruction in commercial guitar, with goals related to commercial music. Consists of one 150-minute lesson per week. Students must remain enrolled in three or more credit hours of music courses (MUSB, MUSC, MUSI, MUSP) as well as one ensemble course. Students must also attend weekly Departmental recitals for the semester, and perform for a jury at the end of the semester. Lab required. Prerequisite: Audition and consent of Instructor. 2 credit hours. (W)

MUSP 2249 Advanced Applied Commercial Music: Percussion  
Advanced private instruction in percussion, with goals related to commercial music. Consists of one 150-minute lesson per week. Students must remain enrolled in three or more credit hours of music courses (MUSB, MUSC, MUSI, MUSP) as well as one ensemble course. Students must also attend weekly Departmental recitals for the semester, and perform for a jury at the end of the semester.
semester. Lab required. Prerequisite: Audition and consent of Instructor. 2 credit hours. (W)

**NCBI 001A Integrated Reading and Writing Boot Camp** *(See online catalog for course description)*

**NCBI 002A Integrated Reading and Writing Refresher** *(See online catalog for course description)*

**NCBM 002A Developmental Refresher** *(See online catalog for course description)*

**NCBM 005A Mastery Extension for Beginning Algebra** *(See online catalog for course description)*

**NCBM 010A Mastery Extension for Intermediate Algebra** *(See online catalog for course description)*

**NCBM 0032 Refresher Lab for Contemporary Mathematics (Quantitative Reasoning)** *(See online catalog for course description)*

**NCBM 0042 Refresher Lab for Elementary Statistical Methods** *(See online catalog for course description)*

**NCBR 001A Developmental Refresher** *(See online catalog for course description)*

**NCBW 001A Developmental Refresher** *(See online catalog for course description)*

**NURA 1160 Clinical-Nursing Aide and Patient Care 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. Prerequisite: NURA 1301 or consent of Program Director. 1 credit hour. (W)

**NURA 1301 Nurse Aide for Health Care**
Knowledge, skills, and abilities essential to provide basic care to residents of long-term care facilities. Topics include resident's rights, communication, safety, observation, reporting and assisting residents in maintaining basic comfort and safety. Emphasis is on effective interaction with members of the health care team, restorative services, mental health, and social service's needs. Lab required. 3 credit hours. (W)

**OSHT 1305 OSHA Regulations - Construction Industry**
A study of Occupational Safety and Health Administration (OSHA) regulations pertinent to the construction industry. Lab required. 3 credit hours. (W)

**PHED 1100 Beginning Weight Training**
Introduction to weight training and body building; learn the basic techniques for strength development and cardiovascular conditioning. Various weight machines, free weights and aerobic machines are used to establish an individual fitness program. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of PHED course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**PHED 1102 Intermediate Weight Training**
Designed for the individual who has experience in basic weight training skills and wants to increase their knowledge of training techniques and conditioning. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of PHED course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**PHED 1104 Beginning Jogging and Fitness**
Develops cardiovascular endurance, flexibility and strength through jogging, stretching and weight training. Physical fitness assessment leads to development of an individual fitness program. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of PHED course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**PHED 1106 Walking and Fitness**
Improve cardiovascular fitness, muscle tone, and flexibility through a vigorous walking and conditioning program. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of PHED course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**PHED 1111 Basketball**
Develops basic skills and strategies through knowledge of the history, rules, and terminology and through participation in game situations. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of PHED course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

**PHED 1112 Soccer**
Develops the basic skills and strategies through knowledge of the history, rules and terminology and through participation in game situations. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of PHED course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.
PHED 1115 Archery
Investigates the basic techniques, rules and scoring as well as the history and terminology of archery. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of PHED course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

PHED 1117 Beginning Tennis
Stresses rules, scoring and fundamental techniques for beginners. Participation by skill level for singles and doubles play is made to ensure vigorous activity for cardiovascular fitness. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of PHED course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

PHED 1118 Intermediate Tennis
Develops and improves each skill level in serving, forehand and backhand drives, lobs and volleys. Performance strategies for both singles and doubles are drilled. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of PHED course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

PHED 1119 Intermediate Archery
Investigates intermediate level techniques for refinement of basic archery shooting skills and participation in competitive target shooting. The class is designed to help students learn more advanced techniques in the sport of archery through hands-on application of using the bow and arrow through lecture, demonstration, and practice of archery skills. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of PHED course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

PHED 1123 Beginning Golf
Stresses basic skills, history, terminology and scoring of golf. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of PHED course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

PHED 1125 Bowling
Teaches ball selection, stance, four-step approach, rules, and scoring procedures. Emphasis on game situations. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of PHED course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

PHED 1129 Introduction to Hatha Yoga
Practice of yogic postures, or "asana," defined as the physical positioning that coordinates breathing with moving and holding still for the purpose of both stretching and strengthening parts of the body. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of PHED course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

PHED 1130 Intermediate Hatha Yoga
The refinement of the asanas (postures) covered in PHED 1129, with emphasis on breath work. Introduces more advanced asanas; emphasis on integrating yoga into daily routines at home and work. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of PHED course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

PHED 1142 Varsity Condition I
Presentation of current scientific and technical information related to a particular activity with emphasis on developing health and skill related fitness, as well as fundamental skills. 1 credit hour. (A)

PHED 1147 Beginning Aerobic Kickboxing/Karate
Cardiovascular and body conditioning are acquired through the use of karate and martial arts techniques set to music and integrating punching bags. 1 credit hour. (A) Note: A student may receive up to 4 credit hours of any combination of PHED course numbers in the 1100-1148 range; however, the same course cannot be taken more than twice.

PHED 1164 Introduction to Physical Fitness and Wellness
This course will provide an overview of the lifestyle necessary for fitness and health. Student will participate in physical activities and assess their fitness status. Students will be introduced to proper nutrition, weight management, cardiovascular health, flexibility, and strength training. Additionally, this course introduces basic concepts of fitness, nutrition, health promotion, and disease prevention. Includes the study and practices of activities and principles that promote fitness and wellness. 1 credit hour. (A)

PHED 1301 Foundations of Kinesiology
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. 3 credit hours (A)

PHED 1304 Personal/Community Health
This course provides an introduction to the fundamentals, concepts, strategies, applications, and contemporary trends related to understanding personal

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Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
and/or community health issues. This course also focuses on empowering various populations with the ability to practice healthy living, promote healthy lifestyles, and enhance individual well-being. 3 credit hours (A)

PHED 1306  First Aid
Instruction and practice for emergency care. Designed to enable students to recognize and avoid hazards within their environment, to render intelligent assistance in case of accident or sudden illness, and to develop skills necessary for the immediate and temporary care of the victim. Successful completion of the course may enable the student to receive a certificate from a nationally recognized agency, the American Heart Association. 3 credit hours. (A)

PHED 1336  Introduction to Sports Management
The course will introduce basic principles of administration, marketing, management, and operations in relation to the various careers in sports management. An overview of the sports industry will be introduced. 3 credit hours. (A)

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. Lab required. 3 credit hours. (A)

PHED 2142  Varsity Condition II
Presentation of current scientific and technical information related to a particular activity with emphasis on developing advanced health and skill related fitness, as well as fundamental skills. Prerequisite: PHED 1142. 1 credit hour. (A)

PHED 2356  Care and 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, intermediate and long-term care of injuries, and administration procedures in athletic training. 3 credit hours. (A)

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. Additionally, texts studied will be from ancient, medieval, and modern sources. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

PHIL 1304  Introduction to World Religions
A comparative study of world religions, including but not limited to Hinduism, Buddhism, Judaism, Christianity, and Islam. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

PHIL 1306  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. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

PHIL 1308  Introduction to Social and Political Philosophy
A study of major issues in social and political theory and/or the work of major philosophical figures in this area. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

PHIL 2321  Philosophy of Religion
A study of the major issues in the philosophy of religion such as the existence and nature of God, the relationships between faith and reason, the nature of religious language, religious experience, and the problem of evil. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

PHOT 6880  Introduction to Adobe AfterEffects - Mac
Create cinematic visual effects and sophisticated motion graphics. Prerequisite: Familiarity with using computer. Required Materials: Text

PHTC 1300  Digital Photography II
An introduction to computer and software instruction for imaging. Includes color, gray scale, image conversion, presentation, and ethics. Lab required. Prerequisite: ARTS 2348. 3 credit hours. (W)

PHTC 1311  Fundamentals of Photography/Digital
An introduction to camera operation and image production, composition, correct exposure and proper lighting. Lab required. 3 credit hours. (W)

PHTC 1341  Color Photography I
Examination of color theory as it applies to photography. Emphasis on color concepts and the intricacies of seeing

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PHTC 1343  Expressive Photography
A study of formal, professional, and individual uses of photography by applying photographic technology to personalized needs. Emphasis on creative visual thinking and problem solving and the exploration of personal vision. Lab required. 3 credit hours. (W)

PHTC 1345  Illustrative Photography I
Instruction in the technical aspects involved in commercial photography. Topics include lighting equipment, techniques of production photography, reproduction principles, illustrative techniques, and advertising. Lab required. Prerequisite: PHTC 1353. 3 credit hours. (W)

PHTC 1347  Landscape Photography
Skill development in the inspection of the landscape visually and photographically utilizing various camera formats. Topics include exploration of historic, geographical, and cultural locations, and review of landscape photographers. Lab required. Prerequisite: ARTS 2348 or ARTS 2356 or PHTC 1311. 3 credit hours. (W)

PHTC 1351  Photojournalism I
Presentation of photographic techniques used by photojournalists in newspapers, magazines, trade publications and digital media to include news, feature, sports, editorial portraits, and photo essays. Includes a study of layout design and the freelance market. Lab required. Prerequisite: ARTS 2348 or ARTS 2356 or PHTC 1311. 3 credit hours. (W)

PHTC 1353  Portraiture I
Skill development in the photographic principles of portrait lighting, posing, and subject rapport. This is a foundation course in photographic portraiture. Assignments are designed to provide both aesthetic challenges as well as comprehensive studio technique. All students must participate in class demos and stick close to prescribed procedures on assignments in order to maintain studio privileges. There will be a mixture of color and black and white materials used, with accent on studio time rather than darkroom or computer time. Lab required. Prerequisite: ARTS 2348 or ARTS 2356 or PHTC 1311. 3 credit hours. (W)

PHTC 1371  Book, Design, and Presentation
Structure and creation of promotional material and one-of-a-kind material, with emphasis on composition and design elements. Lab required. 3 credit hours. (W)

PHTC 2331  Architectural Photography
Study of the equipment, processes, and procedures necessary for the photography of building exteriors and interiors, dusk/night and night architectural landscapes, and construction progress. Lab required. Prerequisite: ARTS 2348 or ARTS 2356 or PHTC 1311. 3 credit hours. (W)

PHTC 2340  Photographic Studio Management
In-depth study of photography business management, pricing, market analysis, promotion, networking, job acquisition, and photographic equipment analysis. Lab required. 3 credit hours. (W)

PHTC 2342  Fashion Photography
Skill development in fashion photography in terms of trends and techniques included in studio and location work. Emphasizes model direction and lighting control. Lab required. Prerequisite: PHTC 1353. 3 credit hours. (W)

PHTC 2343  Portfolio Development
A culmination experience for the evaluation of the student's photographic competencies. Includes association with a professional photographic organization, completion of portfolio, professional self-presentation, comprehensive exam, and seminars in areas of photographic interest. Prerequisite: Consent of Associate Dean. Lab required. 3 credit hours. (W)

PHTC 2349  Digital Photography III
Advanced concepts in the use of the computer and software for photographic manipulation and output. Lab required. Prerequisites: PHTC 1300 or ARTS 2349. 3 credit hours. (W)

PHTC 2353  Portraiture II
Advanced concepts in the study of principles of effective portraiture with specific emphasis on unique presentation and environmental and location studies. Lab required. Prerequisite: PHTC 1353. 3 credit hours. (W)

PHTC 2371  Video Production for Photographers
This is a foundation course in professional video production for photographers, including video capture, editing, sound recording, color grading, and delivery. Lab required. Prerequisite: ARTS 2348. 3 credit hours. (W)

PHTC 2380  Cooperative Education - Commercial Photography
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Prerequisite: Consent of Associate Dean. 3 credit hours. (W)
PHYS 1401 College Physics I
Lecture: 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. Lab: Laboratory activities will reinforce fundamental principles of physics, using algebra and trigonometry; the principles and applications of classical mechanics and thermodynamics, including harmonic motion, mechanical waves and sound, physical systems, Newton's Laws of Motion, and gravitation and other fundamental forces; emphasis will be on problem solving. Lab required. Prerequisite: PHYS 1401. 4 credit hours. (A)

PHYS 1402 College Physics II
Lecture: 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: 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 required. Prerequisite: PHYS 1401. 4 credit hours. (A)

PHYS 1403 Stars and Galaxies
Introduction to stars and galaxies; basic tools and concepts in astronomy and physics are discussed. Subjects studied include stellar evolution, supernovae, black holes, neutron stars, galaxies, and quasars. Laboratory exercises, night observations, planetarium and observatory visits combine to enhance lecture material. Lab required. Prerequisite: Meet TSI standard for MATH 0310, and TSI college-readiness standard for Reading; or equivalent. 4 credit hours. (A)

PHYS 1404 Solar System
Introduction to the solar system; basic tools and concepts in astronomy and physics are discussed. Subjects studied include planets, moons, asteroids, comets, solar system formation, and solar system exploration. Laboratory exercises, night observations, planetarium and observatory visits combine to enhance lecture material. Lab required. Prerequisite: Meet TSI standard for MATH 0310, and TSI college-readiness standard for Reading; or equivalent. 4 credit hours. (A)

PHYS 1405 Conceptual Physics
This course presents concepts of classical and modern physics with application to biology and health sciences.

What students should bring to this course is curiosity about how the world works. Intended for liberal arts, health science, or any majors. Lab required. Prerequisite: Meet TSI standard for MATH 0310, and TSI college-readiness standard for Reading; or equivalent. 4 credit hours. (A)

PHYS 1410 Physics of Music and Sound
This course is a study of the physics governing production, transmission and perception of sound. The focus is on the physical characteristics of sound, as well as the basic physical relationships that govern all vibrations and waves. We will also consider how sound is affected by the environment (acoustics) and how sound is physically and physiologically perceived. Laboratory exercises and classroom demonstrations combine to enhance lecture material. Lab required. Prerequisite: Meet TSI standard for MATH 0310, and TSI college-readiness standard for Reading; or equivalent. 4 credit hours. (A)

PHYS 1415 Physical Science I
Investigation of everyday phenomena of the physical world, which helps students to achieve a well-grounded understanding of selected science concepts as well as the skills that enable and encourage rational independent thinking. Lab required. Prerequisite: Meet TSI standard for MATH 0310, and TSI college-readiness standard for Reading; or equivalent. 4 credit hours. (A)

PHYS 1417 Physical Science II
Investigation of topics in physics, chemistry, geology, and meteorology in the context of a one-semester astronomy course. Topics will include: Celestial measurement of time, calendars, and seasons; geology and meteorology of the Earth, Moon, and planets; Chemistry and physics of stars and galaxies; and the interdisciplinary question of life beyond Earth. Laboratory exercises and night observations combine to enhance lecture material. Lab required. Prerequisite: Meet TSI standard for MATH 0310, and TSI college-readiness standard for Reading; or equivalent. 4 credit hours. (A)

PHYS 2389 Academic Co-op Physics
Integrates on-campus study with practical hands-on work experience in physics. In conjunction with class seminars, the student will set specific goals and objectives in the study of physics. Contact the Cooperative Work Experience Office. 3 credit hours. (A)

PHYS 2425 University Physics I
Lecture: Fundamental principles of physics, using calculus for science, computer science, and engineering majors; the principles and applications of classical and modern mechanics, including harmonic motion and physical systems, and the laws of thermodynamics; and emphasis on problem solving. Lab: Basic laboratory experiments supporting theoretical principles presented in the lecture
section 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. Lab required. Prerequisite: MATH 2413 equivalent within the last five years with a grade of "C" or better. Prerequisite/Concurrent enrollment: MATH 2414 equivalent. 4 credit hours. (A)

PHYS 2426 University Physics II
Lecture: 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, and modern physics. Lab: Laboratory experiments 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 required. Prerequisites: MATH 2414 equivalent, and PHYS 2425 within the last five years with a grade of "C" or better. 4 credit hours. (A)

PLAB 1160 Clinical - Phlebotomy
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills. Direct supervision is provided by the clinical professional. Prerequisite: PLAB 1323. 1 credit hours. (W)

PLAB 1323 Phlebotomy
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. Lab required. 3 credit hours. (W)

POFI 2301 Word Processing-MS Word
Word processing software focusing on business applications. Lab required. Prerequisite/ Concurrent enrollment: POFI 1329. 3 credit hours. (W)

POFI 2331 Desktop Publishing for the Office-MS Office
In-depth coverage of desktop publishing terminology, text editing, and use of design principles. Emphasis on layout techniques, graphics, multiple page displays, and business applications. Lab required. Prerequisite: POFI 2301. 3 credit hours. (W)

POFT 1307 Proofreading and Editing
Instruction in proofreading and editing skills necessary to assure accuracy in business documents. Lab required. 3 credit hours. (W)

POFT 1319 Records and Information Management I
Introduction to basic records information management systems including manual and electronic filing. Lab required. 3 credit hours. (W)

POFT 1329 Beginning Keyboarding
Skill development of keyboarding techniques. Emphasis on development of acceptable speed and accuracy levels and formatting basic documents. 3 credit hours. (W)

POFT 1349 Administrative Office Procedures II
In-depth coverage of office procedures with emphasis on decision-making, goal setting, management theories, and critical thinking. To be completed during the last semester of the Business Office Support Systems degree or certificate. Lab required. Prerequisites: ITSC 1309, POFI 2301, POFT 1307, POFT 1319, and POFT 2301. 3 credit hours. (W)

POFT 1380 Cooperative Education-Administrative Assistant and Secretarial Science, 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. Contact the Cooperative Work Experience Office. Prerequisite: Consent of Associate Dean. 3 credit hours. (W)

POFT 2301 Intermediate Keyboarding
A continuation of keyboarding skills emphasizing acceptable speed, and accuracy levels and formatting documents. Lab required. Prerequisite: POFT 1329. 3 credit hours. (W)

POFT 2303 Speed and Accuracy Building
Review, correct, and improve keyboarding techniques for the purpose of increasing speed and improving accuracy. Lab required. Prerequisite: POFT 1329. 3 credit hours. (W)

POFT 2307 Business Correspondence and Communication
Development of writing and presentation skills to produce effective business communications. Lab required. Prerequisite: POFT 1329. 3 credit hours. (W)

POFT 2380 Cooperative Education-Administrative Assistant and Secretarial Science, 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. Contact the Cooperative Work Experience Office. Prerequisite: Consent of Associate Dean. 3 credit hours. (W)

**PSGT 1205 Neurophysiology of Sleep**
Review of the human central nervous system as related to sleep. Emphasis on associated wave patterns and collection and utilization of sleep histories. Major Requirement: AAS - Polysomnographic Technology. 2 credit hours. (W)

**PSGT 1215 Introduction to Polysomnography**
Introduction to the history of sleep medicine and the role of the technologist in current practice settings. Lab required. Major Requirement: AAS - Polysomnographic Technology. 2 credit hours. (W)

**PSGT 1260 Certificate Clinical I-Polysomnography**
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: Admitted to the Certificate - Polysomnographic Technology Program. Corequisite: PSGT 1400. Major Requirement: Certificate - Polysomnographic Technology. 2 credit hours. (W)

**PSGT 1310 Neuroanatomy and Physiology**
Basic neuroanatomy and physiology. Includes neurologic history, neurologic exam, and diagnostic tools applied to the study of various neurologic disorders. Major Requirement: AAS - Polysomnographic Technology. 3 credit hours. (W)

**PSGT 1340 Sleep Disorders**
Disorders that affect sleep. Includes insomnia, circadian rhythm disorders, narcolepsy, sleep disordered breathing, REM Behavior, movement and neuromuscular disorders, medical, and psychiatric. Prerequisite: PSGT 1310. Major Requirement: AAS or Certificate - Polysomnographic Technology. 3 credit hours. (W)

**PSGT 1360 AAS Clinical I-Polysomnography**
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: PSGT 1400. Major Requirement: AAS-Polysomnographic Technology. 3 credit hours. (W)

**PSGT 1400 Polysomnography I**
Introduction to polysomnographic technology. Includes terminology, instrumentation, patient safety, infection control, recording and monitoring techniques, documentation, professional issues, and patient-technologist interactions. Lab required. Major Requirement: AAS or Certificate - Polysomnographic Technology. 4 credit hours. (W)

**PSGT 2205 Sleep Scoring and Staging**
Development of skills for sleep scoring, staging, and record preparation. Lab required. Prerequisite: PSGT 1400. Major Requirement: AAS or Certificate - Polysomnographic Technology. 2 credit hours. (W)

**PSGT 2250 Infant and Pediatric Polysomnography**
Sleep physiology and the normal sleep patterns of the infant and pediatric population. Includes opportunities to perform a pediatric study. Lab required. Prerequisite: PSGT 1400. Major Requirement: AAS or Certificate - Polysomnographic Technology. 2 credit hours. (W)

**PSGT 2260 Certificate Clinical II - Polysomnography**
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: PSGT 1260. Major Requirement: Certificate - Polysomnographic Technology. 2 credit hours. (W)

**PSGT 2271 Pharmacology for Polysomnography**
Discusses the basic principles of pharmacology and the clinical and pharmacological treatment of sleep disorders. Addresses the use of sleep medication in children, adolescents, and the elderly. Examines the administration, mode of action, and the physiological effects of pharmacological agents on sleep. Prerequisite: PSGT 1205. Major Requirement: AAS - Polysomnographic Technology. 2 credit hours. (W)

**PSGT 2272 Polysomnography Exam Preparation**
Comprehensive review to optimize polysomnography credentialing exam success. Lab required. Prerequisite: Consent of Program Coordinator. Major Requirement: AAS or Certificate - Polysomnographic Technology. 2 credit hours. (W)

**PSGT 2360 AAS Clinical II - Polysomnography**
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: PSGT 1360. Major Requirement: AAS Polysomnographic Technology. 3 credit hours. (W)

**PSGT 2361 AAS Clinical III - Polysomnography**
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: PSGT
2360. Major Requirement: AAS Polysomnographic Technology. 3 credit hours. (W)

PSGT 2374 Clinical Sleep Education
Overview of the role of the Clinical Sleep Educator, including patient education delivery styles, examination of patient learning styles, and a review to optimize credentialing exam success on the Certification in Clinical Sleep Health (CASH) Exam. Lab required. Prerequisite: Consent of Program Director. 3 credit hours. (W)

PSGT 2411 Polysomnography II
Current practices in polysomnography. Includes the use of specialized equipment used to record and monitor various physiological parameters involved with sleep testing. Emphasizes sleep disorders, theory of testing and treatment procedures, and analysis of polysomnography data. Lab required. Prerequisite: PSGT 1400. Major Requirement: AAS or Certificate - Polysomnographic Technology. 4 credit hours. (W)

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. Professional chef uniform and kitchen tools required. Lab required. Prerequisite: Mandatory Culinary/Pastry Arts Orientation. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

PSTR 1305 Breads and Rolls
Concentration on fundamentals of chemically and yeast raised breads and rolls. Instruction on commercial preparation of a wide variety of products. Professional chef uniform and kitchen tools required. Lab required. Prerequisites: CHEF 1305 with a grade of "C" or better and PSTR 1301 with a grade of "C" or better. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

PSTR 1306 Cake Decorating I
Introduction to skills, concepts and techniques of cake decorating. Professional chef uniform and kitchen tools required. Lab required. Prerequisites: CHEF 1305 with a grade of "C" or better and PSTR 1301 with a grade of "C" or better. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

PSTR 1310 Pies, Tarts, Teacakes, and Cookies
Focus on preparation of American and European style pie and tart fillings and dough, cookies, teacakes, custard and batters. Instruction of finishing and presentation techniques. Professional chef uniform and kitchen tools required. Lab required. Prerequisites: CHEF 1305 with a grade of "C" or better and PSTR 1301 with a grade of "C" or better. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

PSTR 1312 Laminated Dough, Pate a Choux, and Donuts
Focus on preparation of laminated dough to include puff pastry, croissant, Danish and a variety of pate a choux products and donuts. Fillings and finishing techniques included. Professional chef uniform and kitchen tools required. Lab required. Prerequisite: PSTR 1310. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

PSTR 1340 Plated Desserts
Preparation and service of hot and cold desserts with a focus on individual desserts, a la minute preparations, and numerous components within one preparation. Emphasis on station organization, timing, and service coordination for restaurant dessert production. Professional chef uniform and kitchen tools required. Lab required. Prerequisites: CHEF 1305 with a grade of "C" or better and PSTR 1301 with a grade of "C" or better. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

PSTR 1342 Quantity Bakeshop Production
Advanced baking techniques to include volume production of a variety of breads and desserts. Lab required. Prerequisite: PSTR 1343. 3 credit hours. (W)

PSTR 1343 Bakery Operations and Management
Introduction to management, marketing, supervision, and sanitation principles required in retail bakery operations. Emphasis on cost control, pricing, computer usage, and personnel issues. Lab required. Prerequisite: PSTR 1310. 3 credit hours. (W)

PSTR 2301 Chocolates and Confections
Production and decoration of traditional truffles, marzipan, molded and hand-dipped chocolate, caramels, nougats, and pate de fruit. Professional chef uniform and kitchen tools required. Lab required. Prerequisites: CHEF
1305 with a grade of "C" or better and PSTR 1301 with a grade of "C" or better. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

PSTR 2307 Cake Decorating II
A course in decoration of specialized and seasonal products. Professional chef uniform and kitchen tools required. Lab required. Prerequisite: PSTR 1306 with a grade of "C" or better. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

PSTR 2331 Advanced Pastry Shop
A study of classical desserts, French and international pastries, hot and cold desserts, ice creams and ices, chocolate work, and decorations. Emphasis on advanced techniques. Professional chef uniform and kitchen tools required. Lab required. Prerequisites: PSTR 1305, PSTR 1306, PSTR 1310, PSTR 2301 and PSTR 2307. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

PSTR 2380 Cooperative Education-Baking and Pastry Arts/Baker/Pastry Chef
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Prerequisites: CHEF 1305 with a grade of "C" or better, PSTR 1301 with a grade of "C" or better, and completion of 9 credit hours in the major core of PSTR. 3 credit hours. (W)

PSYC 1100 Learning Framework
A study of the 1) research and theory in the psychology of learning, cognition, and motivation, 2) factors that impact learning, and 3) application of learning strategies. Theoretical models of strategic learning, cognition, and motivation serve as the conceptual basis for the introduction of college-level student academic strategies. Students 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. 1 credit hour. (A) Note: Students may only take one of the following: EDUC 1200, EDUC 1300, PSYC 1100 or PSYC 1300.

PSYC 1300 Learning Framework
A study of the 1) research and theory in the psychology of learning, cognition, and motivation, 2) factors that impact learning, and 3) application of learning strategies. Theoretical models of strategic learning, cognition, and motivation serve as the conceptual basis for the introduction of college-level student academic strategies. Students 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. 3 credit hours. (A) Note: Students may only take one of the following: EDUC 1200, EDUC 1300, PSYC 1100 or PSYC 1300.

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. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

PSYC 2306 Human Sexuality
This course will provide an overview of the broad field of human sexuality. Topics will be covered from various perspectives - biological, sociological, anthropological, etc., but will focus primarily on the psychological perspective. The goal is for each student to learn factual, scientifically-based information that will provoke thought and contribute to his/her own decision-making on sexual issues outside of the classroom. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A) Note: Students may take either PSYC 2306 or SOCI 2306 but not both.

PSYC 2314 Life-Span Growth and Development
Life-Span Growth and Development is a study of social, emotional, cognitive and physical factors and influences of a developing human from conception to death. Prerequisites: PSYC 2301, and meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

PSYC 2315 Psychology of Adjustment
Gives students deeper insight into their lives and those around them. Includes enhancing self awareness, stress coping, healthy relationships and dealing with loss. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)
PSYC 2316  Psychology of Personality
In-depth study of theories of personality with practical application of each. Methods of personality measurement and assessment are also included. Prerequisites: PSYC 2301, and meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

PSYC 2319  Social Psychology
Research and theory regarding social factors that influence human behavior. Focuses on attitudes, interpersonal attraction, aggression, conformity, communication, values, roles and group processes. These principles will be applied to the human experience. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours (A)

PSYC 2389  Academic Co-op Psychology
Integrates on-campus study with practical hands-on work experience in psychology. In conjunction with class seminars, the student will set specific goals and objectives in the study of psychology. Contact the Cooperative Work Experience Office. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

RBTC 1405  Robotic Fundamentals
Formerly RBTC 1305 An introduction to flexible automation. Topics include installation, repair, maintenance, and development of flexible robotic manufacturing systems. Lab required. 4 credit hours. (W)

RBTC 2345  Robot Application, Set-up, and Testing
A course that provides the student with laboratory experience in the installation, set-up, and testing of robotic cells. Topics include maintenance. Prerequisite: RBTC 1305. Lab required. 3 credit hours. (W)

RELE 1300  Contract Forms and Addenda
Promulgated Contract Forms, which shall include, but is not limited to, unauthorized practice of law, broker-lawyer committee, current promulgated forms, commission rules governing use of forms and case studies involving use of forms. Prerequisite: RELE 1311. 3 credit hours. (W)

RELE 1301  Principles of Real Estate I
A beginning overview of licensing as a real estate broker or salesperson. Includes ethics of practice as a license holder, titles to and conveyance of real estate, legal descriptions, deeds, encumbrances and liens, distinctions between personal and real property, appraisal, finance and regulations, closing procedures, and real estate mathematics. Covers at least three hours of classroom instruction on federal, state, and local laws relating to housing discrimination, housing credit discrimination, and community reinvestment. Fulfills at least 30 of 60 hours of required instruction for salesperson license. 3 credit hours. (W)

RELE 1303  Real Estate Appraisal
The central purposes and functions of an appraisal, social and economic determinants of value, appraisal case studies, cost, market data and income approaches to value estimates, final correlations, and reporting. 3 credit hours. (W)

RELE 1307  Real Estate Investments
Characteristics of real estate investments. Includes techniques of investment analysis, time-valued money, discounted and nondiscounted investment criteria, leverage, tax shelters, depreciation, and applications to property tax. 3 credit hours. (W)

RELE 1311  Law of Contracts
Elements of a contract, offer and acceptance, statute of frauds, specific performance and remedies for breach, unauthorized practice of law, commission rules relating to use of adopted forms and owner disclosure requirements. 3 credit hours. (W)

RELE 1315  Property Management
The role of the property manager, landlord policies, operational guidelines, leases, lease negotiations, tenant relations, maintenance, reports, habitability laws, and the Fair Housing Act. 3 credit hours. (W)

RELE 1319  Real Estate Finance
Monetary systems, primary and secondary money markets, sources of mortgage loans, federal government programs, loan applications, processes and procedures, closing costs, alternative financial instruments, equal credit opportunity laws affecting mortgage lending, Community Reinvestment Act, and the state housing agency. 3 credit hours. (W)

RELE 1321  Real Estate Marketing
Real estate professionalism and ethics; characteristics of successful salespersons; time management; psychology of marketing; listing procedures; advertising; negotiation and closing financing; and the Deceptive Trade Practices-Consumer Protection Act. 3 credit hours. (W)

RELE 1325  Real Estate Mathematics
Basic arithmetic skills. Includes mathematical logic, percentages, interest, time value of money, depreciation, amortization, proration, and estimation of closing statements. 3 credit hours. (W)

RELE 1338  Principles of Real Estate II
A continuing overview of licensing as a broker or salesperson. Includes ethics of practice as a license holder, titles to and conveyance of real estate, legal descriptions, deeds, encumbrances and liens, distinctions between
personal and real property, appraisal, finance and regulations, closing procedures, and real estate mathematics. Covers at least three hours of classroom instruction on federal, state, and local laws relating to housing, discrimination, housing credit discrimination, and community reinvestment. Fulfills at least 30 of 60 hours of required instruction for salesperson license. 3 credit hours. (W)

**RELE 1380 Cooperative Education - Real Estate**
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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

**RELE 2301 Law of Agency**
Law of agency including principal-agent and master-servant relationships, the authority of an agent, the termination of an agent's authority, the fiduciary and other duties of an agent, employment law, deceptive trade practices, listing or buying representation procedures, and the disclosure of an agency. 3 credit hours. (W)

**RELE 2331 Real Estate Brokerage**
A study of law of agency, planning and organization, operational policies and procedures, recruiting, selection and training of personnel, records and control, and real estate firm analysis and expansion criteria. 3 credit hours. (W)

**RELE 2381 Cooperative Education - Real Estate**
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. Contact the Cooperative Work Experience Office. 3 credit hours. (W)

**RNSG 1118 Transition to Professional Nursing Competencies**
Transition to professional nursing competencies in the care of patients throughout the lifespan. Validates proficiency in psychomotor skills and clinical reasoning in the performance of nursing procedures related to the concepts of: clinical judgment, comfort, elimination, fluid and electrolytes, nutrition, gas exchange, safety, functional ability, immunity, metabolism, mobility, tissue integrity. Includes health assessment and medication administration. This course lends itself to a concept-based approach. Prerequisite: Admission to the AAS - Nursing (RN) (LVN/Paramedic/Medic Bridge) Program. Major Requirement: AAS - Nursing (RN). 1 credit hour. (W)

**RNSG 1125 Professional Nursing Concepts I**
Introduction to professional nursing concepts and exemplars within the professional nursing roles: member of profession, provider of patient-centered care, patient safety advocate, and member of the health care team. Content includes clinical judgment, communication, ethical-legal, evidence-based practice, health promotion health information technology, patient-centered care, patient education, professionalism, safety, and team/collaboration. Emphasizes role development of the professional nurse. This course lends itself to a concept-based approach. Prerequisite: Admission to the AAS - Nursing (RN) Program. Corequisites: RNSG 1128, RNSG 1161, RNSG 1216 and RNSG 1430, or consent of Program Director. Major Requirement: AAS - Nursing (RN). 1 credit hour. (W)

**RNSG 1126 Professional Nursing Concepts II**
Expanding professional nursing concepts and exemplars within the professional nursing roles. Applying concepts of clinical judgment, ethical-legal, evidence-based practice, patient-centered care, professionalism, safety, and team/collaboration to the exemplars presented in the Health Care Concepts I course. Introduces concepts of leadership and management. Emphasizes role development of the professional nurse. This course lends itself to a concept-based approach. Prerequisites: RNSG 1125, RNSG 1128, RNSG 1161, RNSG 1216 and RNSG 1430, all with a grade of "C" or better, or consent of Program Director. Corequisites: RNSG 1533 and RNSG 2361, or consent of Program Director. Major Requirement: AAS - Nursing (RN). 1 credit hour. (W)

**RNSG 1128 Introduction to Health Care Concepts**
An introduction to concept-based learning with emphasis on selected pathophysiological concepts with nursing applications. Concepts include acid-base balance, fluid and electrolytes, immunity, gas exchange, perfusion, metabolism, coping, and tissue integrity. This course lends itself to a concept-based approach. Prerequisite: Admission to the AAS - Nursing (RN) Program or consent of Program Director. Major Requirement: AAS - Nursing (RN). 1 credit hour. (W)

**RNSG 1137 Professional Nursing Concepts III**
Application of professional nursing concepts and exemplars within the professional nursing roles. Utilizes concepts of clinical judgment, ethical-legal, evidence-based practice, patient-centered care, professionalism, safety, teamwork and collaboration. Introduces the concepts of quality improvement health information technology, and health care organizations. Incorporates concepts into role development of the professional nurse. This course lends itself to a concept-based approach. Lab required. Prerequisites: RNSG 1126, RNSG 1533 and RNSG 2361, all with a grade of "C" or better; or consent of Program Director. Corequisites: RNSG1538 and
RNSG 1161 Clinical I-Nursing-Registered Nurse Training
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. Course focuses on understanding and application of the nursing process, therapeutic communication, the development of critical thinking, patient/client advocacy, and safety to give comprehensive, quality patient-centered care using evidence-based outcomes to culturally and socially diverse patient/client systems and documentation of care. Development of teaching/learning plans to address patient/client health care needs. Collaborate with the interdisciplinary health care team to promote, maintain and restore optimal health status of patient/client systems. Prerequisite: Admission to the AAS - Nursing (RN) Program. Corequisites: RNSG 1125, RNSG 1128, RNSG 1216, RNSG 1430, or consent of Program Director. Major Requirement: AAS - Nursing (RN). 1 credit hour. (A)

RNSG 1163 Clinical - Nursing Transition from LVN/Paramedic/Medic
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. Course focuses on critical thinking and implementation of the nursing process to plan safe, comprehensive, care for patient/client systems with common physical and mental health needs; development and implementation of teaching/learning plans evidence-based data to address health promotion, maintenance, and restoration. Care includes measures to reduce risks and coordinate health resources in collaboration with a multi-disciplinary health care team to improve patient/client outcomes. Requires communication/documentation skills, patient/client advocacy, and development of clinical reasoning. Prerequisite: Admission to the AAS - Nursing (RN) (LVN/Paramedic/Medic Bridge) Program. Corequisites: RNSG 1118, RNSG 1128 and RNSG 1324. Major Requirement: AAS - Nursing (RN) (LVN/Paramedic/Medic Bridge) Program. 1 credit hour. (A)

RNSG 1216 Professional Nursing Competencies
Development of professional nursing competencies in the care of patients throughout the lifespan. Emphasizes psychomotor skills and clinical reasoning in the performance of nursing procedures related to the concepts of: clinical judgment, comfort, elimination, fluid and electrolytes, nutrition, gas exchange, safety, functional ability, immunity, metabolism, mobility, and tissue integrity. Includes health assessment and medication administration. This course lends itself to a concept-based approach. Prerequisite: Admission to the AAS - Nursing (RN) Program. Corequisites: RNSG 1125, RNSG 1128, RNSG 1161 and RNSG 1430; or consent of Program Director. Major Requirement: AAS - Nursing (RN). 2 credit hours. (W)

RNSG 1324 Concept-Based Transition to Professional Nursing Practice
Integration of previous health care knowledge and skills into the role development of the professional nurse as a provider of patient-centered care, patient safety advocate, member of health care team, and member of the profession. Emphasis is on clinical decision-making for patients and their families. Review of selected health care and professional nursing concepts with application through exemplars. Health care concepts include comfort, diversity, elimination, functional ability, human development, mobility, nutrition, sensory perception, sleep, coping, thermoregulation, tissue integrity, acid-base balance, clotting, cognition, fluid and electrolyte balance, gas exchange, immunity, metabolism, nutrition, grief, and perfusion. Professional nursing concepts include clinical judgment, communication, ethical-legal, evidence-based practice, health promotion, health information technology, patient-centered care, patient education, professionalism, safety, teamwork and collaboration. Introduces concept of leadership and management. This course lends itself to a concept-based approach. Prerequisite: Admission to the AAS - Nursing (RN) (LVN/Paramedic/Medic Bridge) Program, or consent of Program Director. Major Requirement: AAS - Nursing (RN) (LVN/Paramedic/Medic Bridge). 3 credit hours. (W)

RNSG 1430 Health Care Concepts I
In-depth coverage of foundational health care concepts with application through selected exemplars. Concepts include comfort, diversity, elimination, functional ability, human development, mobility, nutrition, sensory perception, sleep, thermoregulation, grief, and tissue integrity. Emphasizes development of clinical judgment skills in the beginning nurse. This course lends itself to a concept-based approach. Lab required. Prerequisite: Admission to the AAS - Nursing (RN) Program. Corequisites: RNSG 1125, RNSG 1128, RNSG 1161 and RNSG 1216, or consent of Program Director. Major Requirement: AAS - Nursing (RN). 4 credit hours. (W)

RNSG 1533 Health Care Concepts II
In-depth coverage of health care concepts with application through selected exemplars. Concepts include acid-base balance, coping, clotting, cognition, fluid and electrolytes, gas exchange, immunity, metabolism, nutrition, comfort, and perfusion. Provides continuing opportunities for development of clinical judgment skills.
The course lends itself to a concept-based approach. Lab required. Prerequisites: RNSG 1125, RNSG 1128, RNSG 1161, RNSG 1216 and RNSG 1430, all with a grade of "C" or better; or consent of Program Director. Corequisites: RNSG 1126 and RNSG 2361, or consent of Program Director. Major Requirement: AAS - Nursing (RN). 5 credit hours. (W)

RNSG 1538 Health Care Concepts III
In-depth coverage of health care concepts with nursing application through selected exemplars. Concepts include cellular regulation, end of life, immunity, interpersonal relationships, grief, human development, intracranial regulation, mood/affect, comfort, sexuality, mobility, and reproduction. Provides continuing opportunities for development of clinical judgment skills. This course lends itself to a concept-based approach. Lab required. Prerequisites: RNSG 1126, RNSG 1533 and RNSG 2361 all with a grade of "C" or better; or consent of Program Director. Corequisites: RNSG 1137 and RNSG 2362, or consent of Program Director. Major Requirement: AAS - Nursing (RN). 5 credit hours. (W)

RNSG 2138 Professional Nursing Concepts IV
Integration of professional nursing concepts and exemplars within the professional nursing roles. Synthesizes concepts of clinical judgment, ethical-legal, evidence-based practice, leadership and management, patient-centered care, professionalism, teamwork, and collaboration through exemplars presented in the Health Care Concepts courses. Emphasizes concept of quality improvement and introduces health policy. Incorporates concepts into role development of the professional nurse. This course lends itself to a concept-based approach. Lab required. Prerequisites: RNSG 1137, RNSG 1538 and RNSG 2362 all with a grade of "C" or better; or consent of Program Director. Corequisites: RNSG 2363 and RNSG 2539, or consent of Program Director. Major Requirement: AAS - Nursing (RN). 1 credit hour. (W)

RNSG 2361 Clinical II-Nursing-Registered Nurse Training
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. Course focuses on critical thinking and implementation of the nursing process to plan safe, comprehensive, care for patient/client systems with common physical and mental health needs; development and implementation of teaching/learning plans evidence based data to address health promotion, maintenance, and restoration. Care includes measures to reduce risks and coordinate health resources in collaboration with multi-disciplinary health care team to improve patient/client outcomes. Requires communication/documentation skills, patient/client advocacy, and development of clinical reasoning.

Prerequisites: RNSG 1125, RNSG 1128, RNSG 1161, RNSG 1216 and RNSG 1430, all with a grade of "C" or better; or consent of Program Director. Corequisites: RNSG 1126 and RNSG 1533, or consent of Program Director. Major Requirement: AAS - Nursing (RN). 3 credit hours. (A)

RNSG 2362 Clinical III-Nursing-Registered Nurse Training
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. Course focuses on application of critical reasoning and implementation of the nursing process to plan patient-centered care for patient/client systems with complex physiologic and psychosocial health needs/problems using evidence based interventions. Care will include measures to meet patient/client systems teaching/learning needs to promote and maintain optimal health status for the patient/client and their families. Course requires communication/documentation care given; clinical reasoning to manage and coordinate quality, comprehensive patient-centered care and access to health care resources. Prerequisites: RNSG 1126, RNSG 1533 and RNSG 2361 all with a grade of "C" or better; or consent of Program Director. Corequisites: RNSG 1137 and RNSG 1538, or consent of Program Director. Major Requirement: AAS - Nursing (RN). 3 credit hours. (A)

RNSG 2363 Clinical IV-Nursing-Registered Nurse Training
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, clinical reasoning, and concepts. Direct supervision is provided by the clinical professional. Course focuses on transition from student nurse to the roles/competencies and responsibilities of the professional nurse utilizing the nursing process to meet the advanced and integrated health needs of the patient/client systems within hospital and community. Promotion of healthy lifestyles with consideration for preferences of culturally and socially diverse patient/client systems in collaboration with the interdisciplinary health care team to promote and maintain optimal health status. Prerequisites: RNSG 1137, RNSG 1538 and RNSG 2362, all with a grade of "C" or better; or consent of Program Director. Corequisites: RNSG 2138 and RNSG 2539, or consent of Program Director. Major Requirement: AAS - Nursing (RN). 3 credit hours. (A)

RNSG 2539 Health Care Concepts IV
In-depth coverage of advanced health care concepts with nursing application through selected exemplars. Concepts include, cognition, immunity, clotting, fluid and electrolyte balance, gas exchange, metabolism, nutrition,
perfusion, tissue integrity, and interpersonal relationships. Continuing development of clinical judgment with integration of all health care concepts. This course lends itself to a concept-based approach. Lab required. Prerequisites: RNSG 1137, RNSG 1538 and RNSG 2362 all with a grade of "C" or better, or consent of Program Director. Corequisites: RNSG 2138 and RNSG 2363, or consent of Program Director. Major Requirement: AAS - Nursing (RN). 5 credit hours. (W)

RSPT 1160 Clinical I-Respiratory Care Therapist
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: Consent of Program Director. Corequisite: Consent of Program Director. Major Requirement: AAS - Respiratory Care. 1 credit hour. (W)

RSPT 1201 Introduction to Respiratory Care
An introduction to the field of respiratory care. Lab required. Prerequisite: Admission to the Respiratory Care Program. Corequisites: RSPT 1307 and RSPT 1410. Major Requirement: AAS-Respiratory Care. 2 credit hours. (W)

RSPT 1207 Cardiopulmonary Anatomy and Physiology
Anatomy and physiology of the cardiovascular and pulmonary systems. Prerequisite: Admission to the Polysomnographic Technology Program. 2 credit hours. (W)

RSPT 1237 Basic Dysrhythmia Interpretation
Study of electrophysiology of the heart and characteristics of cardiac dysrhythmias. 2 credit hours. (W)

RSPT 1307 Cardiopulmonary Anatomy and Physiology
Anatomy and physiology of the cardiovascular and pulmonary systems. Lab required. Prerequisite: Admission to the Respiratory Care Program. 3 credit hours. (W)

RSPT 1361 Clinical II-Respiratory Care Therapist
A health-related, work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: RSPT 1160 with a grade of C or better. Major Requirement: AAS - Respiratory Care. 3 credit hours. (W)

RSPT 1410 Respiratory Care Procedures I
Essential knowledge of the equipment and techniques used in the treatment of cardiopulmonary disease. Lab required. Prerequisite: Admission to the Respiratory Care Program. Major Requirement: AAS-Respiratory Care. 4 credit hours. (W)

RSPT 1411 Respiratory Care Procedures II
Develops essential knowledge and skills of airway care and mechanical ventilation. Lab required. Prerequisite: RSPT 1410 with a grade of C or better. Major Requirement: AAS - Respiratory Care. 4 credit hours. (W)

RSPT 2130 Respiratory Care Examination Preparation
Comprehensive review to optimize respiratory care credentialing exam success. Lab required. Prerequisites: RSPT 2255, RSPT 2353, and RSPT 2360; all with a grade of “C” or better. Corequisites: RSPT 2139, RSPT 2147, RSPT 2231, and RSPT 2361. Major Requirement: AAS - Respiratory Care. 1 credit hour. (W)

RSPT 2139 Advanced Cardiac Life Support
Advanced Cardiac Life Support (ACLS) with an emphasis on airway management. Designed to develop skills for resuscitation of the adult. Includes strategies for managing and stabilizing the cardiopulmonary arrested patient. May include certification based on American Heart Association standards. Prerequisites: RSPT 2255, RSPT 2353 and RSPT 2360; all with a grade of C or better. Corequisites: RSPT 2130, RSPT 2147, RSPT 2231 and RSPT 2361. Major Requirement: AAS - Respiratory Care. 1 credit hour. (W)

RSPT 2147 Specialties in Respiratory Care
Emerging and specialty practices in respiratory care. Additionally, this is an introduction to areas of interest in which the Respiratory Therapist may find application and/or employment. The depth of instruction will provide the indications, expected outcomes, hazards and methods for hyperbaric oxygen (HBO), extracorporeal membrane oxygenation (ECMO), nitric oxide (NO), sleep studies, nutritional assessment, metabolic monitoring, exercise/stress testing, and electroencephalographs. Also includes home care/rehabilitation, and fluid and electrolyte balance. Lab required. Prerequisites: RSPT 2255, RSPT 2353 and RSPT 2360; all with a grade of C or better. Major Requirement: AAS - Respiratory Care. 1 credit hour. (W)

RSPT 2217 Respiratory Care Pharmacology
A study of drugs that affect cardiopulmonary systems. Emphasis on classification, route of administration, dosages/calculations, and physiological interactions.
Prerequisites: RSPT 1160, RSPT 1201, RSPT 1307 and RSPT 1410; all with a grade of C or better. Corequisites: RSPT 1361, RSPT 1411 and RSPT 2310. Major Requirement: AAS - Respiratory Care. 2 credit hours. (W)

**RSPT 2231 Simulations in Respiratory Care**
Theory of clinical simulation examinations. Includes construction types, scoring, and mechanics of taking the computerized simulation examination. Prerequisite: RSPT 2255 with a grade of C or better. Major Requirement: AAS - Respiratory Care. 2 credit hours. (W)

**RSPT 2247 Specialties in Respiratory Care**
Emerging and specialty practices in respiratory care. An introduction to areas of interest in which the Respiratory Therapist may find application and/or employment. The depth of instruction will provide the indications, expected outcomes, hazards and methods for hyperbaric oxygen (HBO), extracorporeal membrane oxygenation (ECMO), nitric oxide (NO), sleep studies, nutritional assessment, metabolic monitoring, exercise/stress testing, and electroencephalograms. Also includes home care/rehabilitation, and fluid and electrolyte balance. Prerequisite: RSPT 2353. Major Requirement: AAS - Respiratory Care. 2 credit hours. (W)

**RSPT 2255 Critical Care Monitoring**
Advanced monitoring techniques used to assess a patient in the critical care setting. Lab required. Prerequisites: RSPT 1362 and RSPT 2471; both with a grade of “C” or better. Corequisites: RSPT 2353 and RSPT 2360. Major Requirement: AAS - Respiratory Care. 2 credit hours. (W)

**RSPT 2300 Cardiopulmonary Disease**
Etiology, pathogenesis, pathology, diagnosis, history, prognosis, manifestations, treatment, and detection of cardiopulmonary diseases. Lab required. Prerequisites: RSPT 1160, RSPT 1201, RSPT 1307 and RSPT 1410; all with a grade of C or better. Corequisites: RSPT 1361 and RSPT 1411. Major Requirement: AAS - Respiratory Care. 3 credit hours. (W)

**RSPT 2353 Neonatal/Pediatric Cardiopulmonary Care**
A study of neonatal and pediatric cardiopulmonary care. Lab required. Prerequisites: RSPT 1362 and RSPT 2471; both with a grade of C or better. Corequisites: RSPT 2255 and RSPT 2360. Major Requirement: AAS - Respiratory Care. 3 credit hours. (W)

**RSPT 2360 Clinical IV-Respiratory Care Therapist**
A health-related, work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: RSPT 1362 with a grade of “C” or better. Major Requirement: AAS - Respiratory Care. 3 credit hours. (W)

**RSPT 2361 Clinical V-Respiratory Care Therapist**
A health-related, work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: RSPT 2360 with a grade of C or better. Major Requirement: AAS - Respiratory Care. 3 credit hours. (W)

**RSPT 2471 Respiratory Care Procedures III**
Provides essential knowledge of advanced mechanical ventilation concepts, critical care assessment, quality control, and basic neonatal/pediatric assessment. Advanced mechanical ventilation concepts include: methods of weaning, advanced modes, and methods of non-invasive ventilation. Critical care assessment includes: basic ECG interpretation and chest tube drainage systems. Quality control includes: maintenance of ABG analyzers. Neonatal/Pediatric assessment includes: APGAR scoring, gestational age assessment, Silverman score, vital signs, and pediatric assessment methods. Lab required. Prerequisite: RSPT 1411 with a grade of C or better. Corequisite: RSPT 1362. Major Requirement: AAS - Respiratory Care. 4 credit hours. (W)

**RSTO 1304 Dining Room Service**
Introduces the principles, concepts, and systems of professional table service. Topics include dining room organization, scheduling, and management of food service personnel. Lab required. Prerequisite/Concurrent enrollment: CHEF 1314. 3 credit hours. (W) Note: Culinary lab classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds), reaching, bending, and working around open flames and with cleaning chemicals.

**RSTO 1325 Purchasing for Hospitality Operations**
Study of purchasing and inventory management of foods and other supplies to include development of purchase specifications, determination of order quantities, formal and informal price comparisons, proper receiving procedures, storage management, and issue procedures. Emphasis on product cost analysis, yields, pricing formulas, controls, and record keeping at each stage of the purchasing cycle. Lab required. Prerequisites: CHEF 1305 and HAMG 1321. 3 credit hours. (W)

**RSTO 2307 Catering**
Principles, techniques, and applications for both on-premises, off-premises, and group marketing of catering operations including food preparation, holding, and transporting techniques. Lab required. Prerequisite: HAMG 2301; or consent of Associate Dean. 3 credit hours. (W)

**RTVB 1329 Scriptwriting**
Writing scripts for film and electronic media. Emphasizes format and style for commercials, public service

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Please refer to [http://www.collin.edu/academics/programs/index.html](http://www.collin.edu/academics/programs/index.html) for the most current information.
announcements, promos, news, and documentaries. Lab required. 3 credit hours. (W)

RTVB 2330 Film and Video Editing
Digital media editing for the preparation and completion of shorts, trailers, documentaries, and features. Prerequisite: ARTV 1351. Lab required. 3 credit hours. (W)

RTVB 2340 Portfolio Development
Preparation and presentation of a portfolio suitable for employment in the media industry. This course is intended to be taken in the last semester. Lab required. Prerequisite: Consent of Associate Dean. 3 credit hours. (W)

RUSS 1411 Beginning Russian I
Introduction to the basic skills of speaking, reading, writing, and listening with attention to selected aspects of Russian culture; designed for students with little or no previous language training. Instruction is enhanced by the use of tapes, slides, computer software, and video cassettes. Lab required. 4 credit hours. (A)

RUSS 1412 Beginning Russian II
Continuation of RUSS 1411. Lab required. Prerequisite: RUSS 1411 or consent of Associate Dean. 4 credit hours. (A)

RUSS 2311 Intermediate Russian I
Intensive review of Russian grammar followed by continued development of speaking, listening, reading and writing skills. Instruction enhanced by slides, tapes, and other audio-visual aids. Prerequisite: RUSS 1412 or consent of Associate Dean. 3 credit hours. (A)

RUSS 2312 Intermediate Russian II
Continuation of RUSS 2311. Instruction enhanced by slides, tapes, and other audio-visual aids. Prerequisite: RUSS 2311 or consent of Associate Dean. 3 credit hours. (A)

SGNL 1401 Beginning American Sign Language I
Introduction to American Sign Language, Deaf culture, and to a brief history of sign and culture. Includes development of expressive and receptive sign skills, together with the learning of numbers, sign vocabulary, and the manual alphabet. Class is conducted primarily without voice. Lab required. 4 credit hours. (A)

SGNL 1402 Beginning American Sign Language II
Study of sign vocabulary, numbers, fingerspelling and Deaf culture. Emphasizes further development of receptive skills, expressive skills, application of rudimentary syntactical and grammatical structures, and an understanding of Deaf and Hearing cultures. Class is conducted primarily without voice. Lab required.

Prerequisite: SGNL 1401 or credit by exam. 4 credit hours. (A)

SGNL 2301 Intermediate American Sign Language I
Introduction to the intermediate skills needed in the production and comprehension of American Sign Language used in everyday communication. The course gives students an overview of the history, values, and social norms of the Deaf community in the United States. This course integrates and refines expressive and receptive skills in American Sign Language, including recognition of sociolinguistic variations. Class is conducted primarily without voice. Lab required. Prerequisite: SGNL 1402 with a grade of "C" or better. 3 credit hours. (A)

SGNL 2302 Intermediate American Sign Language II
A continuation of SGNL 2301, American Sign Language Intermediate II provides a review and application of conversational skills in American Sign Language and provides intensive practice in interpreting from signing to voice as well as from voice to signing, while increasing vocabulary. The course provides an introduction to American Sign Language literature and folklore. (The course includes grammar and vocabularies used in "real life" situations.) Lab required. Prerequisite: SGNL 2301 with a grade of "C" or better. 3 credit hours. (A)

SLNG 1207 Intra-lingual Skills Development for Interpreters
Development of intra-lingual (English to English) skills necessary for future development of inter-lingual (English to American Sign Language [ASL]/ASL to English) skills. Focus on linguistic and cognitive skills development in areas of paraphrasing, summarizing, main idea identification, comprehension, memory, delayed repetition, multi-tasking, vocabulary, and cultural literacy. Lab required. Offered spring semester only. 2 credit hours. (W)

SLNG 1211 Fingerspelling and Numbers
Development of expressive and receptive skills in fingerspelling and numbers. Receptive skills focus on whole word phrase recognition and fingerspelling/number comprehension in context. Expressive skills focus on the development of speed, clarity, and fluency. Lab required. Prerequisite: SGNL 1402. 2 credit hours. (W)

SLNG 1215 Visual/Gestural Communication
Development of skills in non-verbal communications. Emphasizes the use and understanding of facial expression, gestures, pantomime, and body language. Lab required. Offered fall semester only. 2 credit hours. (W)

Please refer to [http://www.collin.edu/academics/programs/index.html](http://www.collin.edu/academics/programs/index.html) for the most current information.
SLNG 1291  Special Topics in Sign Language Interpreter
Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency. Offered summer semester only. 2 credit hours. (W)

Preparation for BEI (Board of Evaluation of Interpreters) Certification Overview of BEI assessment and development of relevant ASL and interpreting skills and knowledge. Prerequisites: SLNG 2186 and SLNG 2302.

SLNG 1311  Fingerspelling and Numbers
Development of expressive and receptive skills in fingerspelling and numbers. Receptive skills focus on whole word phrase recognition and fingerspelling/number comprehension in context. Expressive skills focus on the development of speed, clarity, and fluency. Lab required. Prerequisite/Concurrent enrollment: SGNL 1402. 3 credit hours. (W)

SLNG 1321  Introduction to the Interpreting Profession
An overview of the field of American Sign Language (ASL)/English interpretation. Provides a historical framework for the current principles, ethics, roles, responsibilities, and standard practices of the interpreting profession. Lab required. Prerequisite/Concurrent enrollment: SGNL 2301. 3 credit hours. (W)

SLNG 1347  Deaf Culture
Historical and contemporary perspective of American Deaf culture using a socio-cultural model. Includes cultural identity and awareness, values, group norms, communication, language, and significant contributions made by D/deaf people to the world. 3 credit hours. (W)

SLNG 1350  Sign-to-Voice
Skill development in interpreting and transliterating from American Sign Language and other modes of communication to English and analysis of increasingly complex tasks utilizing simulated interpreting experiences including skills analysis and peer evaluation. Lab required. Prerequisite: SLNG 1321. Offered fall semester only. 3 credit hours. (W)

SLNG 2186  Internship I - Sign Language Interpretation and Translation
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. Prerequisites: SLNG 1350 and SLNG 2301. 1 credit hour. (W)

SLNG 2189  ESC Internship - Sign Language Interpretation and Translation
A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Prerequisite/Concurrent enrollment: SLNG 2371. 1 credit hour. (W)

SLNG 2266  Practicum - Sign Language Interpretation and Translation
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisite: SLNG 2301. 2 credit hours. (W)

SLNG 2301  Interpreting I
An overview of the interpreting process and models of interpretation. Introduces the skills necessary to achieve dynamic message equivalence in interpreting American Sign Language (ASL) to English and English to ASL. Lab required. Prerequisite: SLNG 2301. Offered spring semester only. 3 credit hours. (W)

SLNG 2302  Interpreting II
Continued development of discourse analysis and interpreting skills for increasingly complex tasks. Utilization of consecutive and simultaneous interpreting scenarios including monologues and dialogues. Emphasizes skill development, self-analysis, and peer evaluation. Lab required. Prerequisite/Concurrent enrollment: SLNG 2301. Offered spring semester only. 3 credit hours. (W)

SLNG 2303  Transliterating
A practice-oriented course designed to develop skills necessary for rendering spoken English to a signed English format and signed English to spoken English. Lab required. Prerequisite: SLNG 2301. Offered spring semester only. 3 credit hours. (W)

SLNG 2311  Interpreting in Specialized Settings
Overview of interpreting/transliterating with special populations (e.g., deaf/blind, high visual, oral) and/or special settings (e.g., religious, artistic, medical, legal, mental health). Reinforce interpreting theories and techniques in relation to special population(s) and/or setting(s). Lab required. Prerequisites: SLNG 1350 and SLNG 2301. Offered spring semester only. 3 credit hours. (W)

SLNG 2331  Interpreting III
A practice-oriented course to develop skills in the integration and application of interpreting using complex source materials. Continued exposure to simulated
SMFT 1343  Semiconductor Manufacturing Technology
A study of the processes, materials, and equipment used in the manufacturing of semiconductors, including an overview of the semiconductor industry, related terminology, and standard safety practice. Lab required. 3 credit hours. (W)

SMFT 1371  Fundamentals of Solar Cell Engineering
The chemistry, device physics, and materials science of Photovoltaic Solar Cell technology which results in the production of electricity from sunlight is covered. An overview of the process flows used to manufacture solar cells, the resulting device characteristics, the variety of solar cell structures and the solid state electronics characterization of the structures is presented. The course is taught from an engineering perspective using an appropriate level of mathematics for the engineering models presented. Lab required. Prerequisite: MATH 1314 or consent of Associate Dean. 3 credit hours. (W)

SMFT 1373  Fundamentals of Solar Cell Manufacturing
The course covers the fundamentals of Photovoltaic Solar Cell fabrication from ingot to the final solar cell array. The basic chemistry, physics, and materials science of the fabrication process is presented. The course is taught from an engineering perspective using an appropriate level of mathematics for the engineering models presented. Lab required. Prerequisite: MATH 1314 or consent of Associate Dean. 3 credit hours. (W)

SMFT 1375  Materials, Measurement Technology and Characterization Methods Used in Semiconductor Solar Cell Mfg
The course will include an in-depth coverage of materials measurement techniques, statistical process control/capability analysis, six sigma process characterization, and FEMA from the perspective of Photovoltaic Solar Cell materials characterization, electrical characterization and optical characterization technology and techniques. The course is taught from an engineering perspective using an appropriate level of mathematics for the engineering models presented. Lab required. Prerequisites: SMFT 1371 and SMFT 1373 or consent of Associate Dean. 3 credit hours. (W)

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. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

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. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

SOCI 2301  Marriage and 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. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)
**SOCI 2306 Human Sexuality**  
This course will provide an overview of the broad field of human sexuality. Topics will be covered from various perspectives - biological, sociological, anthropological, etc., but will focus primarily on the psychological perspective. The goal is for each student to learn factual, scientifically-based information that will provoke thought and contribute to his/her decision-making on sexual issues outside of the classroom. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**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. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**SOCI 2340 Drug Use and Abuse**  
Study of the use and abuse of drugs in today's society. Emphasis on the physiological, psychological, and sociological factors that contribute to this behavior. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**SOCI 2389 Academic Co-op Sociology**  
Integrates on-campus study with practical hands-on work experience in sociology. In conjunction with class seminars, the student will set specific goals and objectives in the study of sociology. Contact the Cooperative Work Experience Office. Prerequisite: Consent of Associate Dean, and meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**SOCW 2361 Introduction to Social Work**  
An overview of the history, fields, skills, and values of social work practice in the United States. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**SOCW 2362 Social Welfare**  
This course provides an overview of contemporary social welfare including income support services, mental health services and services for children and families. It includes an examination of social welfare policy and programs. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**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 required. Prerequisite: SPAN 1411 or consent of Associate Dean. 4 credit hours. (A)

**SPAN 1412 Beginning Spanish II**  
Continued development of 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 high beginner to low intermediate level. Lab required. Prerequisite: SPAN 1412 or consent of Associate Dean. 4 credit hours. (A)

**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. Prerequisite: SPAN 1412 or consent of Associate Dean. 3 credit hours. (A)

**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. Prerequisite: SPAN 2311 or consent of Associate Dean. 3 credit hours. (A)

**SPAN 2313 Spanish for Native/Heritage Speakers I**  
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. Prerequisite: SPAN 1412 or consent of Associate Dean. 3 credit hours. (A)

**SPAN 2315 Spanish for Native/Heritage Speakers II**  
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.
World. Prerequisite: SPAN 2313 or consent of Associate Dean. 3 credit hours. (A)

**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. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**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. Additionally, it includes student evaluation of speakers and speeches. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**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. Additionally, this course focuses on interpersonal contexts such as gender communication, conflict, intercultural communication, and listening. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**SPCH 1321 Business and 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. Additionally, it includes the relationship of communication to organizational conflict, management and international business; practice in conducting and participating in business interviews and presentations. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**SPCH 2335 Argumentation and Debate**
This course introduces the students to various argumentation techniques. The student will learn basic research skills and methods of cataloging evidence. The student will learn to organize and present ideas in effective communication paradigms. Individual debate and team formats will be demonstrated. 3 credit hours. (A)

**SPCH 2389 Academic Co-op Speech**
Integrates on-campus study with practical hands-on work experience in speech. In conjunction with class seminars, the student will set specific goals and objectives in the study of speech. Contact the Cooperative Work Experience Office. Prerequisite: Meet TSI college-readiness standard for Reading and Writing; or equivalent. 3 credit hours. (A)

**SRGT 1171 Transition to Practice for the Surgical Technologist**
This course provides surgical technology students with information and skills to assist in transition from the role of student to the role of a practicing surgical technologist. Information gained about high performance work teams is applied to the surgical setting. Service quality management and diversity concepts are applied to surgical settings. Lab required. Prerequisites: HPRS 2300, SRGT 1441 and SRGT 1461. Corequisites: SRGT 2130 and SRGT 2561, or consent of Program Director. Major Requirement: AAS - Surgical Technology. 1 credit hour. (W)

**SRGT 1260 Clinical-Surgical Technology 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. Prerequisite: Admission to the Surgical Technology Program. Corequisite: SRGT 1409 or consent of the Program Director. Major Requirement: AAS-Surgical Technology. 2 credit hours. (W)

**SRGT 1271 Basic Skills of Surgical Technology**
Formerly SRGT 1260 Learn the fundamentals and foundations of Surgical Technology; Apply basic skills of Surgical Technology in a mock laboratory environment in order to gain the skills needed to perform in the healthcare setting. Prerequisite: Admission to the Surgical Technology Program. Corequisite: SRGT 1409, or consent of Program Director. Major Requirement: AAS - Surgical Technology. 2 credit hours. (W)

**SRGT 1409 Fundamentals of Peri-operative Concepts and Techniques**
In-depth coverage of peri-operative concepts such as aseptic principles and practices, infectious processes, wound healing, and creation and maintenance of the sterile field. Lab required. Prerequisite: Admission to the Surgical Technology Program. Corequisite: SRGT 1271, or consent of Program Director. Major Requirement: AAS - Surgical Technology. 2 credit hours. (W)

**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, otorhinolaryngology, and orthopedic surgical specialties incorporating instruments, equipment, and supplies required for safe patient care. Lab required. Prerequisites:
SRGT 1271 and SRGT 1409. Corequisites: HPRS 2300 and SRGT 1461, or consent of Program Director. Major Requirement: AAS - Surgical Technology. 4 credit hours. (W)

**SRGT 1442 Surgical Procedures II**
Introduction to surgical pathology and its relationship to surgical procedures. Emphasis on surgical procedures related to the cardiothoracic, peripheral vascular, plastic/reconstructive, ophthalmology, oral/maxillofacial, and neurological surgical specialties incorporating instruments, equipment, and supplies required for safe patient care. Lab required. Prerequisites: HPRS 2300, SRGT 1441, and SRGT 1461. Corequisites: SRGT 1171, SRGT 2130 and SRGT 2561, or consent of Program Director. Major Requirement: AAS - Surgical Technology. 4 credit hours. (W)

**SRGT 1461 Clinical - Surgical Technology 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. Additionally, the student is allowed to participate as a member of the surgical team under the supervision of the affiliate hospital staff or a clinical instructor in an aseptic environment. Case assignments will be assigned according to specific clinical rotations. Prerequisites: SRGT 1271 and SRGT 1409. Corequisites: HPRS 2300 and SRGT 1441, or consent of Program Director. Major Requirement: AAS - Surgical Technology. 4 credit hours. (W)

**SRGT 1541 Surgical Procedures I**
Introduction to surgical pathology and its relationship to surgical procedures. Emphasis on surgical procedures related to the general, OB/GYN, genitourinary, otorhinolaryngology, and orthopedic surgical specialties incorporating instruments, equipment, and supplies required for safe patient care. Lab required. Prerequisites: SRGT 1260 and SRGT 1409. Corequisites: HPRS 2300 and SRGT 1561, or consent of Program Director. Major Requirement: AAS - Surgical Technology. 5 credit hours. (W)

**SRGT 1542 Surgical Procedures II**
Introduction to surgical pathology and its relationship to surgical procedures. Emphasis on surgical procedures related to the cardiothoracic, peripheral vascular, plastic/reconstructive, ophthalmology, oral/maxillofacial, and neurological surgical specialties incorporating instruments, equipment, and supplies required for safe patient care. Lab required. Prerequisites: HPRS 2300, SRGT 1541, and SRGT 1561. Corequisites: SRGT 1171, SRGT 2130 and SRGT 2561, or consent of Program Director. Major Requirement: AAS - Surgical Technology. 5 credit hours. (W)

**SRGT 1561 Clinical-Surgical Technology 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. The student is allowed to participate as a member of the surgical team under the supervision of the affiliate hospital staff or a clinical instructor in an aseptic environment. Case assignments will be assigned according to specific clinical rotations. Prerequisites: SRGT 1260 and SRGT 1409. Corequisites: HPRS 2300 and SRGT 1541, or consent of Program Director. Major Requirement: AAS-Surgical Technology. 5 credit hours. (W)

**SRGT 2130 Professional Readiness**
Overview of professional readiness for employment, attaining certification, and maintaining certification status. Prerequisites: HPRS 2300, SRGT 1441 and SRGT 1461. Corequisites: SRGT 1171, SRGT 1442, and SRGT 2561, or consent of Program Director. Major Requirement: AAS - Surgical Technology. 1 credit hour. (W)

**SRGT 2561 Clinical - Surgical Technology 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. Prerequisites: HPRS 2300, SRGT 1441 and SRGT 1461. Corequisites: SRGT 1171, SRGT 1442 and SRGT 2130, or consent of Program Director. Major Requirement: AAS - Surgical Technology. 5 credit hours (W)

**TECA 1303 Families, School and 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. Lab required. Prerequisite: Meet TSI standard for INRW 0315; or equivalent. 3 credit hours. (A)

**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. Lab required. Prerequisite: Meet TSI standard for INRW 0315; or equivalent. 3 credit hours. (A)

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. Focus 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. Lab required. Prerequisite: Meet TSI standard for INRW 0315; or equivalent. 3 credit hours. (A)

TECA 1354  Child Growth and Development
A study of the physical, emotional, social, language, and cognitive factors impacting growth and development of children through adolescence. Prerequisite: Meet TSI standard for INRW 0315; or equivalent. 3 credit hours. (A)

TECM 1343  Technical Algebra and Trigonometry
Algebraic and trigonometric applications used in technical/industrial settings. Lab required. 3 credit hours. (W)

TRVM 1323  Group Tour Operations
A study of the role of the group planner, selling to groups, and planning itineraries, including components of a tour package, tour costing, advertising and promotion, group dynamics, and tour guide qualifications. 3 credit hours. (W)

TRVM 1327  Special Events Design
The development of a special event from the conceptual stage through completion. Emphasis on industry terminology, factors to consider when planning a special event, and contingency plans. 3 credit hours. (W)

TRVM 2301  Introduction to Convention/Meeting Management
Overview of the meetings and convention industry and the various aspects and skills involved in planning and managing meeting, conventions, and expositions. Emphasis on types of meetings, markets, industry suppliers, budget and program planning, site selection and contract negotiations, registration and housing, food and beverage requirements, function and meeting room setup, and audiovisual requirements. 3 credit hours. (W)

TRVM 2333  Applied Convention/Meetings Management
Practical application of meetings and exposition skills through a case study or participation in a conference/meeting. Includes integration of meeting planning tools that compare and discriminate between key areas of program development and convention objectives. Prerequisites: TRVM 1323, TRVM 1327, TRVM 2301, TRVM 2341 and TRVM 2355. 3 credit hours. (W)

TRVM 2341  International Convention/Meeting Management
Apply the principles of convention/meeting management in an international setting. Compare the differences in planning a domestic versus an international meeting; including contract negotiation, foreign currency, customs and laws, exposition, marketing, shipping, languages, cultures, and how foreign policy affects the meeting planning process. Identify resources to assist planner in development of an international meeting. Prerequisite: TRVM 2301. 3 credit hours. (W)

TRVM 2355  Exposition and Trade Show Operations
An overview of trade shows and exhibitions operations. Prerequisite: TRVM 2301. 3 credit hours. (W)

TRVM 2380  Cooperative Education-Tourism and Travel Services Management
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. Contact the Cooperative Work Experience Office. Prerequisites: HAMG 1324, HAMG 1340, TRVM 1323, TRVM 1327, TRVM 2301, TRVM 2341 and TRVM 2355; or consent of Associate Dean. 3 credit hours. (W)

WLDG 1401  Metalsmithing
Basic skill development in hand-forging steel, forge welding, scroll-forming, shaping, and joinery utilizing hammers, anvils, and coal and gas forges. Emphasis on techniques and processes to demonstrate versatility and skill. Lab required. Prerequisite: Consent of Discipline
Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**WLDG 1405 Art Metals**
Fundamentals of producing utilitarian and ornamental items in various metals. Skills development through the techniques used in fabrication with sheet and/or stock materials including various welding and cutting processes. Lab required. Prerequisite: Consent of Discipline Lead. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**WLDG 1408 Metal Sculpture**
Techniques and methods of oxy-fuel and electric welding and cutting to produce ornamental and functional items. Skill development in material forming, welding, brazing, and finishing techniques. Includes work ethics, artistic styles, and professionalism. Lab required. Prerequisite: Consent of Discipline Lead. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**WLDG 1413 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. Lab required. Prerequisite: WLDG 1413. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**WLDG 1425 Introduction to Oxy-Fuel Welding and Cutting**
An introduction to oxy-fuel welding and cutting, safety, setup and maintenance of oxy-fuel welding, and cutting equipment and supplies. Lab required. Prerequisite: Consent of Discipline Lead. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**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, and various joint designs. Additionally, instruction provided in SMAW fillet welds in various positions. Lab required. Prerequisite: Consent of Discipline Lead. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**WLDG 1434 Introduction to Gas Tungsten Arc Welding (GTAW)**
Principles of gas tungsten arc welding (GTAW), including setup, GTAW equipment. Instruction in various positions and joint designs. Lab required. Prerequisite: Consent of Discipline Lead. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**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 various welding positions and electrodes. Lab required. Prerequisite: Consent of Discipline Lead. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**WLDG 1471 Introduction to Foundry Practices**
Fundamentals of conceptualizing and producing cast items in ferrous and non-ferrous metals. Skill development through the casting process to create objects from different materials. Includes welding, brazing, pattern making, mold making, flask construction and casting of ferrous and non-ferrous metals. Lab required. Prerequisite: Consent of Discipline Lead. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**WLDG 1530 Introduction to Gas Metal Arc Welding (GMAW)**
Principles of gas metal arc welding, setup and use of Gas Metal Arc Welding (GMAW) equipment, and safe use of tools/equipment. Instruction in various joint designs. Additionally, this is an overview of terminology, safety procedures, and equipment setup. Practice in performing
T-joints, lap joints, and butt joints using Flux Cored Arc Welding (FCAW) equipment. Lab required. Prerequisite: Consent of Discipline Lead. 5 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**WLDG 2413 Intermediate Welding Using Multiple Processes**

Instruction using layout tools and blueprint reading with demonstration and guided practices with some of the following welding processes: oxy-fuel gas cutting and welding, shield metal arc welding (SMAW), gas metal arc welding (GMAW), flux-cored arc welding (FCAW), gas tungsten arc welding (GTAW). Lab required. Prerequisites: WLDG 2443, WLDG 2453, and WLDG 2450 or WLDG 2451. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**WLDG 2431 Advanced Blueprint Interpretation and Cost Analysis**

A continuation of the Blueprint for Welders course. Emphasis placed on inspection, cost analysis, and estimating. Lab required. Prerequisite: WLDG 1413. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**WLDG 2440 Advanced Metal Sculpture**

Project development in an open-studio atmosphere. Individualized instruction to encourage skill combinations and experimentation. Topics include portfolio preparation and presentation. Lab required. Prerequisites: WLDG 1401, WLDG 1405, and WLDG 1408. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**WLDG 2441 Power Hammer**

Skill development in pneumatic, treadle, and trip hammer techniques. Topics include forging various steel alloys and larger stock configurations, tool making, machine care, and hardware. Projects to create functional esthetic objects using power hammers. Lab required. Prerequisite: WLDG 1401. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**WLDG 2443 Advanced Shielded Metal Arc Welding (SMAW)**

Advanced topics based on accepted welding codes. Training provided with various electrodes in shielded metal arc welding processes with open V-groove joints in various positions. Lab required. Prerequisite: WLDG 1428. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**WLDG 2447 Advanced Gas Metal Arc Welding (GMAW)**

Advanced topics in Gas Metal Arc Welding (GMAW). Includes welding in various positions. Lab required. Prerequisite: WLDG 1530. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**WLDG 2450 Orbital Tube Welding**

Orbital tube welding in various industries. Special emphasis on the disciplines of orbital tube welding, including cutting, facing, and development of weld procedures. Lab required. Prerequisite: WLDG 1434. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**WLDG 2451 Advanced Gas Tungsten Arc Welding (GTAW)**

Advanced topics in GTAW welding, including welding in various positions and directions. Lab required. Prerequisite: WLDG 1434. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

**WLDG 2453 Advanced Pipe Welding**

Advanced topics involving welding of pipe using the shielded metal arc welding (SMAW) process. Topics include electrode selection, equipment setup, and safe shop practices. Emphasis on weld positions 5G and 6G using various electrodes. Lab required. Prerequisite: WLDG 1435. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.
WLDG 2471  Advanced Foundry Practices
Project development in an open-studio atmosphere. Individualized instruction to encourage skill combinations and experimentation. Topics include portfolio preparation and presentation. Lab required. Prerequisite: WLDG 1471. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.

WLDG 2480  Cooperative Education - Welding Technology/Welder
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Prerequisite: Consent of Discipline Lead. 4 credit hours. (W) Note: Welding classes require extended periods of time standing in place, lifting heavy weights (up to 60 pounds repeatedly), reaching, bending, and working around open flames and intense heat for extended periods of time.
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