

### How To Use This Catalog:

Each section of this catalog is indicated by a colored tab on the right or left edge of the page. In the Contents below you can find the information included within each tabbed section.

Please go to our website: [www.chattanoogastate.edu](http://www.chattanoogastate.edu) for the most current information about the college.

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# How To Use This Catalog

## Your Official Guide To The College

### *Where to find key information.*

- You will find information ranging from entrance requirements to graduation requirements in the *General Information* section (pages 47-64).
- You can locate A.A.S degrees and Technical Certificates on pages 5-30 (*these degree programs prepare students directly for careers; they are not designed to transfer to four-year institutions*). With each program description is a list of courses students must successfully complete to graduate.
- You can learn how to *fast-track* to a *four-year, baccalaureate degree by reviewing the general education requirements and transfer information on pages 34-37*.
- You can find *brief descriptions of courses* on pages 71-110. *Pages 71-72 explain how the course descriptions are arranged; page 72 contains a guide to reading the course descriptions* and *page 32 explains the Types of Course Delivery (Many Ways To Learn)*.
- You can locate information about *online courses on pages 32, and 73*. *Please note: You can earn both an associate's degree and a bachelor's degree through our Regents Online Degree Program (RODP)*.
- You can find *brief biographies of faculty and staff* on pages 112-118.

<http://www.chattanoogaastate.edu> or call toll free 1-866-547-3733  
E-mail: [askjoe@chattanoogaastate.edu](mailto:askjoe@chattanoogaastate.edu)

# Accreditations and Approval

**Chattanooga State Technical Community College  
is Accredited by the Commission on Colleges of the Southern Association of Colleges and  
Schools (SACS) to Award the Associate Degree**

1866 Southern Lane, Decatur, Georgia 30033-4097 • (404) 679-4501

**This accreditation is the highest granted to any college or university.**

**Every eligible instructional program of the College is nationally accredited.**

## Air Conditioning and Refrigeration

APPROVED BY HVAC EXCELLENCE

P.O. Box 491, Mount Pleasant, IL 60056-0491  
(800) 394-5268 FAX (800) 546-3726

## Automotive Technology

### Collision Repair

APPROVED BY THE NATIONAL AUTOMOTIVE TECHNICIANS  
EDUCATION FOUNDATION (NATEF)

101 Blue Seal Dr., SE, Suite 101  
Leesburg, VA 20175  
(703) 669-6650 FAX (703) 669-6125  
www.natef.org

## Dental Hygiene and

### Dental Assisting

ACCREDITED BY THE COMMISSION ON  
DENTAL ACCREDITATION

OF THE AMERICAN DENTAL ASSOCIATION

*(A specialized accrediting body recognized by the Council on  
Postsecondary Accreditation by the United States Department  
of Education)*

211 East Chicago Av., Chicago, IL 60641-2678  
(312) 440-2500 FAX (312) 440-7494

## Diagnostic Medical Sonography

ACCREDITED BY THE COMMISSION ON ACCREDITATION  
OF ALLIED HEALTH EDUCATION PROGRAMS (CAAHEP)

1361 Park St., Clearwater, FL 33756  
(727) 210-2350 FAX (727) 210-2354

IN COOPERATION WITH THE

JOINT REVIEW COMMITTEE ON EDUCATION

IN DIAGNOSTIC MEDICAL SONOGRAPHY

2025 Woodlane Dr., St. Paul, MN 55125  
(651) 731-7225 FAX (817) 354-8519

## Emergency Medical Services

ACCREDITED BY THE COMMITTEE ON ACCREDITATION OF  
EDUCATIONAL PROGRAMS FOR THE EMS PROFESSIONS

1248 Harwood Rd., Bedford, TX 76021  
http://www.COAE MSP.org

(817) 283-9403 FAX (817) 354-8519

## Engineering Technology Programs:

### Civil Engineering Technology

#### Electrical/Electronic Engineering Technology:

Automated Controls Concentration  
Computer Systems Concentration  
Mechanical Engineering Technology

ACCREDITED BY THE TECHNOLOGY  
ACCREDITATION COMMISSION

OF THE ACCREDITATION BOARD FOR ENGINEERING  
AND TECHNOLOGY

111 Market Pl., Suite 1050, Baltimore, MD 21202  
(410) 347-7700

## Fire Science Technology:

### Emergency Medical Care

### Emergency Service Supervision and Administration

### Fire Suppression

ACCREDITED BY INTERNATIONAL FIRE SERVICE  
ACCREDITATION CONGRESS

1700 W. Tyler, Stillwater, OK 74078  
(405) 744-8303

## Health Information Management

ACCREDITED BY THE COMMISSION ON ACCREDITATION  
FOR HEALTH INFORMATICS AND INFORMATION MANAGEMENT  
EDUCATION (CAHIIM)

233 N. Michigan Ave., Suite 2150,  
Chicago, IL 60601-5800  
(312) 233-1100 FAX (312) 233-1090

## Industrial Electricity

ACCREDITED BY THE NATIONAL CENTER FOR CONSTRUCTION  
EDUCATION AND RESEARCH (NCCER)

P.O. Box 141104, Gainesville, FL 32614-1104  
(888) 622-3720 FAX (352) 334-0932

www.nccer.org

## Judicial Reporting

APPROVED BY THE NATIONAL COURT  
REPORTERS ASSOCIATION

8224 Old Courthouse Rd.

Vienna, VA 22182-3808

(800) 272-6272 FAX (703) 556-6291

## Medical Assistant

ACCREDITED BY THE COMMISSION ON ACCREDITATION  
OF ALLIED HEALTH EDUCATION PROGRAMS  
(WWW.CAAHEP.ORG)

35 East Wacker Dr., Suite 1970

Chicago, IL 60601-2208

(312) 553-9355 FAX (312) 553-9616

ON RECOMMENDATION OF THE COMMITTEE OF ACCREDITATION  
FOR MEDICAL ASSISTANT EDUCATION

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS

20 North Wacker Dr., Suite 1575

Chicago, IL 60606-2963

(800) 228-2262

## Building Construction Technology

### Heavy Equipment Operator

### Masonry

### Plumbing

ACCREDITED BY THE NATIONAL CENTER FOR  
CONSTRUCTION EDUCATION AND RESEARCH  
(NCCER)

3600 NW 43rd St., Bldg. G  
Gainesville, FL 32606

## Nuclear Medicine Technology

ACCREDITED BY THE JOINT REVIEW COMMITTEE ON  
EDUCATIONAL PROGRAMS

IN NUCLEAR MEDICINE TECHNOLOGY

2000 W. Danforth Rd., Suite 130, #203

Edmond, OK 73003

(405) 285-0546 FAX(405) 285-0579

## Nursing (RN)

ACCREDITED BY THE NATIONAL LEAGUE FOR NURSING  
ACCREDITING COMMISSION

61 Broadway, New York, NY 10006  
(800) 669-1656

## Nursing (RN and LPN)

APPROVED BY THE TENNESSEE STATE  
BOARD OF NURSING

Tennessee Board of Nursing, First Floor, Cordell Hull  
Building, 425 Fifth Av. North  
Nashville, TN 37247-1010 • (615) 532-5166

## Paralegal Studies

APPROVED BY THE AMERICAN BAR ASSOCIATION  
750 North Lake Shore Dr., Chicago, IL 60611

## Pharmacy Technician

ACCREDITED BY THE AMERICAN SOCIETY OF HEALTH SYSTEM  
PHARMACISTS

7272 Wisconsin Av., Bethesda, MD 20814  
(301) 657-3000 FAX (301) 652-8278

## Physical Therapist Assistant

ACCREDITED BY THE COMMISSION ON  
ACCREDITATION IN PHYSICAL

THERAPY EDUCATION (CAPTE) OF THE AMERICAN PHYSICAL  
THERAPY ASSOCIATION

1111 N. Fairfax St., Alexandria, VA 22314  
(800) 999-2782

## Radiation Therapy Technology Radiologic Technology

ACCREDITED BY THE JOINT REVIEW COMMITTEE ON  
EDUCATION IN RADIOLOGIC TECHNOLOGY

20 North Wacker Dr., Suite 2850

Chicago, IL 60606-3182

(312) 704-5300 FAX (312) 704-5304

www.jrcert.org

## Respiratory Care

ACCREDITED BY THE COMMITTEE ON ACCREDITATION FOR  
RESPIRATORY CARE (CoARC)

1248 Harwood Rd.

Bedford, TX 76021-4244

(817) 283-2835 FAX (817) 354-8519

## Surgical Technology

ACCREDITED BY THE COMMISSION ON ACCREDITATION  
OF ALLIED HEALTH EDUCATION PROGRAMS (CAAHEP)

35 East Wacker Dr., Suite 1970

Chicago, IL 60601-2208

(312) 553-9355 FAX (312) 553-9616

## Veterinary Technology

ACCREDITED BY THE AMERICAN VETERINARY MEDICAL  
ASSOCIATION

1931 N. Meacham Road, Suite 100  
Schaumburg, IL 60173

(800) 248-2862 FAX (847) 925-1329

www.avma.org

# Academic Terminology

*The following is a list of terms commonly used in admission and registration procedures.*

**Academic load** The total hours of credit for all courses taken during a semester.

**Add and drop deadlines** The latest date in a semester when a course may be added or dropped from a student's class schedule.

**Admissions** The process of being admitted to the College allowing you to register for classes. Completion of the Admissions process does not constitute registration for classes.

**Admissions file** The documents collected for admission including the application form, official transcripts of previous work in high school or college and any standardized test scores or other information required by the Admissions Office.

**Audit** Registering for and attending class but not eligible to receive credit.

**Concentration** A group of courses within a major which emphasizes one aspect of the major.

**Concurrent** A course that may be taken prior to or at the same time as another course.

**Corequisite** A course to be taken or a requirement to be fulfilled at the same time another required course is being taken.

**Curriculum** The set of courses offered in a particular degree or certificate program. More generally, the courses (in total) offered in a college or university. The plural is curricula.

**Drop** Officially discontinuing a portion of one's schedule for the remainder of the semester.

**Early Registration** The period of time before official registration day(s) for each semester when students may register for future term(s).

**Elective** A course that is accepted toward fulfillment of credit for a degree or certificate but is not specifically required for that degree or certificate. So termed because a student "elects" or chooses to take the course(s).

**Flex Schedule** These classes begin approximately one week after the regular full-session classes.

**Full load** A full-time student is one taking 12 or more hours. A full load is often referred to as 12 hours. A student taking less than 12 hours is a part-time student.

**General Education For Transfer** The shared common core curriculum of 41 semester hours taken in the freshman and sophomore years which provides critical thinking skills and the broad knowledge to become a lifetime learner in a global community and literate in many forms of communication.

**Grade point average (GPA)** An average on the four point scale determined by dividing the total accumulated quality points by the corresponding total hours of credit attempted. Certain grades do not influence this computation, e.g., "W."

**Honors course** A version of a regular course reserved for students who select and qualify for advanced challenge.

**Major** The academic area offered by the College in which one specializes.

**Orientation** A meeting (or series of meetings) designed to acquaint a new student with the facilities, policies, sources of information and assistance, and academic and social atmosphere of the College.

**Prerequisite** A requirement to be completed or a level of skill or knowledge to be demonstrated prior to enrollment in a course or program.

**Probation** The status of students when their cumulative GPA drops below Chattanooga State's standards. Students may still enroll while on probation.

**Quality points** Academic performance records are compiled through use of a scale assigning four "quality points" per semester hour of credit for an "A" grade ranging to one "quality point" per semester hour of credit for a "D" grade.

**Reapplication** A form students must fill out if they do not attend Chattanooga State for one or more semesters (summer excluded).

**Registration** The process of officially enrolling in one or more courses. Students must be admitted to the College before they can register for classes.

**Semester** The division of the calendar year used in academic scheduling. A semester is roughly four months in duration.

**Semester credit hour** The unit of academic credit at Chattanooga State. Generally the number of hours a course meets each week determines the amount of credit it carries. (Laboratory and clinical courses are notable exceptions to this guideline.)

**Special Students** A Special Student is one who takes credit courses without working toward a degree.

**Suspension** The status of students (usually following probation) when their cumulative GPA drops below Chattanooga State's standards for two consecutive semesters. Students may not enroll while on suspension.

**Transcript** A cumulative record of a student's course work and grades.

**Transfer Program** An academic program that completes two years at the College which prepares the student to transfer to a university.

**Transitional Studies** Foundation courses in English, math, reading, and study skills designed for students who are not fully prepared for college level courses. Placement in Transitional Studies courses is determined by ACT or SAT and/or COMPASS tests scores.

**Withdraw** Officially discontinuing all of one's schedule for the remainder of the semester.

# A.A.S. Degrees & Technical Certificates

Chattanooga State Technical Community College

Volume Number 34

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A.A.S. Degrees & Technical Certificates

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<http://www.chattanoogaastate.edu> or call toll free 1-866-547-3733

E-mail: [askjoe@chattanoogaastate.edu](mailto:askjoe@chattanoogaastate.edu)

## General Information

Chattanooga State's A.A.S. degrees and technical certificates prepare students for specialized careers. These programs are designed for the student who does not intend to transfer to a traditional baccalaureate degree program. (Should a student later decide to pursue a bachelor's degree, four year institutions may accept some or all credits toward a bachelor's degree.) Career students can pursue programs leading to the Associate of Applied Science (A.A.S.) degree or a Technical Certificate of Credit.

### Associate of Applied Science

Associate of Applied Science degrees are designed to prepare students for immediate employment in a specialized area. The A.A.S. degree requires:

- Total Credit Hours  
60 semester credit hours of college level work
- General Education  
A minimum of 25% of the program must be in General Education and must include at least 3 hours of approved courses from each of the following:
  - English Composition (3 hours)
  - Humanities and/or Fine Arts (3 hours)
  - Social/Behavioral Science (3 hours)
  - Math or Natural Science (3 or 4 hours)
 One additional course from any of the following categories (3 or 4 hours):
  - Communication
  - Humanities
  - Fine Arts
  - Literature
  - Math
  - Natural Science
  - Social/Behavioral Sciences
- Major—A minimum of 36 hours in the technical specialty.
- A grade of "C" or better is required in all prerequisite courses and in specific courses listed in the program summary of required hours.

*Note: The SUMMARY OF REQUIRED HOURS for the student's major may require that a specific course be taken to satisfy a given General Education requirement. Otherwise, the student may select any course from the list. If the requirement calls for 3 credit hours and the student selects a 4- or 5-credit course, the extra credit hour(s) will count as unrestricted elective credit toward graduation. (If the requirement specified in the student's major is a 4-hour course, the 4th credit hour will not count toward satisfying the unrestricted elective requirement because it is required as opposed to being selected by the student.)*

### Approved General Education Courses for All Degrees

The following courses fulfill general education requirements at Chattanooga State.

#### Communication

ENGL	1010	Composition I
ENGL	1020	Composition II
SP	110	Fundamentals of Public Speaking

#### Humanities and/or Fine Arts

ART	1010	Survey: Art History I
ART	1020	Survey: Art History II
ART	1030	Art Appreciation
ENGL	2110	American Literature I
ENGL	2120	American Literature II
ENGL	2140	African American Literature
ENGL	2210	English Literature I
ENGL	2220	English Literature II
ENGL	2410	Western World Literature I
ENGL	2420	Western World Literature II
HUM	1010	Introduction to the Humanities I
HUM	1020	Introduction to the Humanities II
HUM	2130	Mythology
MUS	1030	Music Appreciation
PHIL	1030	Introduction to Philosophy
PHIL	2230	Ethics
RELS	2030	Religions of the World
THEA	1030	Introduction to Theatre

### Social & Behavioral Sciences

EC	211	Principles of Economics (macro)
EC	212	Principles of Economics (micro)
GEOG	1025	World Geography
PE	230	The Science of Fitness and Wellness
PO	110	Introduction to American Government
PO	112	Introduction to World Politics
PY	101	General Psychology
SO	110	Introduction to Sociology
SO	216	Cultural Anthropology

### Natural Sciences

ASTR	1030	Astronomy
BIOL	1110	General Biology I
BIOL	1120	General Biology II
BIOL	1310	Integrated Biology
BIOL	2010*	Human Anatomy and Physiology I
BIOL	2020*	Human Anatomy and Physiology II
CHEM	1010	Introduction to Chemistry I
CHEM	1020	Introduction to Chemistry II
CHEM	1110	General Chemistry I
CHEM	1120	General Chemistry II
CHEM	1310	Integrated Chemistry
ESC	1110	Environmental Science I
ESC	1120	Environmental Science II
GEOL	1040	Physical Geology
GEOL	1050	Historical Geology
PHYS	1030	Physics Concepts
PHYS	1310	Integrated Physics
PHYS	2010	Non-Calculus-Based Physics I
PHYS	2020	Non-Calculus-Based Physics II
PHYS	2110	Calculus-Based Physics I
PHYS	2120	Calculus-Based Physics II
PSCI	1030	The Physical Environment
PSCI	1310	Integrated Earth & Space Science

\*BIOL 2010-2020 sequence must be completed to meet Natural Science requirement.

### Mathematics

MATH	1010	Contemporary Mathematics
MATH	1410	Structure of Number Systems I
MATH	1530	Introductory Statistics
MATH	1710	Pre-Calculus I
MATH	1720	Pre-Calculus II
MATH	1830	Calculus for Management, Life, and Social Sciences
MATH	1910	Calculus I with Analytic Geometry

### Math Placement

Students pursuing majors for which the math requirement would normally be calculus or pre-calculus may begin their college math at a higher level if they meet the criteria listed below.

Most degrees at Chattanooga State require at least one college level math course. Meeting the criteria to place into a higher level course does not exempt the student from this requirement, nor is any credit granted for the course(s) the student is able to skip.

#### Criteria

- Three (3) high school math credits above the Algebra I level **and** a Math subscore of 25 on the ACT or corresponding SAT score.
- Two (2) high school math credits above the Algebra I level **and** a Math subscore of 21 on the ACT or corresponding SAT score.

#### Advanced Placement Course

Calculus with Analytic Geometry-I, MATH 1910  
Pre-Calculus II

or

Calculus for Management, Life, and Social Sciences, MATH 1720 MATH-1830

### Technical Certificate of Credit

Programs leading to Technical Certificates of Credit are offered in response to the training needs of area business and industry. Since the credential denotes proficiency in a particular occupation, program standards are determined in consultation with an advisory board of practicing professionals. Students admitted to these programs may be enrolled as special students.

## Business & Information Technologies

[http://www.chattanooga.state.edu/Business\\_Information/bimain.asp](http://www.chattanooga.state.edu/Business_Information/bimain.asp)

**Call (423) 697-4441  
or for Paralegal Studies and  
Realtime Reporting  
call (423) 697-4797**

### Accounting Technology

#### Associate of Applied Science Degree

The Accounting Technology Associate of Applied Science degree includes instruction in accounting principles and theory, business law applications, tax accounting, payroll, computerized accounting information systems, budgeting and cost accounting, financial statement preparation and analysis, and financial planning. The degree will assist those employed in both small and large business entities to analyze business transactions, communicate information to management, handle compliance with governmental tax regulations, and effectively communicate the data gained in the accounting process.

#### Career Opportunities

Accountant, bookkeeper, fixed asset accountant, billing and collections clerk, regulation compliance in banking and other industries, accounts receivable, payable and payroll entry level positions, paraprofessionals in accounting and tax preparation at bookkeeping or public accounting firms, cost accountant, and brokerage assistants.

#### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours	
		FALL	SPR
<b>Freshman</b>			
BU 114,115	Principles of Accounting I, II	3	3
BU 211	Legal Environment of Business	3	
BU 212	Business Law		3
ENGL 1010	Composition I	3	
FP 101	Fundamentals of Financial Planning	3	
MATH 1530	Introductory Statistics		3
MATH 1710	Pre-Calculus I	3	
MG 103	Business Today - An Introduction		3
	Computer Elective		3
		<u>15</u>	<u>15</u>
<b>Sophomore</b>			
BU 185	Federal Taxes	3	
BU 204,205	Intermediate Accounting I, II	3	3
BU 210	Business Tax Reporting		3
BU 224	Cost & Budgeting	3	
BU 250,251	Accounting Information Systems I, II	3	3
BU 255	Professional Review in Accounting and Taxation		3
	Humanities/Fine Arts Gen. Ed. Elective		3
	Social/Behavioral Science Gen. Ed. Elective	3	
		<u>15</u>	<u>15</u>
Total Hours: 60			

### Applied Technology

#### Associate of Applied Science Degree

The Applied Technology degree provides students who have successfully completed specialized training at a **Tennessee Technology Center** (previously called the Industrial Technology Center Division at Chattanooga State) or an **apprenticeship program** approved by the U.S. Department of Labor to advance their careers by completing concentrations in either technology management or technology education. Students admitted to these programs are awarded 30 semester hours of advanced placement credit upon completion of all transitional studies requirements and 15 hours of college credit with a GPA of 2.0 or above.

#### Admissions Criteria

In order to be admitted to either of the concentrations in the Applied Technology Degree, a student must meet all admissions criteria for degree seeking students at Chattanooga State and 1) hold a certificate or diploma requiring at least 1,290 clock hours from Chattanooga State's Tennessee Technology Center Division or other Tennessee Technology Center **OR** 2) hold a certificate of completion from an apprenticeship program approved by the U.S. Department of Labor requiring at least 1,290 clock hours.

Regardless of the criteria used for admission, documentation must be provided at the time of admission. Applicants must meet all admission requirements for degree seeking status and remove Transitional Studies deficiencies, if any.

There are two concentrations within the Applied Technology major:

1. **Technology Education**
2. **Technology Management**

*Please see those listings as follows.*

#### 1. Technology Education Concentration Management

##### Associate of Applied Science Degree

*The Technology Education concentration is intended for non-credentialed teachers in technical education programs at Tennessee Technology Centers, in high school technical education programs, and in proprietary technology schools. The program will provide an A.A.S. degree, which is the minimum SACS-approved credential for faculty in such programs. To gain admission to this program, students must present evidence of education and/or training in a technical area as provided in the Admissions Guidelines for the Associate of Applied Technology Degree, shown above, OR submit a portfolio for review and approval by the Chattanooga State Credit for Life Experience Committee. Such portfolio must include a letter of review from a subject matter expert in the area of technical training evaluating the applicant's technical training and abilities. The portfolio composition, review and approval process will be governed by the policies of the Chattanooga State Credit for Life Experience Committee. Admitted students will be granted 30 hours of Advanced Placement credit upon completion of all transitional studies requirements and 15 hours of college credit with a GPA of 2.0 or above.*

**Career Opportunities**

Teacher at a Tennessee Technology Center, high school teacher in a technology education program, teacher at a proprietary technical school.

SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours	
		FALL	SPR
	Advanced Placement		30
ENGL 1010	Composition I	3	
**TELC 2008	Facilitating Learning through Assessment and Evaluation	3	
**TELC 2011	Teaching with Technology		3
**TELC 2013	Adult Learners		3
**TELC 2015	Survey of Exceptionalities & Diversity in Adult Learners	3	
SP 110	Public Speaking		3
	*Directed Elective		3
	Humanities/Fine Arts Gen. Ed. Elective		3
	Math/Natural Science Gen. Ed. Elective	3/4	
	Social & Behavioral Science Gen. Ed. Elective	3	
Total Hours: 60/61		15/16	45

\*Approved Directed Electives: TELC 2014, 2016.

\*\*TELC courses are all RODP and can be located on the following website: <http://www.rodpr.org/>

**2. Technology Management Concentration**

**Management**

**Associate of Applied Science Degree**

The Technology Management concentration is designed to broaden the education of students who have successfully completed specialized training in a technology field. Through general education classes and courses in business and management, students develop their skills needed for supervisory careers or to start a small business within their area of technical training and experience. To gain admission to this program, students must present evidence of education and/or training in a technical area as provided in the Admissions Guidelines for the Associate of Applied Technology Degree, shown above. Admitted students will be granted 30 hours of Advanced Placement credit upon completion of all transitional studies requirements and 15 hours of college credit with a GPA of 2.0 or above.

**Career Opportunities**

Team leader, supervisor, foreman, entrepreneur.

SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours	
		FALL	SPR
	Advanced Placement		30
BU 114	Principles of Accounting I		3
BU 211	Legal Environment of Business		3
ENGL 1010	Composition I	3	
MG 103	Business Today, an Introduction	3	
MG 114	Principles of Management		3
MG 165	Business Math	3	
SP 110	Public Speaking		3
	Humanities/Fine Arts Gen. Ed. Elective	3	
	Math/Natural Science Gen. Ed. Elective		3/4
	Social & Behavioral Science Gen. Ed. Elective	3	
Total Hours: 60/61		15	45/46

**Business**

See "Management"

**Computer Programming**

See "Programming Concentration"

**Computer Science**

See: "End User Support Concentration," "Network Management Concentration," "Programming Concentration," "Information Systems Technology Certificate"

**Graphic Design**

See "Media Technologies"

**Information Systems Technology**

**Associate of Applied Science Degree**

There are three concentrations within the Information Systems Technology major:

1. End User Support
2. Network Management
3. Programming

Please see those listings as follows.

**1. End User Support Concentration**

**Information Systems Technology**

**Associate of Applied Science Degree**

This program trains information systems technicians for support roles in the information technology field. Technical and non-technical subjects address client support needs in areas such as application software, help desk, user training, microcomputer support and network services.

**Career Opportunities**

Microcomputer applications, help desk, user training and network services support.

SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours	
		FALL	SPR
<b>Freshman</b>			
CS 104	Fundamentals of Information Systems	3	
CS 140	Internet Foundations	3	
CS 124	Visual BASIC I	3	
CS 197	Spreadsheet Software Applications	3	
CS 198	Database Software Applications		3
CS 204	Microcomputer Architecture		3
CS 205	Computer Networks		3
ENGL 1010	Composition I		3
MATH 1530	Introductory Statistics	3	
	Social/Behavioral Science Elective		3
		15	15
<b>Sophomore</b>			
BU 114	Principles of Accounting I		3
CS 160 or CS 225	Java Programming I or Visual BASIC II		3
CS 152	Introduction to Adobe Dreamweaver	3	
NW 205	Network Client Operating Systems	3	
CS 296	Principles of Database Management Systems	3	
	*Directed Elective	3	3
CS 244	Systems Analysis and Design		3
SP 110	Fundamentals of Public Speaking	3	
	Humanities/Fine Arts Gen. Ed. Elective		3
		15	15
Total Hours: 60			

\*Six hours of directed electives must be selected from CS 240, CS 150, CS 151, CS 155, CS 276, and NW 207.



## 2. Network Management Concentration

**Information Systems Technology**  
Associate of Applied Science Degree

This program prepares graduates for computer network management certification.

### Career Opportunities

Network manager

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		FALL	SPR
<b>Freshman</b>			
CS 104	Fundamentals of Information Systems	3	
CS 124	Visual BASIC I	3	
NW 205	Network Client Operating System	3	
ENGL 1010	Composition I	3	
CS 185	C++ Programming Language I		3
CS 204	Microcomputer Architecture		3
CS 205	Computer Networks		3
MATH 1530	Introductory Statistics		3
	Humanities/Fine Arts Gen. Ed. Elective	3	
	Social/Behavioral Science Gen. Ed. Elective		3
		<u>15</u>	<u>15</u>
<b>Sophomore</b>			
BU 114	Principles of Accounting I		3
CS 296	Principles of Database Management Systems	3	
NW 207	Managing & Maintaining a Server Environment	3	
CS 244	Systems Analysis and Design		3
NW 208	Management of Network Infrastructure		3
	*Directed Elective		3
NW 211	Network Security Fundamentals	3	
SP 110	Fundamentals of Public Speaking		3
NW 215	Firewalls and Network Security	3	
CS 276	Operating Systems	3	
		<u>15</u>	<u>15</u>

Total Hours: 60

\*Three hours of directed electives must be selected from : NW 210, NW 219, NW 223, NW 227.

## 3. Programming Concentration

**Information Systems Technology**  
Associate of Applied Science

This program prepares students to work as computer programmers in business. Technical and non-technical related subjects give students a better understanding of possible application areas and supervisory and administrative responsibilities.

### Career Opportunities

Computer programmer, control clerk, job control specialist, operations librarian.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		FALL	SPR
<b>Freshman</b>			
CS 104	Fundamentals of Information Systems	3	
CS 124	Visual Basic I	3	
ENGL 1010	Composition I	3	
MATH 1530	Introductory Statistics	3	
CS 160	Java Programming I		3
CS 185	C++ Programming Language I		3
CS 198	Database Software Applications		3
CS 225	Visual Basic II		3
	Social/Behavioral Science Gen. Ed. Elective	3	
BU 114	Principles of Accounting I		3
		<u>15</u>	<u>15</u>
<b>Sophomore</b>			
CS 250	Introduction to Active Server Pages		3
CS 161	Java Programming II	3	
CS 244	Systems Analysis & Design		3
CS 285	C++ Programming Language II	3	
CS 296	Principles of Database Management Systems	3	
CS 299	Special Projects		3
MG 160	Project Management	3	
SP 110	Fundamentals of Public Speaking		3
	Humanities/Fine Arts Gen. Ed. Elective		3
	*Directed Elective	3	
		<u>15</u>	<u>15</u>

Total Hours: 60

\*Three hours of directed electives must be selected from : CS 150, CS 276 or CS 249.

## Legal Assisting

See "Paralegal Studies"

## Management

Associate of Applied Science Degree

There are six concentrations within the Management major:

1. Construction Management
2. Entrepreneurship
3. General Management
4. Health Services Management
5. Office Management
6. Retail Management

Please see those listings as follows.

### 1. Construction Management Concentration

**Management**

Associate of Applied Science Degree

The Construction Management concentration provides students already trained in the construction trades with the opportunity to expand their career opportunities in management and entrepreneurship. Through general education classes and courses in business and management, students develop the skills needed to move into supervisory roles or to start a small business within their area of technical training and experience.

To gain admission to this program, a student must present: 1) a diploma in construction or a construction trade from Chattanooga State's Tennessee Technology Center or from another Tennessee Technology Center, OR 2) hold a certificate of completion from an apprenticeship program approved by the U.S. Department of Labor requiring at least 1,290 clock hours.

Regardless of the criteria used for admission, documentation must be provided at the time of admission. Applicants must meet all admission requirements for degree seeking status and remove Transitional Studies deficiencies, if any. Students accepted into this program will receive 24 hours of advanced placement upon the successful completion of 15 hours of college level credit.\*

Course No.	Course Title	SUMMARY OF REQUIRED HOURS		
		FALL	SPR	SUM
	*Advanced Placement			24
BU 114	Principles of Accounting I	3		
BU 211	Legal Environment of Business			3
CI 164	Construction Estimating	3		
CI 233	Contracts and Specifications		3	
ENGL 1010	Composition I	3		
MATH 1710	Pre-Calculus I		3	
MG 114	Principles of Management	3		
MG 160	Project Management			3
MG 264	Human Resources Management			3
	General Education Elective	3		
	Humanities/Fine Arts Gen. Ed. Elective			3
	Social & Behavioral Science Gen. Ed. Elective			3
		<u>15</u>	<u>39</u>	<u>6</u>

Total Hours: 60

## 2. Entrepreneurship Concentration

### Management

#### Associate of Applied Science Degree

This program is for students interested in starting, financing, and operating a small business. Emphasis is on finance, marketing, accounting, personnel management, and supervision.

#### Career Opportunities

Entrepreneur, manager in a small business.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		FALL	SPR
<b>Freshman</b>			
BU 114	Principles of Accounting I	3	
BU 211	Legal Environment of Business	3	
CS 293	Computer Applications in Management		3
EC 211 or 212	Principles of Economics I or II		3
ENGL 1010	Composition I	3	
MG 103	Business Today - An Introduction	3	
MG 114	Principles of Management		3
MG 154	Marketing		3
MG 165	Business Mathematics	3	
	General Education Elective		3
		<u>15</u>	<u>15</u>
<b>Sophomore</b>			
BU 250	Accounting Information Systems I	3	
FM 201	Financial Management	3	
MATH 1530	Introductory Statistics		3
MG 224, 225	Entrepreneurship I, II	3	3
MG 254	Principles of Selling		3
MG 264	Human Resources Management	3	
	Humanities/Fine Arts Gen. Ed. Elective		3
	MG, BU or FP Electives	3	3
		<u>15</u>	<u>15</u>
	Total Hours: 60		

## 3. General Management Concentration

### Management

#### Associate of Applied Science Degree

The General Management concentration prepares students to manage businesses and other organizations.

#### Career Opportunities

Office manager, assistant manager, department manager, personnel administration, supervisor.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		FALL	SPR
<b>Freshman</b>			
BU 114, 115	Principles of Accounting I, II	3	3
BU 211	Legal Environment of Business		3
CS 293	Computer Applications in Management	3	
EC 211 or 212	Principles of Economics I or II		3
ENGL 1010	Composition I	3	
MG 103	Business Today - An Introduction	3	
MG 114	Principles of Management		3
MG 154	Marketing	3	
	*Directed Elective		3
		<u>15</u>	<u>15</u>
<b>Sophomore</b>			
FM 201	Financial Management	3	
MATH 1530	Introductory Statistics		3
MG 264	Human Resources Management	3	
MG 281	Strategic Management Practices		3
	*Directed Electives	6	6
	General Education Elective	3	
	Humanities/Fine Arts Gen. Ed. Elective		3
		<u>15</u>	<u>15</u>
	Total Hours: 60		

\*Suggested Directed Electives for Areas of Emphasis:

<b>General Emphasis</b>			
CS 101	Computer Literacy		3
	Course from BU, FP, MG, or RS		12
<b>Industrial:</b>			
CS 101	Computer Literacy		3
MG 105	Quality Management		3
MG 214	Supply Chain Management		3
MG 217	Operations Management		3
	BU 224, or FP 101, or any MG course		6
<b>Service:</b>			
CS 101	Computer Literacy		3
MG 105	Quality Management		3
MG 176	Customer Service		3
MG 217	Operations Management		3
	BU 224, or FP 101, or any MG course		6



A display in Chattanooga State's Outdoor Museum of Art

### 4. Health Services Management Concentration

#### Management

#### Associate of Applied Science Degree

This concentration prepares qualified students for supervisory and/or management positions in the health care industry.

#### Career Opportunities

Medical office manager, dental office manager, supervisory or management positions in the health care field.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS		
		FALL	SPR	SUM
	*Advanced Placement	24		
BU 114	Principles of Accounting I		3	
BU 211	Legal Environment of Business		3	
EC 211 or 212	Macro or Microeconomics		3	
ENGL 1010	Composition I	3		
MG 103	Business Today - An Introduction	3		
MG 114	Principles of Management	3		
MG 165	Business Mathematics	3		
MG 264	Human Resources Management		3	
SP 110	Fundamentals of Public Speaking			3
	Computer Elective		3	
	Humanities/Fine Arts Gen. Ed. Elective			3
	Math/Natural Science Gen. Ed. Elective	3/4		
Total Hours: 60/61		39/40	15	6

\*To qualify for admission to this program, students must present proof of Education: 1) completion of a clinically-based health program consisting of a minimum of 24 semester credit hours OR 2) a diploma from a Tennessee Technology Center requiring at least 1,290 clock hours in a clinically-based health program AND current registration/certification/licensure/credentials from 1) the State of Tennessee, OR 2) the regulating authority in another state OR 3) a national credentialing authority (if applicable). Students who are interested in careers in the health care industry but lack this requirement should pursue the General Management concentration.

BU 114	Principles of Accounting I	3
MG 114	Principles of Management	3
OF 104	Business Communications I	3
OF 105	Business Communications II	3
OF 195	General Office Procedures	3

#### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours	
		FALL	SPR
<b>Freshman</b>			
ENGL 1010	Composition I		3
OF 104, 105	Business Communications I, II	3	3
OF 113, 114	Keyboarding Document Processing I, II	3	3
OF 125, 126	Word Processing I, II	3	3
OF 195	General Office Procedures	3	
	Mathematics Gen. Ed. Elective*	3	
	Social and Behavioral Science Gen. Ed. Elective		3
		15	15
<b>Sophomore</b>			
MG 114	Principles of Management	3	
BU 114	Principles of Accounting	3	
MG 160	Project Management		3
MG 264	Human Resources Management		3
SP 110	Fundamentals of Public Speaking	3	
OF 206	Office Administration Internship		3
CS 293	Computer Applications in Management	3	
	Humanities/Fine Arts Gen. Ed. Elective		3
	** Directed Electives	3	3
Total Hours: 60		15	15

\*MATH 1530, Introductory Statistics is recommended.

\*\*Directed Electives must be based on the Emphasis chosen:

<b>Legal:</b>	
LA 110	Fundamentals of Law (3)
OF 130	Legal Procedures (3)
<b>Medical:</b>	
HE 103	Medical Terminology (3)
HE 127	Medicolegal, Ethical & Professional Concepts (3)
<b>Professional:</b>	
BU 211	Legal Environment of Business (3) AND
OF 127	Desktop Publishing (3) OR
MG 176	Customer Service Skills (3) OR
BU 250	Accounting Information Systems I (3)

### 5. Office Management Concentration

#### Management

#### Associate of Applied Science Degree

The Office Management Program is designed to provide a two-year degree with emphases in legal, professional and medical training. This program is for those who desire skills needed in the workforce at large. Graduates may enter the workforce and proceed with further education or fully dedicate their efforts toward a career as an administrative professional.

#### Career Opportunities

Executive Assistant, Administrative Assistant, Office Manager, Office Supervisor, Administrative Coordinator, Administrative Specialist, Assistant to Executive Title, Administrative Manager, Customer Service Representative, Administrative Associate, Executive/Secretary, Word Processing Specialist, Clerk/Typist, Medical Office Administrator, Legal Office, Legal/Medical Secretary.

After completion of 12 semester hours of college level work at Chattanooga State, Certified Professional Secretaries (CPS) or Certified Administrative Professionals (CAP) may receive up to 15 hours of college credit, applicable toward the A.A.S. degree in Office Management only. This credit may not duplicate or replace previously earned college credits. The student must present proof that all parts of the CPS or CAP exam have been passed and must be actively pursuing an Office Management major. The courses for which credit may be awarded are:

### 6. Retail Management Concentration

#### Management

#### Associate of Applied Science Degree

#### Career Opportunities

Store manager/assistant manager, customer service, buyer, merchandising manager, department manager/assistant manager, district director.

#### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours	
		FALL	SPR
<b>Freshman</b>			
BU 114, 115	Principles of Accounting I, II	3	3
BU 211	Legal Environment of Business		3
CS 293	Computer Applications in Management	3	
EC 211 or 212	Principles of Economics I or II		3
ENGL 1010	Composition	3	
MG 103	Business Today - An Introduction	3	
MG 114	Principles of Management		3
MG 154	Marketing	3	
	General Education Elective		3
		15	15
<b>Sophomore</b>			
FM 201	Financial Management	3	
MATH 1530	Introduction to Statistics		3
MG 165	Business Mathematics	3	
MG 176	Customer Service Skills	3	
MG 214	Supply Chain Management		3
MG 215	Retail Operations	3	
MG 254	Principles of Selling		3
MG 264	Human Resource Management		3
MG 281	Strategic Management Practices		3
	Humanities/Fine Arts Gen. Ed. Elective	3	
Total Hours: 60		15	15

## Media Technologies

### Associate of Applied Science Degree

There are three concentrations within the Media Technologies major:

1. **Graphic Design Concentration**
2. **Media Technology Concentration**
3. **Web Based Design Concentration**

Please see those listings as follows.

### 1. Graphic Design Concentration

#### Media Technologies

#### Associate of Applied Science Degree

The Graphic Design concentration focuses on print media. Students are prepared for careers in graphic design firms and advertising agencies, printing and graphic arts service industries and in-plant or in-house art departments. Students will need to spend approximately \$250-300 for basic professional equipment the first semester and \$100-150 per semester for consumable supplies.

#### Career Opportunities

Graphic designer, graphic services specialist, art director, pre-press, service bureau, printing, graphic service sales, illustrator.

#### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours	
		FALL	SPR
<b>Freshman</b>			
AA 106	Design Principles	3	
AA 107	Intro to Illustration		3
AA 108	Design Concepts	3	
AA 116	Basic Typography		3
AA 140	Intro to Applications for Graphic Design	3	
AA 240	Applications for Graphic Design II		3
CO 110	Introduction to Mass Communications	3	
CS 140	Web Foundations		3
ENGL 1010	Composition I	3	
	Math/Science Gen. Ed. Elective		3/4
		<u>15</u>	<u>15/16</u>
<b>Sophomore</b>			
AA 209	Graphic Design I	3	
AA 210	Graphic Design II		3
AA 215	Advertising Design I	3	
AA 217	Advertising Design II		3
ART 1030	Art Appreciation	3	
SP 110	Fundamentals of Public Speaking	3	
	Social/Behavioral Science Gen. Ed. Elective		3
	*Directed Electives	3	3
AA 222	Portfolio		3
		<u>15</u>	<u>15</u>

Total Hours: 60/61

\*Choice of Directed Electives: AA 190, AA 249, CS 150, CS 151, CS 152, MG 224, MG 225, MG 114, MG 154, MG 254, CO 204, CS 241 and MG 103.

### 2. Media Technology Concentration

#### Media Technologies

#### Associate of Applied Science Degree

The media technology concentration will give students an opportunity to take courses in broadcasting, production, linear editing, and other areas of mass media. This multi-faceted approach will meet the identified need for students interested in radio, television, or print journalism while providing an overview of all aspects of media technology. This program will also include a number of courses which are transferable to senior institutions for students interested in pursuing an advanced degree while working in the industry.

## Career Opportunities

Entry level positions in radio and television operations throughout the region.

#### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours	
		FALL	SPR
<b>Freshman</b>			
AA 106	Design Principles	3	
CO 110	Introduction to Mass Communications	3	
CO 202	Broadcast Announcing		3
CO 204	TV Production		3
CS 140	Internet Foundations	3	
ENGL 1010	Composition I	3	
SP 110	Fundamentals of Public Speaking		3
	*Directed Elective		3
	Humanities/Fine Arts Gen. Ed. Elective	3	
	Social/Behavioral Science Gen. Ed. Elective		3
		<u>15</u>	<u>15</u>
<b>Sophomore</b>			
CO 210	Communications Practicum	3	
CO 221,231	Media Writing I,II	3	3
CO 230	Remote Television Production	3	
CO 232	Public Relations		3
CO 241	Non-linear Video Editing	3	
CO 281	Media Management		3
	*Directed Elective	3	3
	Mathematics/Natural Science Gen. Ed. Elective		3 or 4
		<u>15</u>	<u>15</u>

Total Hours: 60/61

\*Select 9 hours from: Any AA or CO course, BU 211, CS 104, 150, 152, MG 154, 244, 254.

### 3. Web Based Design Concentration

#### Media Technologies

#### Associate of Applied Science Degree

The web based design degree trains students for careers in advertising agencies, art services, department stores, printing industries, television, graphic arts industries, and in-plant or agency packaging services. The Web Design concentration focuses on web page design and courses specific to the internet. Students will need to spend approximately \$200-\$250 for basic professional equipment the first year.

#### Career Opportunities

Art director, production artist, graphic designer, illustrator, printer, printing, pre-press, service bureau.

#### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours	
		FALL	SPR
<b>Freshman</b>			
AA 106	Design Principles	3	
CS 140	Internet Foundations	3	
CS 150	Principles of Web Site Design	3	
CS 155	Web Graphics	3	
ENGL 1010	Composition I	3	
AA 116	Basic Typography		3
CS 152	Introduction to Dreamweaver		3
	*Directed Elective		3
CO 110	Introduction to Mass Communications		3
	Social/Behavior Science Gen. Ed. Elective		3
		<u>15</u>	<u>15</u>
<b>Sophomore</b>			
CO 241	Non-Linear Video Editing	3	
ART 1030	Art Appreciation	3	
CS 241	Intermediate Web Site Design	3	
SP 110	Fundamentals of Public Speaking	3	
	*Directed Elective	3	
AA 222	Portfolio		3
CS 151	Introduction to Flash		3
CS 242	Javascript for Designers		3
	*Directed Elective		3
	Math/Science Gen. Ed. Elective		3
		<u>15</u>	<u>15</u>

Total Hours: 60

Directed Electives: 6 hours from AA, CS or CO courses.

## Paralegal Studies

Associate of Applied Science Degree  
Approved by the American Bar Association

The goal of the Paralegal Studies program is to provide a general education with emphasis on substantive legal and ethical principles and prepare them for entry-level paralegal positions working under the supervision of an attorney in the private or public sector. This program is also the basis for the first two years of a baccalaureate program in Legal Assisting through Chattanooga State's 2+2 articulation agreement with the University of Tennessee at Chattanooga. (See the Advising Center for details.)

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		FALL	SPR
Freshman			
BU 114	Principles of Accounting I	3	
CS 101 or CS 197 or CS 293	Computer Literacy* or Spreadsheet Software Applications or Computer Applications in Management		3
ENGL 1010	Composition I	3	
LA 110	Fundamentals of Law	3	
LA 130	Legal Research	3	
LA 135	Legal Writing/Case Analysis		3
PO 110	American Government	3	
OF 105 or ENGL 1020	Business Communications II or Composition II		3
	Humanities Gen. Ed. Elective		3
	Foreign Language or General Education Elective***	4 or 3	
		15	16 or 15
Sophomore			
LA 210	Contracts		3
LA 220	Torts		3
LA 240	Trial Practice and Civil Procedure	3	
LA 290 or LA 299	Law Practice Management or Internship		3
	Legal Assisting Electives	6	6
	Math or Natural Science Gen. Ed. Elective	3 or 4	
	Social and Behavioral Sciences Gen. Ed. Elective**	3	
		15 or 16	15
	Total Hours: 60 or 62		

\*CS 101, Computer Literacy, is recommended only for students with little or no background in using a spreadsheet program such as excel.

\*\*PY 101, General Psychology, is strongly recommended, PE 230 is excluded.

\*\*\*PE 230 is excluded; Spanish (SPAN 1010) recommended.

## Realtime Reporting

Associate of Applied Science Degree

Beginning in the fall of 2006, the Realtime Reporting Degree became a 1 + 1 program with the first year being the Tennessee Technology Center Realtime Reporting: Scopist diploma. After successfully completing this one year Scopist diploma, students will receive 24 hours of advance credit toward the Realtime Reporting Degree. (See "Realtime Reporting: Scopist" in the Tennessee Technology Center section of this catalog.)

Admitted students will be granted 24 hours of Advanced Placement credit upon completion of all transitional studies requirements and 15 hours of college credit with a GPA of 2.0 or above.

There are three concentrations within the Realtime Reporting major:

1. Broadcast Captioning
2. CART Reporting
3. Judicial Reporting

Please see those listings as follows.

## 1. Broadcast Captioning Concentration

Realtime Reporting

Associate of Applied Science Degree

The Broadcast Captioning concentration prepares students to provide television captioning services for deaf and hard-of-hearing people.

### Career Opportunities

Live television captioning of news programs, talk shows, sporting events, shopping networks, political debates.

#### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours		
		FALL	SPR	SUM
	*Advanced Placement			24
CO 249	Special Topics in Mass Communications	3		
ENGL 1010	Composition I	3		
GEOG 1025	World Geography		3	
HP 132	Psychology of Deaf People	3		
PO 110	Introduction to American Government	3		
REAL 132,133,134	Captioning II, III, IV	4	4	4
REAL 202	Captioning/CART Procedures			3
	**Humanities/Fine Arts Gen. Ed. Elective		3	
	Math Gen. Ed. Elective		3	
	Total Hours: 60	16	37	7

\*Advanced Placement through the Tennessee Technology Center.

\*\*HUM 1010, Introduction to Humanities I is strongly recommended.

## 2. CART Reporting Concentration

Realtime Reporting

Associate of Applied Science Degree

The CART (Communication Access Realtime Translation) Reporting Concentration prepares students to provide communication access services for deaf and hard-of-hearing people.

### Career Opportunities

CART in educational settings, conferences, conventions, business meetings, church services, theater productions.

#### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours		
		FALL	SPR	SUM
	*Advanced Placement			24
ENGL 1010	Composition I	3		
GEOG 1025	World Geography		3	
HP 120	American Sign Language		3	
HP 132	Psychology of Deaf People	3		
PO 110	Introduction to American Government	3		
REAL 132,133,134	Captioning II, III, IV	4	4	4
REAL 202	Captioning/CART Procedures			3
	**Humanities/Fine Arts Gen. Ed. Elective		3	
	Math Gen. Ed. Elective		3	
	Total Hours: 60	16	40	4

\*Advanced Placement through the Tennessee Technology Center.

\*\*HUM 1010, Introduction to Humanities I is strongly recommended.

## 3. Judicial Reporting Concentration

Realtime Reporting

Associate of Applied Science Degree

Approved by the National Court Reporters Association

The Judicial Reporting concentration prepares students to provide realtime reporting services in the legal environment.

### Career Opportunities

Official court reporter or freelance reporter providing realtime reporting of court proceedings, depositions, medical malpractice cases, arbitrations, sworn statements, government hearings, board meetings.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS		
		FALL	SPR	SUM
	*Advanced Placement		24	
ENGL 1010	Composition I	3		
GEOG 1025	World Geography		3	
LA 130	Legal Research		3	
OF 104	Business Communications	3		
PO 110	Introduction to American Government		3	
REAL 122, 123, 124	Judicial Reporting II, III, IV	4	4	4
REAL 201	Judicial Procedures	3		
	*Humanities/Fine Arts Gen. Ed. Elective		3	
	Math Gen. Ed. Elective		3	
		<u>16</u>	<u>40</u>	<u>4</u>

\*Advanced Placement through the Tennessee Technology Center.  
 \*\*HUM 1010, Introduction to Humanities I is strongly recommended.

## Information Systems

### Technical Certificate of Credit

This certificate is for persons interested in information systems technology. Thirteen semester hours of core courses are required of every student; the remaining coursework is chosen from information systems, accounting, management, or network management. A minimum grade of "C" is required in each course.

#### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours	
		FALL	SPR
CS 104	Fundamentals of Information Systems	3	
CS 124 or CS 160	Visual BASIC I or Java Programming I		3

Directed Electives (18 Hours total electives)

Web Emphasis			
CS 150	Principles of Web Site Design	3	
CS 155	Web Graphics	3	
CS 151	Building Web Sites		3
CS 152	Introduction to Adobe Dreamweaver		3
CS 241	Intermediate Web Site Design		3
CS 242	Introduction to Scripting Languages		3

OR

Desktop Application Emphasis			
CS 101	Computer Literacy	3	
CS 197	Spreadsheet Software Applications		3
CS 198	Database Software Applications		3
OF 125	Word Processing I	3	
CS 293	Computer Applications in Management		3
	Elective (3 hours must be selected from courses with CS prefix)		3

OR

General Emphasis		18 hours must be selected from courses with CS or NW prefix	
		<u>6</u>	<u>12</u>

Total Hours: 24

## Office Systems Specialist

### Technical Certificate of Credit

This two-semester certificate provides students with entry-level word processing skills. A minimum grade of "C" is required in each course.

#### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours	
		FALL	SPR
OF 103 or CS 293	Records Management/Calculators -or- Computer Applications in Management		3
OF 104	Business Communication I	3	
OF 113, 114	Keyboarding/Document Processing I, II	3	3
OF 125, 126	Word Processing I, II	3	3
OF 195	General Office Procedures	3	
		<u>12</u>	<u>9</u>

Total Hours: 21

## Supervision

### Technical Certificate of Credit

This two-semester certificate is designed to address the skill set needed by new or recently promoted supervisors. These are students who are not typically seeking a degree, but to whose future employers formal recognition of completion of this program is of value. These courses stress the day-to-day functional requirements of supervisors.

#### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours	
		FALL	SPR
MG 228, 289	Applied Management I, II	3	3
MG 114	Principles of Management	3	
MG 264	Human Resources Management		3
		<u>6</u>	<u>6</u>

Total Hours 12

## Business and Information Technologies Technical Certificates

### Information Security

#### Technical Certificate of Credit

This Information Security Certificate is available to students who wish to expand their technical knowledge using software tools for Information Security. This certificate focuses on the acquisition of theory and technical competencies associated with the Information Technology Profession with a curriculum that forms the basis for continued career growth, life-long learning as an IT professional, or a future IT/Network Management program. This program is intended for the training of students employed in the Information Systems field who need expertise in Network Security. However, for students who have not worked in the IS field, they will need to acquire the necessary skills earned through the following courses of CS 204, CS 205, NW 205 and NW 207.

#### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours	
		FALL	SPR
NW 211	Network Security Fundamentals	3	
NW 215	Firewalls & Network Security	3	
NW 219	Network Operating System Security		3
NW 223	Computer Security & Penetration Testing		3
NW 227	Computer Forensics	3	
NW 231	Wireless Security		3
NW 235	Disaster Recovery		3
		<u>9</u>	<u>12</u>

Total Hours: 21



Chattanooga State's Mens Baseball team playing the Chattanooga Lookouts.

# Engineering Technologies

Chattanooga State offers two-year degrees in both Engineering Technology and a Pre-Engineering transfer program. Students interested in these fields need to know the difference between Engineering and Engineering Technology.

- Engineering uses mathematics, science, experience, and judgment to develop ways to benefit humanity.
- Engineering Technology supports engineering through knowledge, methods, and technical skills. It lies between the craftsman and the engineer, closer to the engineer.

Engineering Technology courses (those with prefixes CI, DD, EE, ET, MD), while not generally accepted at four-year institutions offering degrees in Engineering, are accepted at many four-year Engineering Technology programs, and are accepted by UTC's Engineering Technology Management B.S. program. The degree also offers immediate job opportunities.

Pre-Engineering students should follow the articulation agreement for the senior institution to which they plan to transfer. The department is working especially close with UTC's Engineering School so that transfer credit hours are maximized.

<http://www.chattanoogaastate.edu/Engineering/enmain.asp>

## Electrical/Electronic Engineering Technology

### Associate of Applied Science Degree

There are three concentrations within the Electrical/Electronic Engineering Technology major:

1. **Automated Controls**
2. **Computer Systems**
3. **Networking Technology**

Please see those listings as follows.

### 1. Automated Controls Concentration

#### Electrical/Electronic Engineering Technology

##### Associate of Applied Science Degree

Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology

The Electrical/Electronic Engineering Technology major gives students a broad education in AC and DC circuits, electronic circuits, logic circuits, advanced electronic circuits, digital computer systems, and integrated circuits through practical laboratory experiences and classroom instruction. The Automated Controls Concentration provides in-depth study in robotics, process control with feedback control loops, programmable logic controllers, transducers, and factory cell automation.

## Career Opportunities

Engineering technician, electronics technician, industrial electronics technician, industrial-electrician, instrumentation technician, manufacturing technician, plant technician, robotics technician, service technician, systems-application technician.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		FALL	SPR
<b>Freshman</b>			
DD 116	CAD for Electronics		3
EE 110	Electrical Circuits I	4	
EE 121	Electronics I		4
EE 140	Digital Circuits	4	
ENGL 1010	Composition I	3	
ET 115	Computers in Engineering Technology	3	
MATH 1710	Pre-Calculus I	3	
MATH 1720	Pre-Calculus II		4
	Physics Gen.. Ed. Elective*		4
		<u>17</u>	<u>15</u>
<b>Sophomore</b>			
EE 212	Electrical Circuits II	4	
EE 221	Electronics II		4
EE 260	Programmable Logic Controllers	4	
EE 261	Automation Control Systems		4
EE 271	Capstone Project		3
ENGL 2710	Technical Reports	3	
MATH 1910	Calculus w/Analytic Geometry I	4	
	Humanities/Fine Arts Gen. Ed. Elective		3
	Social/Behavioral Science Gen. Ed. Elective		3
		<u>15</u>	<u>17</u>
		Total Hours: 64	

\*PHYS 1030, PHYS 2010, PHYS 2110.

## 2. Computer Systems Concentration

### Electrical/Electronic Engineering Technology

#### Associate of Applied Science Degree

Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology

The Electrical/Electronic Engineering Technology major gives students a broad education in AC and DC circuits, electronic circuits, logic circuits, advanced electronic circuits, digital computer systems, and integrated circuits through practical laboratory experiences and classroom instruction. The Computer Systems Concentration provides in-depth study in microcomputer peripherals, bus standards, communication protocols, and the latest in microprocessor technology.

## Career Opportunities

Associate engineering technician, computer technician, communications technician, electronics technician, industrial electronics technician, instrumentation technician, networking technician, plant technician, service technician, systems application technician.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS		
		FALL	SPR	SUM
<b>Freshman</b>				
DD 116	CAD for Electronics			3
EE 110	Electrical Circuits I	4		
EE 121	Electronics I		4	
EE 140	Digital Circuits	4		
ENGL 1010	Composition I	3		
ET 115	Computers in Engineering Technology	3		
MATH 1710	Pre-Calculus I	3		
MATH 1720	Pre-Calculus II		4	
	*PHYS 1030, PHYS 2010, or PHYS 2110.			4
		<u>17</u>	<u>11</u>	<u>4</u>

Sophomore			
EE 212	Electrical Circuits II	4	
EE 221	Electronics II		4
EE 250	Microcomputer Systems	4	
EE 251	Microcontrollers Applications		4
EE 271	Capstone Project		3
ENGL 2710	Technical Reports		3
MATH 1910	Calculus w/Analytic Geometry I	4	
	Humanities/Fine Arts Gen. Ed. Elective		3
	Social/Behavioral Science Gen. Ed. Elective	3	
		15	17
	Total Hours: 64		

\*PHYS 1030, PHYS 2010, PHYS 2110.

### 3. Networking Technology Concentration

**Electrical/Electronic Engineering Technology**  
**Associate of Applied Science Degree**

This program trains students to work in data/telecommunications by providing a broad knowledge of computer operating systems protocol as well as techniques for establishing physical connections between various computer platforms. Graduates will be able to work with stand-alone local area networks, distributed workgroups linked directly to a host computer, and interconnecting computers with different platforms.

#### Career Opportunities

Management information system technician, management information system coordinator, computer network installer, network repair (maintenance) technician, computer technician.

SUMMARY OF REQUIRED HOURS			
Course No.	Course Title	Semester Hours	
		FALL	SPR
<b>Freshman</b>			
CNAP 1010	CISCO CCNA I	4	
CNAP 1020	CISCO CCNA II		4
EE 110	Electrical Circuits I	4	
EE 121	Electronics I		4
EE 140	Digital Circuits	4	
ENGL 1010	Composition I	3	
ET 115	Computers in Engineering Technology		3
MATH 1710	Pre-Calculus I	3	
	Natural Science Gen. Ed. Elective		4
		18	15
<b>Sophomore</b>			
CNAP 1030	CISCO CCNA III	4	
EE 250	Microcomputer Systems	4	
EE 251	Microcontrollers Applications		4
ENGL 2710	Technical Reports		3
	Approved Technical Electives	3	3
	Humanities Gen. Ed. Elective	3	
	Social/Behavioral Science Gen. Ed. Elective		3
		14	13
	Total Hours: 60		

Approved technical electives

- Data communications emphasis: CS 204 Computer Architecture and CS 205 Data Communications or
- Security emphasis: NW 205 - Networking Client Operating Systems and NW 211 - Security or
- CISCO emphasis: CNAP 1040 + 2 hours approved by E/EET advisor from DD, EE, MD, NW or CS courses.

## Engineering Technology

**Associate of Applied Science Degree**

There are five concentrations within the Engineering Technology major:

1. Civil Engineering Technology
2. Construction Engineering Technology
3. Design/Drafting Engineering Technology
4. Manufacturing Engineering Technology
5. Mechanical Engineering Technology

6. Radiation Protection
7. Motor Sports Engineering Technology

Please see those listings as follows.

### 1. Civil Engineering Technology Concentration

**Engineering Technology**

**Associate of Applied Science Degree**

**Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology**

This program gives students the knowledge, methods, and skills to work as engineering technicians in support of such civil engineering activities such as assisting in the design of structural steel and reinforced concrete, monitoring construction, maintaining material quality used in construction, surveying and mapping, construction estimating, and assisting in the design of hydraulics structures.

#### Career Opportunities

Civil engineering technician, construction estimator, construction inspector, land surveyor, hydraulics technician, structural design technician, construction materials lab technician.

#### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours	
		FALL	SPR
<b>Freshman</b>			
CI 164	Construction Estimating		3
CI 174	Surveying I		4
DD 124	*CAD Engineering Drawing II		3
ENGL 1010	Composition I	3	
ENGL 2710	Technical Reports		3
ET 115	Computers in Engineering Technology	3	
MATH 1710	Pre-Calculus I	3	
MATH 1720	Pre-Calculus II		4
PHYS 1030	Concepts of Physics	4	
	Humanities/Fine Arts Gen. Ed. Elective	3	
		16	17
<b>Sophomore</b>			
CI 224	Hydraulics & Hydrology	3	
CI 231	Construction Materials Testing	3	
CI 242	Structural Steel		3
CI 243	Reinforced Concrete		3
CI 274	Surveying II	4	
MATH 1910	Calculus w/Analytic Geometry I	4	
MD 134,242	Statics & Strength of Materials I, II	3	3
	Social/Behavioral Science Gen. Ed. Elective		3
	**Technical Elective		3
		17	15
	Total Hours: 65		

\*Prerequisite: DD 114.  
 \*\*DD, MD, or CI course.

### 2. Construction Engineering Technology Concentration

**Engineering Technology**

**Associate of Applied Science Degree**

The primary objective of this program is to provide the basic technical theory, principles, and practices to enable the graduate to work in the construction industry. Opportunities may be available with testing firms, materials suppliers, specialty contractors, construction safety, subcontractors, home builders, general contractors, land surveyors, and inspection service bureaus. The program is intended for a student planning on immediate employment as an engineering technician, but when the concentration is accredited by TAC/ABET it will provide 2+2 transfer to a baccalaureate program.



**Career Opportunities**

Construction - estimator, materials testing, inspector, supervision, safety; contractor, surveying, project planning.

SUMMARY OF REQUIRED HOURS		Semester Hours	
Course No.	Course Title	FALL	SPR
<b>Freshman</b>			
CI 110	Construction Safety	3	
CI 116	Construction Planning & Scheduling		3
CI 164	Construction Methods & Estimating		3
CI 174	Surveying I		4
DD 124	*CAD Engineering Drawing II		3
ENGL 1010	Composition I	3	
ET 115	Computers in Engineering Technology	3	
MATH 1710	Pre-Calculus I	3	
MATH 1720	Pre-Calculus II		4
PHYS 1030	Concepts of Physics	4	
		<u>16</u>	<u>17</u>
<b>Sophomore</b>			
CI 231	Construction Materials Testing	3	
CI 233	Contracts & Specifications	3	
CI 242 or CI 243	Structural Steel or Reinforced Concrete		3
ENGL 2710	Technical Reports		3
MATH 1910	Calculus w/Analytic Geometry I	4	
MD 134,242	Statics & Strength of Materials I, II	3	3
	Humanities Gen. Ed. Elective	3	
	Social/Behavioral Science Gen. Ed. Elective		3
	**Technical Elective		3
Total Hours: 64		<u>16</u>	<u>15</u>

\*Prerequisite: DD 114.  
 \*\*CI, DD, or MD course.

**3. Design/Drafting Engineering Technology Concentration**

**Engineering Technology**  
 Associate of Applied Science Degree

To be accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET)

The Design/Drafting Engineering Technology program gives students a broad education in mechanical design, manufacturing processes, and materials science. Advanced skills in computer-aided drafting and design are developed through the use of 3-dimensional solid modeling software.

**Career Opportunities**

Engineering Assistant, Computer Simulations Technician, Mechanical Engineer and CAD System Administrator.

SUMMARY OF REQUIRED HOURS		Semester Hours	
Course No.	Course Title	FALL	SPR
<b>Freshman</b>			
ENGL 1010	Composition I	3	
ENGL 2710	Technical Reports		3
MATH 1710	Pre-Calculus I	3	
MATH 1720	Pre-Calculus II		4
PHYS 1030	Concepts of Physics		4
MD 184	Manufacturing Processes	3	
MD 104	Blueprint Reading and Analysis	3	
DD 124	CAD Engineering Drawing II**		3
ET 115	Computers in Engineering Technology	3	
MD 254	Elements of Materials Science		3
		<u>15</u>	<u>17</u>
<b>Sophomore</b>			
MD 134	Statics & Strength of Materials I	3	
DD 227	Inventor I	3	
DD 228	Inventor II		3
DD 243	SolidWorks I	3	
DD 253	SolidWorks II		3
DD 284	Design Capstone Project		3
	CAD Technical Elective*	3	
	Engineering Technology Technical Elective**		3
	Social/Behavioral Science Gen.. Ed. Elective	3	
	Humanities/Fine Arts Gen. Ed. Elective		3
Total Hours: 65		<u>15</u>	<u>18</u>

\*Choose 2 courses from DD 118, 204, 216, 218, 222  
 \*\*Choose 1 course from MD 226, 242, 264, EE 284  
 \*\*\*Prereq: DD 114

**4. Manufacturing Engineering Technology Concentration**

**Engineering Technology**

Associate of Applied Science Degree

Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology

The Manufacturing Engineering Technology major provides graduates with a unique blend of theoretical and hands-on knowledge with computer integration in a manufacturing environment. This curriculum includes a background in mechanical/manufacturing engineering technologies and related theory, computer-aided design (CAD), computer numerical control (CNC), computer-aided manufacturing (CAM), statistical process control (SPC), quality management and control, engineering management. Computer usage for process control and effective communication skills is emphasized along with practical skills for programming and operating technically sophisticated equipment.

**Career Opportunities**

With an A.A.S. degree in Manufacturing Engineering Technology you will become an integral member of the team needed by modern industrial firms. Your knowledge of production systems, automated equipment, system integration, process controls, quality control and managerial skills will help you perform many different duties including applications for computer integration, process setup and control, quality control. You will be prepared to enter jobs such as equipment troubleshooter, equipment builder, equipment installation technician, manufacturing or quality control specialist, plant supervisor and other operational or management positions. Other areas may include product planning, product design, or system design. Your skills will enable you to enter your chosen field and quickly become a member of a dynamic industry.

SUMMARY OF REQUIRED HOURS		Semester Hours	
Course No.	Course Title	FALL	SPR
<b>Freshman</b>			
DD 124	CAD Engineering Drawing II		3
ENGL 1010	Composition I	3	
ENGL 2710	Technical Reports		3
ET 115	Computers in Engineering Technology	3	
MATH 1710	Pre-Calculus I	3	
MATH 1720	Pre-Calculus II		4
MD 184	Manufacturing Processes	3	
MD 254	Elements of Material Science		3
PHYS 1030	Concepts of Physics	4	
	Humanities/Fine Arts Gen. Ed. Elective		3
		<u>16</u>	<u>16</u>
<b>Sophomore</b>			
EE 284	Electrical Technology for Mechanical Engineering Technology	3	
MATH 1530	Introductory Statistics	3	
MD 134	Statics and Strength of Materials I	3	
MD 207,208	Numerical Control I, II	3	3
MD 226	Fluid Power		3
MD 294	Automated Manufacturing	3	
MD 295	Manufacturing Management		3
QA 240	Statistical Process Control	3	
	Social/Behavioral Science Gen. Ed. Elective		3
	*Technical Elective		3
Total Hours: 65		<u>18</u>	<u>15</u>

\*DD 214, DD 222, DD 227, or DD 243.

A.A.S. Degrees & Technical Certificates

## 5. Mechanical Engineering Technology Concentration

### Engineering Technology

#### Associate of Applied Science Degree

Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology

This program gives students a broad education in mechanical design, manufacturing processes, creation and utilization of mechanical power, thermosciences, heating, ventilation and air conditioning (HVAC) design, metals and special materials, and computer-aided drafting and design.

### Career Opportunities

Customer support technician, draftsman/designer, engineering assistant, HVAC technician, computer-aided draftsman/designer, industrial mechanics technician, metallurgical laboratory technician, mechanical engineering technician.

#### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours	
		FALL	SPR
<b>Freshman</b>			
CHEM 1010	Introduction to Chemistry I		4
DD 124	CAD Engineering Drawing II		3
ENGL 1010	Composition I	3	
ENGL 2710	Technical Reports		3
ET 115	Computers in Engineering Technology		3
MATH 1710	Pre-Calculus I	3	
MATH 1720	Pre-Calculus II		4
MD 184	Manufacturing Processes	3	
MD 254	Elements of Material Science		3
PHYS 1030	Concepts of Physics	4	
		<u>16</u>	<u>17</u>
<b>Sophomore</b>			
EE 284	Electrical Technology for Mechanical Engineering Technology	3	
MATH 1910	Calculus w/Analytic Geometry I	4	
MD 134,242	Statics and Strength of Materials I, II	3	3
MD 226	Fluid Power		3
MD 264	Thermodynamics I	3	
MD 274	Machine Design		3
	Humanities/Fine Arts Gen. Ed. Elective		3
	Social/Behavioral Science Gen. Ed. Elective	3	
	*Technical Elective		3
	Total Hours: 64	<u>16</u>	<u>15</u>

\*DD 204, DD 214, DD 222, DD 227, or DD 243.

## 6. Radiation Protection Concentration

### Engineering Technology

#### Associate of Applied Science Degree

To be accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET)

The Radiation Protection offers students a unique opportunity to obtain high-tech and cutting-edge training that will prepare the graduate for any organization or business that handles radioactive substances to include advanced manufacturing, life sciences, research reactor, the nuclear power industry, hazardous waste removal companies, and government agencies. The Radiation Protection concentration will also provide students a broad education in engineering technology fundamentals such as computer tools and applications, engineering drawings, and analysis of mechanical systems. Technicians with the educational background this program provides are in high demand now, and with the rising use of radiation in diagnostics, medical treatment and applications, and future expansions of nuclear power technology, this demand will

Engineering courses not for men only.

remain high for years to come. Therefore, job placement prospects are highly favorable and starting salaries reflect this high demand.

### Career Opportunities

Radiation Protection Technician, Health Physics Technician, Industrial Hygiene Technician and Nuclear Power Plant Operations.

#### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours	
		FALL	SPR
<b>Freshman</b>			
ENGL 1010	Composition I	3	
ENGL 2710	Technical Reports		3
MATH 1710	Pre-Calculus I	3	
MATH 1720	Pre-Calculus II		4
PHYS 1030	Concepts of Physics	4	
NU 101	Health Physics & Industrial Hygiene Seminar	1	
NU 104	Radiation Protection & Radiological Health Administration	4	
DD 124	CAD Engineering Drawing II		3
ET 115	Computers in Engineering Technology		3
	Social/Behavioral Science Gen. Ed. Elective		3
		<u>15</u>	<u>16</u>
<b>Sophomore</b>			
MATH 1910	Calculus with Analytic Geometry I	4	
MD 134	Statics and Strength of Materials I	3	
MD 246	Reactor Theory		4
NU 154	Nuclear Physics	4	
NU 204	Introduction to Health Physics & Industrial Hygiene	4	
NU 264	Health Physics		4
EE 113	Introduction to Power Plant Instrumentation		4
HS 243	Radiation Biology & Hyperthermia		3
	Humanities/Fine Arts Gen. Ed. Elective		3
		<u>15</u>	<u>18</u>
	Total Hours: 64		

## 7. Motor Sports Engineering Technology Concentration

### Engineering Technology

#### Associate of Applied Science Degree

This program meets the needs of those enthusiasts involved in motor Sports vehicle design and construction. Motor Sports is a \$475 billion a year industry and Chattanooga is surrounded by major and minor motor Sports tracks and each year is host to a number of racing events and shows. Car, boat, motorcycle, and ATV race enthusiasts are seeking training avenues for making their vehicle the fastest and best. Chattanooga State began a Motor Sports initiative in the fall 2005 semester, which has generated interest and demand for motor Sports welding, machining, and engine performance. The newly formed Motor Sports Club, a multidisciplinary student organization, is now the largest at Chattanooga State.

Because of the combination of hands-on skills in machining, welding and engine operations, plus extensive training in mechanical engineering technology theory and applications, the students should also find success in jobs in industrial maintenance and manufacturing. This is an area in which local industry has major needs.

### Career Opportunities

Integral member of the team needed by motor sports-related industries ranging from racing automobiles to dragsters, marine craft, and motorcycles.

SUMMARY OF REQUIRED HOURS		Semester Hours	
Course No.	Course Title	FALL	SPR
<b>Freshman</b>			
	*Advanced Placement	12	
DD 124	CAD Engineering Drawing II		3
ENGL 1010	Composition I		3
ET 115	Computers in Engineering Technology		3
MATH 1710	Pre-Calculus I	3	
MATH 1720	Pre-Calculus II		4
MOTR 101	Introduction to Motor Sports		1
	Humanities/Fine Arts Gen. Ed. Elective		3
		15	17
<b>Sophomore</b>			
EE 284	Electrical Technology for Mechanical Engineering Technology	3	
	Technical Reports	3	
ENGL 2710	Technical Reports		3
MATH 1530	Statistics		3
MD 134	Statics and Strength of Materials I	3	
MD 226	Fluid Power		3
MD 254	Elements of Material Science		3
MD 264	Thermodynamics I	3	
MD 295	Manufacturing Management		3
PHYS 1030	Concepts of Physics	4	
	Social/Behavioral Science Gen. Ed. Elective		3
		16	15
	Total Hours: 63		

\*Students must present evidence of education and/or training at time of admissions in accordance with the Tennessee Technology Center/A.A.S. Degree Articulation policy. Admitted student will be granted 12 hours of Advance Placement upon completion of all transitional studies requirements and 15 hours of college credit with a GPA of 2.00 or above. This program is designed for students who completed the Motor Sports Vehicle Technology Certificate as well as Automotive Technology, Diesel Mechanic Technology, and Motorcycle & Marine Service Technology diplomas.

## Industrial Maintenance Technology

### Associate of Applied Science Degree

There are two concentrations within the Industrial Maintenance Technology major:

1. Chemical
2. Electromechanical

Please see those listings as follows.

### 1. Chemical Concentration

#### Industrial Maintenance Technology Associate of Applied Science Degree

The associate degree program in industrial maintenance technology (chemical concentration) prepares graduates for a position as a process operator/technician in a manufacturing facility. Students will gain an understanding of chemistry and chemical processes as well as blueprint reading, electrical and mechanical fundamentals, and computer skills. Emphasis is placed upon the understanding and troubleshooting of process systems. The program combines classroom study and practical hands-on experience. The courses in the program emphasize safe and efficient work practices, teamwork, communication skills, and real world case studies.

#### Career Opportunities

Process operators/technicians in the chemical, polymer, pharmaceutical, plastics, food/beverage, water/sewage, and pulp/paper industries.

SUMMARY OF REQUIRED HOURS		Semester Hours	
Course No.	Course Title	FALL	SPR
<b>Freshman</b>			
CS 101	Computer Literacy		3
CT 111	Introduction to Process Technology	3	

CT 112	Industrial Mathematics	3	
CT 113	Industrial Chemistry		4
CT 121	Industrial Process Equipment		4
ENGL 1010	Composition I	3	
MATH 1530	Introductory Statistics	3	
MD 104	Blueprint Reading and Analysis	3	
OS 116	Industrial Maintenance Safety		3
	Humanities/Fine Arts Gen. Ed. Elective		3
		15	17
<b>Sophomore</b>			
CT 122	Introduction to Quality Control	3	
CT 123	Introduction to Process Operations	4	
CT 124	Introduction to Process Controls & Instrumentation		3
	*Natural Science Gen. Ed. Elective	4	
	Social/Behavioral Science Gen. Ed. Elective		3
	**Technical Electives	3	8
		14	14
	Total Hours: 60		
	*CHEM 1010 or PHYS 1030		
	**Selected from courses with the following prefixes: CI, CT, DD, EE, ET, EZ, MD, MN, MZ, PZ or QA		

## 2. Electromechanical Concentration

### Industrial Maintenance Technology Associate of Applied Science Degree

The associate degree program in electromechanical technology prepares graduates for a position as a maintenance technician in an environment where electrical machinery and electro-pneumatic systems are prevalent. Students will develop a wide variety of technical skills in electrical fundamentals, fluid power, mechanical systems, and computers. Emphasis is placed upon the understanding and troubleshooting of electromechanical systems. A comprehensive understanding of how these technical skills are linked together to create automated systems is developed so that the electromechanical technician will be able to install, troubleshoot, and repair the complex machinery used in business and industry.

#### Career Opportunities

Maintenance technician in commercial and industrial settings such as utilities, hospitals, schools, and manufacturing facilities; building superintendent and maintenance supervisory positions.

SUMMARY OF REQUIRED HOURS		Semester Hours	
Course No.	Course Title	FALL	SPR
<b>Freshman</b>			
CS 101	Computer Literacy		3
ENGL 1010	Composition I	3	
MATH 1530	Introductory Statistics	3	
MD 104	Blueprint Reading and Analysis	3	
MN 102,112	Electrical Fundamentals I, II	3	3
MN 103,113	Mechanical Fundamentals I, II	3	3
OS 116	Industrial Maintenance Safety		3
	*Natural Science Gen. Ed. Elective		4
		15	16
<b>Sophomore</b>			
MN 215	Maintenance Management & Organization		3
MN 218	Hydraulics, Pneumatics, and Fluid Systems	3	
	Humanities/Fine Arts Gen. Ed. Elective	3	
	Social/Behavioral Science Gen. Ed. Elective		3
	**Technical Electives	8	9
		14	15
	Total Hours: 60		
	*CHEM 1010 or PHYS 1030.		
	**Selected from courses with the following prefixes: CI, CT, DD, EE, ET, EZ, MD, MN, MZ, PZ or QA.		

## Engineering Technology Technical Certificates

### CAD Technology Technical Certificate of Credit

This program prepares students to work as CAD (Computer Aided Design) Drafters and Designers and provides skills enhancement for working architects, engineers, drafters, and designers. It includes advanced CAD drafting and design using Auto CAD and specialty software in electronics, graphics programming, or mechanical, architectural or civil design. A minimum grade of "C" is required in each course.

#### Admission Information

Additional admission procedures are required for this program. For specific information on admission.

**Call (423) 697-4434**

For requirements and application procedures, contact the Department of Engineering & Emergency Technologies.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		FALL	SPR
Freshman			
DD 114,124	CAD Engineering Drawing I, II	3	3
MD 104	Blueprint Reading & Analysis	3	
MD 184	Manufacturing Processes		3
		<u>6</u>	<u>6</u>
Sophomore			
	*Directed Electives	3	3
	Total Hours: 18	3	3

\*Directed Elective must be selected from:

DD 116	<sup>1</sup> CAD for Electronics	3
DD 218	<sup>2</sup> Civil 3-D	3
DD 222	Introduction to Pro/ENGINEER	3
DD 227	Inventor I	3
DD 228	Inventor II	
DD 243	SolidWorks I	3
DD 253	SolidWorks II	3

<sup>1</sup>Prerequisite: EE 110, ET 115; or instructor's consent. Concurrent EE 121.

<sup>2</sup>Prerequisite: CI 224, 274; or instructor's consent.

## Humanities and Fine Arts

## Humanities and Fine Arts Technical Certificates

### Professional Actor Training Program

#### Technical Certificate of Credit

A two-year, intensive acting program designed for students who desire to pursue a career in theatre, film, and television. The program consists of four technical certificates listed below. Students have the option of earning an Associates degree at Chattanooga State with additional course work. No more than 12 hours of certificate instruction may be applied toward this degree. The Professional Actor Training Program and Rose Bruford College in London have entered into a collaboration whereby students who successfully complete all four technical certificates and who meet Rose Bruford's entrance requirements may be eligible to earn a Bachelor's degree with honors following one additional calendar year of study in London.

### Technical Certificate in Acting: Beginning

Admission is by audition only. All courses in this certificate are co-requisites.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		FALL	SPR
THEA 1110	Acting I	4	
THEA 1230	Movement I	3	
THEA 1310	Production I	3	
THEA 1410	Voice and Speech I	3	
THEA 1520	Improvisation I	3	
	Total Hours: 16		

### Technical Certificate in Acting: Intermediate

Admission is by successful completion of the Technical Certificate in Acting: Beginning. All courses in this certificate are co-requisites.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		FALL	SPRING
THEA 1120	Acting II		4
THEA 1235	Movement II		3
THEA 1320	Production II		3
THEA 1420	Voice and Speech II		3
THEA 1525	Improvisation II		3
	Total Hours: 16		



A creation of Chattanooga State's Engineering Technology students.

### Technical Certificate in Acting: Advanced

Admission is by successful completion of Technical Certificates in Acting: Beginning and Intermediate or audition demonstrating advanced skills. All courses in this certificate are co-requisites.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		Semester Hours	FALL
THEA 2110	Acting III	4	
THEA 2230	Movement III	3	
THEA 2310	Production III	3	
THEA 2410	Voice and Speech III	3	
THEA 2520	Improvisation III	3	
Total Hours: 16			

### Technical Certificate in Acting: Professional

Admission is by successful completion of Technical Certificate in Acting: Advanced. All courses in this certificate are co-requisites.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		Semester Hours	SPRING
THEA 2120	Acting IV	4	
THEA 2235	Movement IV	3	
THEA 2320	Production IV	3	
THEA 2420	Voice and Speech IV	3	
THEA 2525	Improvisation IV	3	
Total Hours: 16			

application materials and other pertinent information. The application deadline is April 1 of the year in which fall admission is sought. Applications would be accepted after this deadline date only if there were not enough qualified applicants to fill the class.

**NOTE: The program is not designed to meet educational requirements for those students desiring to transfer to a pre-veterinary program.**

Course No.	Course Title	SUMMARY OF REQUIRED HOURS		
		FALL	SPR	SUM
<b>Freshman</b>				
BIOL 1110	*General Biology I		4	
CHEM 1010	Introduction to Chemistry I	4		
ENGL 1010	Composition I	3		
HE 103	Medical Terminology	3		
PHIL 2230	Ethics		3	
SP 110	Speech			3
VETT 1010	Introduction to Veterinary Technology*	3		
VETT 1015	Pharmacology & Pharmaceutical Calc.			4
VETT 1020	Animal Anatomy & Physiology		4	
VETT 2010	Clinical Practicum I			4
VETT 2015	Animal Nursing		4	
		<b>13</b>	<b>15</b>	<b>11</b>
<b>Sophomore</b>				
BIOL 2230	Microbiology	4		
VETT 2000	Clinical Pathology	4		
VETT 2016	Topics in Veterinary Technology		3	
VETT 2020	Clinical Practicum II	4		
VETT 2030	Clinical Practicum III			5
VETT 2040	Anesthesia & Surgical Nursing		4	
VETT 2050	Imaging	4		
	Social/Behavioral Sciences Gen. Ed. Elective			3
Total Hours: 70		<b>16</b>	<b>15</b>	

Prerequisites:

\*Remedial/Developmental courses, if applicable.

## Math & Sciences

Call (423) 697-4442

### Veterinary Technology

Associate of Applied Science Degree

The Veterinary Technology Program is a five semester Associate of Applied Science (A.A.S.) degree encompassing both general education requirements and veterinary technology knowledge and skills acquisition. The program is designed to prepare the student to become a licensed veterinary technician. The courses at Chattanooga State will be taught in state-of-the-art facilities. Clinical experiences will occur in local veterinary clinics and hospitals.

There is also a **part-time**, 12 semester degree program leading to an Associate of Applied Science degree. This part-time program is geared toward students who are unable to enroll in the usual full-time, five-semester program due to their work schedule.

### Career Opportunities

Career opportunities for licensed veterinary technicians include, but are not limited to, traditional private practices (small animal, large animal, and mixed), research facilities, zoos, aquariums, educational institutions, private industry and local, state, and federal government positions.

### Admission Information

Additional admission procedures are required for this program. Contact the Life Sciences Department for

## Math & Sciences Technical Certificate

### Food Science and Technology

Technical Certificate  
(Pending TBR Approval)

This two semester certificate is designed to give participants an introduction to Food Science, Food Technology, and food Business with a particular emphasis on operational functions including food safety, quality and sanitation. In addition, candidates for this certificate will demonstrate a clear understanding of the food chain from raw material to end product. Students receiving the certificate should be prepared to compete more successfully for positions within the food processing industry and have a foundations of skills to be successful in those positions.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		FALL	SPR
FOST 1110	Fundamentals of Food Technology	4	
ND 120	Food Service Sanitation		2
ND 121	Food Service Sanitation Practicum		1
SP 120	Interpersonal Communication Skills Electives*	3	
Total Hours: (16-18)		<b>7</b>	<b>6-8 (9-11)</b>

\*Directed Electives

BIOL 1430 Nutrition (3)

CT 111 Introduction to Process Technology (3)

CT 121 Industrial Process Equipment (4)

CT 122 Introduction to Quality Control (3)

CT 150 Unit Operations I (4)

MG 105 Introduction to Quality Management (3)

## Nursing/Allied Health

### Admission/Retention Policies

*A student must be admitted to the specific Nursing/allied Health program beyond general admission to Chattanooga State Technical Community College. Selection into health programs is based on a comparative evaluation of all applicants' test scores, transcripts and other applications information. Composition of a class will reflect diversity based on age, gender and race. Students must have successfully completed (or be scheduled to complete during the summer) all Transitional Studies courses and other required prerequisite courses.*

*Students are encouraged to take additional science and general education courses, however, students are cautioned that science courses taken prior to program acceptance must have been completed no sooner than five years before the student is admitted to the program. HOWEVER, completion of the application process and any/all science and general education courses **does not guarantee acceptance** into a health program.*

*The goal of all Chattanooga State's health programs is to prepare practitioners who can function in the health care arena to ensure the safety of patients. Program standards are in place to assure that students have the potential to perform as entry level practitioners. These program standards are available in the Nursing/Allied Health Division office. Acceptance into a health program is contingent upon the student's demonstrated ability to meet these standards. Following acceptance and prior to entering the first career course in designated healthcare programs, each student must undergo a criminal background check in order to comply with policies of affiliating clinical practice agencies. It shall be the student's responsibility to comply with instructions provided upon acceptance and provide the results by a designated date. The check will be at the expense of the student. Students who do not meet this requirement in a timely manner or whose background does not meet agency standards will not be able to successfully complete the program. Additionally, a criminal background may preclude licensure or employment. Individuals with a question concerning this should schedule an appointment with the Program Director. All Nursing and Allied Health Programs and Certificates require a grade of "C" or higher in all courses used to fulfill curriculum requirements. For specific information on admission requirements and application procedures, contact the Division of Nursing/Allied Health.*

**Call (423) 697-4450,  
for Nursing call (423) 493-8720**

[http://www.chattanooga.state.edu/Allied\\_Health/ahmain.asp](http://www.chattanooga.state.edu/Allied_Health/ahmain.asp)

## Dental Hygiene

Associate of Applied Science Degree  
Accredited by the Commission on Dental Accreditation of  
the American Dental Association

The Dental Hygiene program provides a background in basic studies as well as directed dental hygiene experience, acquired in an on-campus dental facility as well as in community facilities. The student will develop judgment and skills needed for providing oral health care to the public under the supervision of a dentist and within the limits of the Code of Ethics of the American Dental Hygienists Association and the laws of the state in which he/she practices. A minimum grade of "C" (or "S") is required in all DH, science, and all non-elective courses. Graduates are prepared to take the National Dental Hygiene board examination and the state or regional clinical examination.

### Career Opportunities

*Private practice—general, group, specialty; health departments or associated institutions; teaching—dental hygiene or dental assisting schools; pediatric, geriatric or special needs centers; health maintenance organizations, hospitals, nursing homes; dental claims departments of insurance companies; sales representative of preventive dental products.*

### Admission Information

Additional admission procedures are required for this program. Contact the Allied Health Division office for application materials and other pertinent information. The application deadline is the first Monday in March. However, applications will be processed until the class is full. CHEM 1010 is a prerequisite (or 1 year of high school chemistry with a "B" or better).

Course No.	Course Title	SUMMARY OF REQUIRED HOURS		
		FALL	SPR	SUM
Freshman				
BIOL 1430	Nutrition			3
BIOL 2010,2020	Human Anatomy and Physiology I, II	4	4	
DH 132,135	Dental Hygiene I, II	9	9	
DH 142,145	Dental Hygiene Applications I, II	4	4	
ENGL 1010	Composition I			3
PY 101	General Psychology			3
		17	20	6
Sophomore				
BIOL 2230	Microbiology	4		
DH 238,239	Dental Hygiene III, IV	5	3	
DH 248,249	Dental Hygiene Applications III, IV	4	4	
SO 110	Introduction to Sociology			3
	Humanities Gen. Ed. Elective	3		
	*Mathematics Gen. Ed. Elective			3
	Total Hours: 72	16	13	

\*MATH 1530 recommended.

MATH 1410 not acceptable for Nursing/Allied Health programs.

## Fire Science Technology

Associate of Applied Science Degree

There are three concentrations within the Fire Science Technology major:

- 1. Emergency Medical Care**
- 2. Emergency Service Supervision and Administration**
- 3. Fire Suppression**

*Please see those listings as follows.*

## 1. Emergency Medical Care Concentration

### Fire Science Technology

#### Associate of Applied Science Degree

This concentration gives students a broad education in stress, legal issues, community relations, research, safety, fire protection, and paramedic training. Students who are currently licensed as paramedics will receive 32 hours of advanced placement credit. Students may work toward their paramedic training while completing the general education and emergency medical services technical core.

#### Career Opportunities

Private and municipal ambulance services, industrial fire and medical response teams, fire departments which employ combination fire fighters/paramedics, and hospital emergency rooms

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		FALL	SPR
	*Advanced Placement	32	
ENGL 1010	Composition I	3	
FI 113	Fire Protection Systems	3	
FI 114	Building Construction for Fire Science		3
FI 215	Fire Behavior and Combustion	3	
SP 110	Fundamentals of Public Speaking		3
	Humanities/Fine Arts Gen. Ed. Elective	3	
	Mathematics Gen. Ed. Elective	3	
	Natural Science Gen. Ed. Elective		4
	**Social/Behavioral Sciences Gen. Ed. Elective		3
Total Hours: 60		15	13

\*Completion of CSTCC's Paramedic Training Program or current state or national paramedic certification/licensure.

\*\*Must choose from: PY 101, PO 110, or SO 110.

MATH 1410 not acceptable for Nursing/Allied Health programs.

For information on Chattanooga State's Paramedic Training Program, contact the Division of Nursing and Allied Health.

## 2. Emergency Service Supervision and Administration Concentration

### Fire Science Technology

#### Associate of Applied Science Degree

This program is designed for experienced emergency services personnel who desire additional education for improved job performance and/or advancement. The program covers legal issues, safety, research, and emergency services, as well as supervision, leadership, planning, prevention, systems, and fire behavior.

#### Career Opportunities

Company officer/chief officer positions with fire departments, emergency medical supervision, and fire brigade leaders.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		FALL	SPR
Freshman			
ENGL 1010	Composition I	3	
FI 111	Introduction to Emergency Services	3	
FI 113	Fire Protection Systems	3	
FI 114	Building Construction for Fire Science		3
FI 221	Fire Administration I	3	
SP 110	Fundamentals of Public Speaking	3	
	Mathematics Gen. Ed. Elective		3
	*Social/Behavioral Sciences Gen. Ed. Elective		3
	**Technical Electives		8
Total Hours: 60		15	17

Sophomore			
FI 140	Legal Aspects of the Fire Service		3
FI 215	Fire Behavior and Combustion	3	
FI 222	Fire Administration II		3
FI 260	Fire Prevention and Inspection		3
FI 280	Emergency Services Practicum	3	
	Humanities/Fine Arts Gen. Ed. Elective	3	
	Natural Science Gen. Ed. Elective		4
	**Technical Electives	4	2
Total Hours: 60		13	15

\*Must choose from: PY 101, PO 110, or SO 110.

\*\*Technical Electives totaling fourteen (14) hours must be selected from courses with the following prefixes: EA, FI, HZ, MG, OS. Alternatively, students who plan to transfer to a four year program may, with adviser approval, use their Technical Elective hours to take additional General Education courses needed to satisfy requirements for the baccalaureate degree. Students with current state or national licensure as Emergency Medical Technicians may be eligible for Advanced Standing credit toward the Technical Elective requirement. See program adviser for details.

MATH 1410 not acceptable for Nursing/Allied Health programs.

## 3. Fire Suppression Concentration

### Fire Science Technology

#### Associate of Applied Science Degree

This concentration allows career emergency service personnel to enhance their emergency services education, and gives the student who wishes to enter emergency services an introduction to the basics of fire suppression. Topics include legal issues, safety, fire protection, tactics/strategy, fire equipment, and building construction, fire systems, prevention, and fire cause.

#### Career Opportunities

Fire suppression, rescue, hazardous materials organizations, fire prevention, industrial fire protection, and private fire protection companies.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		FALL	SPR
Freshman			
ENGL 1010	Composition I	3	
FI 111	Introduction to Emergency Services	3	
FI 113	Fire Protection Systems	3	
FI 114	Building Construction for Fire Science		3
FI 116	Firefighting Strategy and Tactics I	3	
SP 110	Fundamentals of Public Speaking		3
	Mathematics Gen. Ed. Elective		3
	*Social/Behavioral Science Gen. Ed. Elective		3
	**Technical Electives	3	5
Total Hours: 60		15	17
Sophomore			
FI 124	Fire Fighting Tactics and Strategy II		3
FI 140	Legal Aspects of the Fire Service		3
FI 215	Fire Behavior and Combustion	3	
FI 260	Fire Prevention and Inspection		3
FI 262	Fire Cause and Investigation		3
	Humanities/Fine Arts Gen. Ed. Elective	3	
	Natural Science Gen. Ed. Elective	4	
	**Technical Electives	4	2
Total Hours: 60		14	14

\*Must choose from: PY 101, PO 110, or SO 110.

\*\*Technical Electives totaling fourteen (14) hours must be selected from courses with the following prefixes: EA, FI, HZ, MG, OS. Alternatively, students who plan to transfer to a four year program may, with adviser approval, use their Technical Elective hours to take additional General Education courses needed to satisfy requirements for the baccalaureate degree. Students with current state or national licensure as Emergency Medical Technicians may be eligible for Advanced Standing credit toward the Technical Elective requirement. See program adviser for details.

MATH 1410 not acceptable for Nursing/Allied Health programs.

## Health Information Management

Associate of Applied Science Degree

Accredited by the Commission on Accreditation  
for Health Informatics and  
Information Management Education (CAHIIM)

The Health Information Management program prepares students to become Health Information Technicians (HIT). The curriculum consists of a combination of classroom, laboratory, and clinical practice. A minimum grade of "C" is required in all courses. Graduates are eligible to take the national exam administered by the American Health Information Management Association and receive recognition as a Registered Health Information Technician (RHIT) upon passing the examination.

The Health Information Management program is an evening program; however, clinical practice is during the day.

### Admission Information

Additional admission procedures are required for this program. Contact the Allied Health Division office for application materials and other pertinent information. Applicants must have a minimum 55% reading and 59% composite scores on the NET/HOBET for acceptance into the program along with other requirements. The application deadline for priority consideration is the first Monday in April. Applications for qualified applicants may be accepted after this deadline if the class is not full.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		FALL	SPR
Freshman			
BIOL 2010	Anatomy and Physiology I	4	
BIOL 2020	Anatomy and Physiology II		4
CS 101	Computer Literacy		3
ENGL 1010	Composition I	3	
HE 103	Medical Terminology	3	
HE 115	Health Information Management Foundations	4	
HE 118	Pharmacology	3	
HE 127	Medicolegal and Professional Ethics		3
HE 225	Health Data Content and the Computer Based Record		3
	Social/Behavioral Science Gen. Ed. Elective		3
		<u>17</u>	<u>16</u>
Sophomore			
HE 211	Pathophysiology	4	
HE 226	*Health Information Management Clinical Practice	3	
HE 244	Healthcare Statistics	2	
HE 245	Clinical Coding and Classification I	4	
HE 247	Healthcare Quality, Utilization & Risk Management		2
HE 248	Reimbursement Methodologies		3
HE 255	Clinical Coding and Classification II	4	
HE 256	*Health Information Management Clinical Practice II		3
HE 297	Organization and Supervision for Health Care Professionals	2	
SP 110	Fundamentals of Public Speaking	3	
	Humanities/Fine Arts Gen. Ed. Elective		3
		<u>18</u>	<u>15</u>
	Total Hours: 66		

\*These classes are offered during the day only.

## Nursing (RN)

Associate of Applied Science Degree

Accredited by the National League for  
Nursing Accrediting Commission  
61 Broadway, New York, New York 10006  
1-800-669-1656

Approved by the Tennessee Board of Nursing

The Nursing Program prepares individuals to be providers and managers of nursing care and members of the nursing discipline. Graduates use a clinical decision making process to provide care to diverse individuals across the life-span.

Following acceptance into a nursing class, the day program includes a sequence of four clinical courses that can be completed in two academic years. A new day class is accepted each fall. The night program includes five clinical courses and takes two and one-half years to complete. New night classes are accepted every other year. The next class is fall 2009. A minimum grade of "C" must be earned in all courses included in the summary of required hours. Contact the Nursing Program office or nursing web site for detailed information on program policies (Nursing Program Handbook) or for information about admission, readmission, transfer from an accredited nursing program, and articulation with baccalaureate programs.

### Career Opportunities

Hospitals, physician's offices, home health care agencies, nursing homes.

### Admission Information

Admission into the Nursing Program is a competitive process. Application deadline is March 15. All required prerequisites must be completed prior to enrollment in the first nursing course. Contact the Nursing Program office or nursing web site for detailed information on admission, selection, policies, etc. Attendance at a Nursing Program Information Session is strongly encouraged.

### Day Program

Prerequisites	Course No.	Course Title	SUMMARY OF REQUIRED HOURS		
			FALL	SPR	SUM
Transitional studies courses, if applicable. CHEM 1010 or equivalent					
Freshman					
	BIOL 1430	Nutrition	3		
	BIOL 2010,2020	Human Anatomy and Physiology I, II	4	4	
	ENGL 1010	Composition I			3
	NS 119,128	Nursing I, II	9	9	
	PY 101	General Psychology		3	
	PY 217	Human Growth and Development	3		
		*Mathematics Gen. Ed. Elective			3
Sophomore			<u>19</u>	<u>16</u>	<u>6</u>
BIOL 2230	Microbiology		4		
NS 238,249	Nursing III, IV		9	9	
	Humanities/Fine Arts Gen. Ed. Elective			3	
			<u>13</u>	<u>12</u>	
	Total Hours: 66				

## Medical Record Technology

See "Health Information Management"



### Night Program

		SUMMARY OF REQUIRED HOURS		
Prerequisites				
Transitional studies courses, if applicable. CHEM 1010 or equivalent				
BIOL 2010, 2020 (Anatomy and Physiology I, II)		8		
BIOL 1430 (Nutrition)		3		
BIOL 2230 (Microbiology)		4		
Prerequisite Total Hours: 15				
		Semester Hours		
Course No.	Course Title	FALL	SPR	SUM
Freshman				
ENGL 1010	Composition I			3
NS 110, 120	Night Nursing I, II	7	7	
PY 101	General Psychology		3	
PY 217	Human Growth and Development	3		
		<u>10</u>	<u>10</u>	<u>3</u>
Sophomore				
NS 210,220	Night Nursing III, IV	7	7	
	Humanities Gen. Ed. Elective	3		
	*Math Gen. Ed. Elective		3	
		<u>10</u>	<u>10</u>	
NS 230	Night Nursing V	8		
Total Hours: 66				

\*Recommended: MATH 1010, MATH 1530 or MATH 1710.  
MATH 1410 not acceptable for Nursing/Allied Health Programs.

### Nursing (RN) LPN Transition Program Paramedic to RN Transition Program

The LPN and Paramedic to RN Transition Programs offer accelerated curriculum tracks for the licensed practical nurses and licensed Paramedic to pursue the Associate of Applied Science Degree in nursing and RN licensure. The associate degree curriculum is adapted to recognize the knowledge and skills of the LPN and Paramedic. Following completion of a transition course (NS 024 for LPN's or NS 027 for Paramedics), in the summer semester students receive equated credit for first year nursing courses and are eligible to enter the second year of the nursing program, NS 238 (day) or NS 210 (night program).

#### Admission Information

Admission into the LPN and Paramedic to RN Transition Programs is a competitive process. Application deadline is January 15. All required prerequisites must be completed prior to enrollment in the transition course. Contact the Nursing Program office or nursing web site for detailed information on admission, selection, policies, etc. Attendance at a Nursing Program Information Session is strongly encouraged.

### Physical Therapist Assistant

Associate of Applied Science Degree  
Accredited by the Commission on Accreditation in  
Physical Therapy Education

Physical Therapist Assistants (PTA's) work under the direction and supervision of a Physical Therapist (PT). PTA's perform physical therapy treatment interventions delegated by the supervising Physical Therapist. The PTA Program is a combination of classroom, laboratory and clinical practice designed to prepare the student in the use of exercise, physical therapy modalities, clinical communication skills, and special treatment procedures. Program content is based on recommended guidelines as

established by the American Physical Therapy Association and the Commission on Accreditation in Physical Therapy Education. The program prepares students to take the board examination for Physical Therapist Assistants administered by the state. A minimum grade of "C" is required in all degree courses.

#### Career Opportunities

Hospital, rehabilitation center, extended care facility, home health agency, private practice, school system, outpatient.

#### Admission Information

Additional admission procedures are required for this program. Contact the Allied Health Division office for application materials and other pertinent information. The application deadline is the first Monday in March of the year in which fall admission is sought. (Applications would be accepted after this deadline only if there were not enough qualified applicants to fill the 20 spaces in the class.) Please visit the PTA program website located at: [http://www.chattanoogaastate.edu/Allied\\_Health/pt\\_assist/pta\\_main.asp](http://www.chattanoogaastate.edu/Allied_Health/pt_assist/pta_main.asp) for more complete information regarding the program, the career, and application/admission procedures.

		SUMMARY OF REQUIRED HOURS	
		Semester Hours	
		FALL	SPR
Course No.	Course Title		
Freshman			
BIOL 2010,2020	Human Anatomy and Physiology I, II	4	4
ENGL 1010	Composition I		3
PHYS 1030	Concepts of Physics	4	
PT 104	Introduction to Physical Therapy	2	
PT 111	Clinical Practice I		2
PT 112	Pathological Conditions		3
PT 115,125	Physical Therapy Procedures I, II	5	4
PT 123	Functional Anatomy	4	
		<u>19</u>	<u>16</u>
Sophomore			
PT 201	Physical Therapy Seminar		2
PT 205	Therapeutic Exercise	5	
PT 210,221	Clinical Practice II, III	4	10
	Social/Behavioral Science Gen.. Ed. Elective	3	
	Humanities/Fine Arts Gen. Ed. Elective		3
	Mathematics Gen. Ed. Elective	3	
		<u>15</u>	<u>15</u>
Total Hours: 65			

MATH 1410 not acceptable for Nursing/Allied Health Programs.

### Radiologic Technology

Associate of Applied Science Degree  
Accredited by the Joint Review Committee on  
Education in Radiologic Technology

The Radiologic Technology Program begins fall semester and is a 24-month program. Full-time student status is required. A minimum grade of "C" is required for all courses in the major. Clinical assignments totaling approximately 1,400 clock hours are required and may include semester breaks. Graduates may apply as candidates for certification by the American Registry of Radiologic Technologists.

#### Clinical Affiliates

Chattanooga Imaging Inc., Chattanooga Outpatient Center, Erlanger East Imaging Center, Erlanger Medical Center, Erlanger North Medical Center, Hutcheson Medical Center, Memorial Hospital, Memorial Atrium (outpatient), Memorial North Park Hospital, Parkridge Medical Center, Parkridge East Hospital, Rhea Medical Center, Skyridge Medical Center.

A.A.S. Degrees & Technical Certificates

**Admission Information**

Additional admission procedures and progression criteria are required for this program. Contact the Allied Health Division office, 697-4450, for application materials and other pertinent information. The deadline for priority consideration is April 15. After this date, applications will be processed as they are received.

**Prerequisites**

High School Chemistry, “C” grade or above or Principles of Chemistry CHEM 1010 “C” grade or above. Pre-Calculus I MATH 1710 “C” grade or above.

SUMMARY OF REQUIRED HOURS		Semester Hours		
Course No.	Course Title	FALL	SPR	SUM
<b>Freshman</b>				
BIOL 2010,2020	Human Anatomy and Physiology I, II	4	4	
ENGL 1010	Composition I	3		
RT 1130	Introduction to Radiologic Technology	3		
RT 1220,1330	Clinic I, II		2	3
RT 1143,1243	Radiographic Exposure/Physics I, II	4	4	
RT 1145,1244	Radiographic Positioning—Film Critique & Medical Terminology I, II	4	4	
		18	14	3
<b>Sophomore</b>				
RT 2420,2520,2630	Clinic III, IV, V	2	2	3
RT 2430	Radiographic Positioning—Film Critique III	3		
RT 2433	Special Procedure Radiography—Nursing	4		
RT 2440	Introduction to Digital Imaging and Radiation Therapy	4		
RT 2442,2542	Radiology Seminar I, II	4	4	
RT 2540	Radiologic Pathology		4	
RT 2543	Radiobiology and Radiation Protection		4	
	Humanities/Fine Arts Gen. Ed. Elective			3
	Social/Behavioral Science Gen. Ed. Elective		3	
		17	17	6
Total Hours: 75				

**Advanced Standing Program**

Certified RT’s may receive up to 44 semester hours of college credit for previous certified instruction and/or experience. Students who qualify for “advanced standing” need only complete the core curriculum outlined below.

**Requirements**

1. Certified transcript from approved school of Radiologic Technology. (School must have JRCERT/CAHEA approval at the time the student graduated.)
2. Proof of registration by ARRT.

SUMMARY OF REQUIRED HOURS		Semester Hours
Course No.	Course Title	
ENGL 1010	Composition I	3
MATH 1710	Pre-Calculus I	3
RT 2440	Introduction to Digital Imaging and Radiation Therapy	4
RT 2433	Special Procedure Radiology—Nursing	4
RT 2540	Radiologic Pathology	4
RT 2543	Radiobiology and Radiation Protection	4
SP 110	Fundamentals of Public Speaking	3
	Humanities/Fine Arts Gen. Ed. Elective	3
	Social/Behavioral Science Gen. Ed. Elective	3
Total Hours: 31		

**Respiratory Care**

Associate of Applied Science Degree  
Accredited by the Committee on Accreditation for Respiratory Care

The Respiratory Care Program is six semesters and-qualifies graduates to take the Entry Level Examination to become a Certified Respiratory Therapist (CRT) and the written and simulation portions of the Registry Examination to become a Registered Respiratory Therapist (RRT). Through a combination of classroom and laboratory instruction and clinical practice, students gain knowledge and skills in cardiopulmonary testing and therapy. A minimum grade of “C” is required in all courses used to meet graduation requirements. One year of high school chemistry with a grade of “B” or better is a prerequisite. College level in mathematics is required. Graduates will meet the requirements to practice as a respiratory therapist as defined in the Tennessee Respiratory Care Practitioner’s Act.

**Admission Information**

Additional admission procedures are required for this program. Contact the Allied Health Division office for application materials and other pertinent information. The deadline for priority consideration is May 15.

SUMMARY OF REQUIRED HOURS		Semester Hours		
Course No.	Course Title	FALL	SPR	SUM
<b>Freshman</b>				
BIOL 2010,2020	Human Anatomy and Physiology I, II	4	4	
BIOL 2230	Microbiology			4
ENGL 1010	Composition I	3		
RC 111,112,113	Principles of Respiratory Care Procedures I, II, III	3	4	4
RC 142	Cardiopulmonary Anatomy & Physiology	3		
RC 143	Pharmacology		2	
RC 241	Arterial Blood Gas Analysis		2	
RC 242	Cardiopulmonary Pathophysiology			3
		13	12	11
<b>Sophomore</b>				
RC 210	Mechanical Ventilation	4		
RC 212	Cardiopulmonary Diagnostic Testing		3	
RC 213	Advanced Respiratory Topics		3	
RC 214	Advanced Practice			3
RC 221,222,223	Respiratory Care Clinical Practicum I,II,III	5	5	4
RC 243	Neonatal and Pediatric Respiratory Care	3		
	Humanities/Fine Arts Gen. Ed. Elective		3	
	Social/Behavioral Science Gen. Ed. Elective			3
		12	14	10
Total Hours: 72				

MATH 1410 not acceptable for Nursing/Allied Health Programs.

**Ultrasound**

See “Diagnostic Medical Sonography” or “Cardiovascular Sonography”

**X-Ray Technology**

See “Radiologic Technology”

## Nursing/Allied Health Technical Certificates

### Dental Assisting Certificate

#### Technical Certificate of Credit

Accredited by the American Dental Association,  
Commission on Dental Accreditation

This 3-semester program prepares the student to become a valuable member of the dental health team. The dental assistant may serve a dental practice or health center as an office manager/business assistant, chair side assistant, laboratory assistant, or as the person responsible for dental health education. The Dental Assisting curriculum provides a foundation in the health sciences along with extensive training in the technology necessary to perform those tasks delegated to dental assistants by the State Dental Practice Act. Clinical training experiences working with dentists and patients are provided in the facilities of the Dental Center on the Chattanooga State campus, in private offices of practicing dentists, at community health centers, and at schools within the area.

Students who successfully complete this program are eligible to sit for the State Registry Examination (RDA) and the Dental Assisting National Board Examination (CDA).

### Career Opportunities

Private Practice—General, Group, or Specialty; Health Departments; Dental Supply House; Manufacturer's Representative; Dental Insurance Claims; Dental Office Receptionist/Manager.

### Admission Procedures

In addition to submitting proof of high school graduation or GED and completing the application process for admission to Chattanooga State, a students seeking admission to the Dental Assisting program must also:

1. Attend a Dental Assisting info session.
2. Take the appropriate entrance exam (ACT, SAT or COMPASS) to determine placement. All recommended transitional studies classes must be completed prior to enrolling in the dental assisting program, except DSPM 0850, which may be taken concurrently with DAST classes.
3. Complete the Nursing and Allied Health Application form.
4. Complete a 16-hour pre-clinical observation in a dental practice.
5. Participate in a personal academic planning session with a program faculty member

Applicants who complete these steps will be offered admission into the next class in which space is available. One class of 36 students is admitted each fall semester. More information, printable forms and information session schedules are available at [http://www.chattanoogaastate.edu/Allied\\_Health/ahmain.asp](http://www.chattanoogaastate.edu/Allied_Health/ahmain.asp)

Course No.	Course Title	SUMMARY OF REQUIRED HOURS			Semester Hours
		FALL	SPR	SUM	
CS 101	Computer Literacy	3			
DAST 1120,1121	Basic Sciences I, II	3	2		
DAST 1130,1131	Clinical Skills I, II	4	3		
DAST 1140	Dental Radiology	4			
DAST 1150	Dental Materials	4			
DAST 1160	Dental Office Management		3		
DAST 1170,1171	Clinical Practice I,II		7	6	
ENGL 1010	Composition I		3		
PY 101	General Psychology			3	
SP 110	Fundamentals of Public Speaking			3	
Total Hours: 28		18	18	12	

### Cardiovascular Sonography Certificate

#### Technical Certificate of Credit

The Cardiovascular Sonography program is a 12-month advanced certificate program providing specialty education for post-associate healthcare professionals and preparation for certification by the American Registry of Diagnostic Medical Sonographers (ARDMS) in the specialty categories of Echocardiography, Vascular Technology, and Physics. Classes are conducted two or three days every other week, with clinical experience obtained at approved clinic affiliates within the region. A minimum grade of "C" is required in each course. Full-time status is required for those who have no previous experience in sonography. Applicants who have worked as diagnostic medical sonographers may qualify for part-time status, or those who have been working for a minimum of one year in the field may potentially qualify for non-traditional working status.

A class will be accepted each year for fall admission. Diagnostic Medical Sonography is also offered as a 12-month Technical Certificate located in the A.A.S. degrees and technical certificates section of this catalog.

### Admission Information

Additional admission procedures are required for this program. Contact the Allied Health Division office for application materials and other pertinent information. The deadline for priority consideration is March 15.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS			Semester Hours
		FALL	SPR	SUM	
US 200	Introduction to Diagnostic Medical Sonography	2			
US 201,211,221	Ultrasound Physics I, II, III	2	2	2	
US 204	Cardiovascular Anatomy & Physiology	3			
US 206	Cardiovascular Hemodynamics	3			
US 208,218,228	Vascular Clinic I, II, III	3	2	2	
US 209,219,229	Echocardiography Clinic I, II, III	3	2	2	
US 210	Ultrasound Administration		1		
US 214,224	Vascular Testing I, II		2	3	
US 216,226	Adult Echocardiography Testing I, II		2	2	
US 220	Ultrasound Seminar			2	
Total Hours: 40		16	11	13	

### Computed Tomography

#### Technical Certificate of Credit

The Computed Tomography (CT) program is a one-semester, three-course set designed to meet the professional needs of radiologic technologists for formal specialized education in Computed Tomography. The curriculum includes the following topics: patient care and management; whole body cross-sectional anatomy; pathology; imaging procedures with protocols; special procedures in computed tomography; history of computed tomography; fundamentals of computers; scanning methods; digital imaging; quality control; and radiation protection.

The required clinical education component is conducted at an approved clinical education center over a fifteen week period providing at least 225 contact hours on site. Supervised performance of computed tomography of the head, neck, spine, chest, abdomen, pelvis and musculoskeletal system is required. Arrangements for clinical education are made by the students to obtain clinical experience with a Chattanooga State approved CT facility in their geographic area. Students must purchase liability insurance or show evidence of self coverage of \$1,000,000 or more.

The CT courses are taught Fall semester on alternate weekends (Friday night and Saturday), based on demand and offer 15-semester credit hours [240 CEU's for purpose of American Registry of Radiologic Technologists (ARRT) continuing education]. Radiologic Technologists certified and registered by ARRT may receive advanced standing for the clinical education

component if they have independently performed whole-body computed tomography an equivalent of one year full-time within the past three years. In addition, competence in the performance of computed tomography of the head, neck, spine, chest, abdomen, pelvis, and musculoskeletal system must be demonstrated.

### Admission Procedures

In addition to completing the application process for admission to Chattanooga State, students seeking admission to the Computed Tomography program must also submit a Computed Tomography Application Form to the Division of Nursing/Allied Health. Applicants must be graduates of a CAHEA/JRCERT accredited Radiologic Technology Program and eligible for certification or certified and registered by the ARRT. Selection into the program is on a first applied most qualified basis.

### Deadline

Applications for Fall semester must be submitted by August 15 for priority consideration.

SUMMARY OF REQUIRED HOURS		
Course No.	Course Title	Semester Hours
		FALL
TM 210	Computed Tomography Patient Care & Management	4
TM 220	Computed Tomography Physics	4
TM 230	Computed Tomography Clinic	7
Total Hours:		15

## Diagnostic Medical Sonography Certificate

### Technical Certificate of Credit

Accredited by the Commission on Accreditation of Allied Health Education Programs in cooperation with the Joint Review Committee on Education in Diagnostic Medical Sonography

The Diagnostic Medical Sonography program is a 12-month advanced certificate program providing specialty education for post-associate healthcare professionals and preparation for certification by the American Registry of Diagnostic Medical Sonographers (ARDMS) in the specialty categories of Abdomen & Small Parts, Obstetrics & Gynecology, and Physics. Classes are conducted two or three days every other week, with clinical experience obtained at approved clinic affiliates within the region. A minimum grade of "C" is required in each course. Full-time status is required for those who have no previous work experience in sonography. Applicants who have worked as diagnostic medical sonographers for a minimum of one (1) year may potentially qualify for the program in a non-traditional working status.

A class will be accepted each year for fall admission.

### Admission Information

Additional admission procedures are required for this program. Contact the Allied Health Division office for application materials and other pertinent information. The application deadline for priority consideration is **March 15**.

SUMMARY OF REQUIRED HOURS				
Course No.	Course Title	Semester Hours		
		FALL	SPR	SUM
US 200	Introduction to Diagnostic Medical Sonography	2		
US 201,211,221	Ultrasound Physics I, II, III	2	2	2
US 202,212,222	Obstetrics and Gynecology I, II, III	4	2	3
US 203,213,223	Abdominal and Small Parts I, II, III	4	2	3
US 205,215,225	Clinic I, II, III	7	2	2
US 210	Ultrasound Administration		1	
US 220	Ultrasound Seminar			2
Total Hours:		19	9	12

## Magnetic Resonance Imaging

### Technical Certificate of Credit

The Magnetic Resonance Imaging program, designed to meet the professional needs of radiologic technologists for formal specialized education in MRI, is a one-semester course offered in two course-credit formats. The curriculum includes the following topics: MRI physics, cross-sectional anatomy, patient safety, site development, MR imaging techniques applicable to all MR imaging systems, patient care and management, pathology, and quality control.

MRI 200 is taught Fall semester only, in six Saturday instructional settings and twenty-four observational hours in clinic. The optional clinical component, MRI 230, is offered Fall and Spring and involves 225 hours of clinical education at a Chattanooga State approved MRI facility in the student's geographic area. Both courses must be completed to receive the Technical Certificate. Arrangements for the required clinical component are made by the student. Students must purchase liability insurance or show evidence of self-coverage of \$1,000,000 or more. Insurance is available through Chattanooga State and is payable at the time of registration.

### Admission Procedures

In addition to completing the application process for admission to Chattanooga State, students seeking admission to the Magnetic Resonance Imaging program must also submit a MRI Application Form to the Division of Nursing/Allied Health. Applicants must be graduates of a CAHEA/JRCERT accredited Radiologic Technology program and eligible for certification or certified and registered by the ARRT.

Selection into the program is on a first-applied, most-qualified basis. Qualified applications received after the class is full will be accepted for the following class and placed on a reserve list to fill the space of any withdrawals.

Radiologic technologists certified and registered by the American Registry of Radiologic Technologists may receive advanced standing for the clinical component if they have independently performed whole-body magnetic resonance imaging an equivalent of one year, full time within the past 3 years. In addition, competence in the performance of magnetic resonance imaging of the head, neck, spine, chest, abdomen, pelvis and musculoskeletal system must be demonstrated.

### Deadline

Applications for Fall semester must be submitted by June 15 for priority consideration.

SUMMARY OF REQUIRED HOURS		
Course No.	Course Title	Semester Hours
MRI 200	Magnetic Resonance Imaging	4
MRI 230	Magnetic Resonance Imaging Clinical	7
Total Hours:		11

## Nuclear Medicine Technology Certificate

### Technical Certificate of Credit

Accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology

The Nuclear Medicine Technology program provides specialty education for registered radiologic technologists, registered medical technologists, registered cardiovascular technologists, registered diagnostic medical sonographers, registered nurses, registered respiratory therapists, or suitably prepared persons with bachelor's degrees and patient care experience. The program also provides preparation for the ARRT and/or NMTCB certification exams in nuclear medicine technology. This 12 month program begins each fall semester. Classes are conducted every other week on Monday

and Tuesday with clinical experience obtained at affiliated clinical sites. A minimum grade of "C" is required in each course. Full-time status is required.

Applicants who have worked as nuclear medicine technologists for a minimum of two years may qualify for the Non-Traditional program. Contact the program for more information.

### Admission Information

Additional admission procedures for all applicants are required for this program. Admission is based on college grade point averages, personal interviews, references, and evaluation of motivation and individual qualities needed to successfully complete the nuclear medicine technology program. Non-RT students must take the Hobet test.

All applicants must present postsecondary education credits for human anatomy and physiology, college algebra, written communications, general chemistry with lab, and physics (radiation physics preferred). Basic computer knowledge is also strongly recommended. Junior colleges, universities and postsecondary technical institutes may be used to earn these course prerequisites to study in nuclear medicine.

Contact the Allied Health Division office for application materials and other pertinent information. The application deadline for priority consideration is **April 15**. Applications received after the deadline will be accepted if space permits.

SUMMARY OF REQUIRED HOURS				
Course No.	Course Title	Semester Hours		
		FALL	SPR	SUM
NM 200	Introduction to Nuclear Medicine	2		
NM 201	Instrumentation and Statistics	3		
NM 205,215,225	Clinical Procedures I, II, III	2	4	6
NM 207,217,227	Practicum in Nuclear Medicine I, II, III	9	2	6
NM 208	Radiopharmacology	2		
NM 212	Physics and Radiation Biology of Nuclear Medicine	18	4	12
Total Hours: 40				

## Pharmacy Technician Certificate

### Technical Certificate of Credit

Accredited by the American Society of Health System Pharmacists

This program prepares students for certification by the Pharmacy Technician Certification Board (PTCB). Pharmacy technicians assist licensed pharmacists to provide health care and medications to patients. Pharmacy Technicians must perform precise work where details can be a matter of life or death. They must have a broad knowledge of pharmacy practice and the techniques required to fill prescriptions, constitute IV solutions, and prepare medications. Good communication and interpersonal skills are essential to interact with patients and other health care professionals on a daily basis.

The Pharmacy Technician courses are designed in accordance with American Society of Health-System Pharmacists (ASHP) guidelines. They are not designed for college transfer credit. A minimum grade of "C" is required in each course.

A new day class is accepted each fall and is completed in 12 months. A new night class is accepted each fall and takes 5 semesters to complete.

### Career Opportunities

Community pharmacies, drug manufacturing companies, drug wholesale companies, home-health care, hospital pharmacies, nuclear-medicine pharmacies, nursing homes

### Admission Information

Additional admission procedures are required for this program. Students are encouraged to apply early, as the program is filled

on a Rolling Admission basis. This means that applications are reviewed upon receipt, interviews are scheduled, and notification letters are mailed to applicants until the class has been filled.

For specific information on admission requirements and application procedures, contact the program director.

#### Day Program

##### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours		
		FALL	SPR	SUM
PC 101	Introduction to Pharmacy Practice	3		
PC 104	*Chemistry for Pharmacy Technicians	4		
PC 105	Pharmacy Law and Ethics	3		
PC 110	Pharmaceutical Calculations		4	
PC 115	**Introduction to Human Biology	4		
PC 201	Pharmacology and Therapeutics		4	
PC 205	Pharmacy Practice		5	
PC 220	***Pharmacy Practice Clinical Rotations			5
Total Hours: 32		14	13	5

\*Prerequisites: DSPM 0800, DSPR 0800, DSPW 0800; may substitute CHEM 1010.

\*\*May substitute BIOL 1060 or BIOL 2020.

\*\*\* These classes may involve days, evenings and/or weekends.

#### Night Program

##### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours		
		FALL	SPR	SUM
First Year				
CHEM 1010	*Introduction to Chemistry	4		
BIOL 1060	Introduction to Human Biology	4		
PC 101	Introduction to Pharmacy Practice		3	
PC 105	Pharmacy Law and Ethics		3	
PC 205	Pharmacy Practice			5
		8	6	5
Second Year				
PC 110	Pharmaceutical Calculations	4		
PC 201	Pharmacology and Therapeutics	4		
PC 220	***Pharmacy Practice Clinical Rotations			5
Total Hours: 32		8	5	

\*Prerequisites: DSPM 0800, DSPR 0800, DSPW 0800.

\*\*\* These classes may involve days, evenings and/or weekends.

## Radiation Therapy Technology Certificate

### Technical Certificate of Credit

Accredited by the Joint Review Committee on Education in Radiologic Technology

The Radiation Therapy Technology certificate is a 12 month program of specialty education for registered radiographers and prepares them to take the ARRT certification exam in radiation therapy technology. Classes are conducted every other week on Thursday and Friday with clinical experience obtained at affiliated clinical sites throughout the Southeast. A grade of 75% or better is required in each course. Full-time status is required for those who have no previous work experience in radiation therapy.

Applicants who have worked as radiation therapy technologists for a minimum of two (2) years may qualify for the advanced standing program. Contact the division for further information.

A class will be accepted each fall semester.

### Admission Information

Additional admission procedures are required for this program. Contact the Allied Health Division office for application materials and other pertinent information.

##### SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Semester Hours		
		FALL	SPR	SUM
HS 123	Introduction to Radiation Oncology	3		
HS 172	Anatomy and Imaging	2		
HS 214,224	Radiation Physics I, II	4	4	
HS 220,230,240	Clinic I, II, III	8	4	6
HS 223,233	Radiation Oncology I, II		3	3
HS 243	Radiation Biology and Hyperthermia			3
Total Hours: 40		17	11	12

A.A.S. Degrees & Technical Certificates

# Social and Behavioral Sciences

## Early Childhood Education

Associate of Applied Science Degree

This program trains students to work in early childhood education (ages birth through eight). It includes theoretical and practical elements and features supervised classroom practice teaching. It does not lead to a teaching certificate or qualify graduates to teach in the public schools.

### Career Opportunities

*Child care teacher, child care director\*, family/group child care owner, school age care teacher, assistant director, teacher's assistant (Pre K-4), substitute teacher (public/private), entry level position in designated child and family welfare agencies.*

*\*This job also requires some successful job experience.*

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		Semester Hours FALL	Semester Hours SPR
<b>Freshman</b>			
ECED 1010	Introduction to Early Childhood Education	2	
ECED 2010	Safe, Healthy Learning Environments	3	
ECED 2015	Early Childhood Curriculum		3
ECED 2020	Infant, Toddler, Child Development		3
ECED 2130	Clinical Practicum I	2	
ENGL 1010	Composition I	3	
SP 110	Fundamentals of Public Speaking		3
	Mathematics Gen. Ed. Elective	3	
	Natural Science Gen. Ed. Elective		4
	Unrestricted Elective		3
		<u>13</u>	<u>16</u>
<b>Sophomore</b>			
ECED 2040	Family Dynamics & Community Involvement	3	
ECED 2060	Development of Exceptional Children	3	
ECED 2070	Developmental Assessment		3
ECED 2080	Language and Literature in Early Childhood	3	
ECED 2085	Math and Science in Early Childhood	3	
ECED 2140	Clinical Practicum II	2	
ECED 2150	Clinical Practicum III		2
ENGL 2630	Literature for Children		3
	*ECED Elective		3
	Humanities/Fine Arts Gen. Ed. Elective		3
	Social/Behavioral Science Gen. Ed. Elective		3
	Total Hours: 60	<u>14</u>	<u>17</u>

*\*Directed Elective must be selected from:*

ECED 2030	Infant & Toddler Care	3
ECED 2050	Psychomotor Development	3
ECED 2090	Creative Expression	3
ECED 2100	The Mentoring Teacher	3
ECED 2120	Administration of Child Care Programs	2

## Human Services Specialist

Associate of Applied Science Degree

The Human Services Specialist Program is designed to provide students with the appropriate knowledge and skills necessary to become competent in working with many human service agencies in the areas of mental health, aging, child care, homelessness, disabilities, poverty and drug abuse counseling.

If a baccalaureate degree is desired, the student should consult one of the Human Services faculty for information on how this program may articulate with a baccalaureate degree in Social Work.

### Career Opportunities

*Mental health technician, youth worker, social services delivery worker, child care specialist, family services advocate, psychiatric technician, drug abuse counselor, adolescent counseling assistant, customer service representative.*

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		Semester Hours FALL	Semester Hours SPR
<b>Freshman</b>			
ENGL 1010, 1020	Composition I, II	3	3
HR 101	Introduction to the Field of Social Welfare	4	
HR 130	Substance Abuse Theories	3	
HR 205	Interviewing and Interpersonal Skills		4
HR 210	Methods of Human Service Practice		3
MATH 1530 or MATH 1010	Introductory Statistics or Contemporary Mathematics		3
PO 110	Introduction to American Government		3
PY 101	General Psychology	3	
SO 110	Introduction to Sociology	3	
		<u>16</u>	<u>16</u>
<b>Sophomore</b>			
BIOL 1110	General Biology I or Natural Science Elective	4	
SO 202	Social Problems		3
HR 219	Family Systems	3	
HR 220	Human Services Practicum		6
HR 245	Introduction to Counseling		3
PY 213	Abnormal Psychology		3
HUM	Humanities/Fine Arts Gen. Ed. Elective	3	
SO 216	*Cultural Anthropology	3	
	OR		
	**Directed Elective		
	Total Hours: 60	<u>13</u>	<u>15</u>

*\*UTC Transfers are required to take this course.*

*\*\* Directed Electives: WMST 2010 Women's Studies.*

*CJ 1010 Introduction to Criminal Justice.*

**Call (423) 697-2442 or for Human Services Specialist call (423) 697-3127**



First day of Summer Fun at Chattanooga State's Child Development Center.

## Contents

### Page

31-32 Regents Online Degree Programs (RODP)

### What is “RODP”?

“RODP” stands for “Regents Online Degree Programs.” The universities, colleges, and technology centers of the Board of Regents System of Tennessee public education have combined resources to enable students to get certain degrees completely online. For more information, go here: [www.rodpc.org](http://www.rodpc.org).

### What are “RODP classes”?

RODP classes are courses offered by all of the TBR institutions state-wide. These classes are delivered completely online. Find a list of all classes here: [http://www.rodpc.org/degrees/course\\_listings.htm](http://www.rodpc.org/degrees/course_listings.htm). Click on the course title to see the syllabus.

### How do I enroll in RODP classes?

You enroll in RODP classes the same way you enroll in regular CSTCC classes. You must (1) be admitted to the college, (2) see an advisor, (3) register for RODP online classes along with any other CSTCC classes that you would like to take.

### How do I recognize RODP classes?

RODP classes are designated as “R50” sections.

### If I want to take an RODP class, do all of my classes have to be RODP?

No. You can mix and match CSTCC traditional classes, hybrid classes, video classes, online classes, and RODP online classes interchangeably. Courses delivered in all of these methods will show up on your transcript simply as CSTCC courses.

### Do RODP classes count the same as CSTCC classes?

Yes. RODP classes have the same number, title, and content as CSTCC courses. They count the same as CSTCC classes.

### Do RODP classes transfer?

Yes. They transfer just as any other CSTCC courses would.

### How do my RODP grades show on my transcript?

They show up as your grades for having taken CSTCC classes. (If you were to take RODP classes through another institution, then the grades would show up as grades from that institution.)

### Do RODP online classes cost more than CSTCC online classes?

Yes. You must pay a per-credit-hour fee of \$39. Also, you must pay for all credit hours, even after the first 12 hours. [www.rodpc.org/enrolltoday/fees.htm](http://www.rodpc.org/enrolltoday/fees.htm)

Will my financial aid apply to RODP classes? Yes.

### How do I get books?

To find out what books you need for RODP classes, go to <http://rodpc.bkstr.com>. You may buy the books there, new or used. CAUTION: Oftentimes the books for RODP classes are not the same as the books listed for the same class at CSTCC. You should not go to the CSTCC Bookstore to get RODP books.

### When can I log in to my RODP classes?

You will be able to log in to your RODP classes on the day classes begin. Your username and password will not work until then.

### How do I log in to my RODP class?

On the first day of class, go to <http://elearn.rodpc.org> and follow the directions for log in.

### Who will be my instructor?

Your instructor will be a full-time or adjunct instructor for one of the TBR institutions.

### Who is my advisor?

Your advisor should be an expert in your major field who can guide you through your degree program. If you want to take a class online, you can check the CSTCC list for 971 section classes. If CSTCC does not list the course, look for an RODP R50 section. Your advisor can help you select the RODP course you need. If you have declared one of the programs listed on the RODP web site for a major, then you may be assigned to the RODP Campus Contact for advising.

### What are “RODP programs of study”?

These are programs that can be (but do not have to be) completed totally online. You can follow one of these programs and still mix and match CSTCC and RODP online classes, as you wish. The “RODP program” is simply a listing of classes leading to a degree: [www.rodpc.org/degrees](http://www.rodpc.org/degrees). If CSTCC is your home institution when you receive your RODP program degree, then you receive a CSTCC degree in that field.

### Do I have to follow an RODP program of study to take RODP classes?

No. You can take RODP classes anytime for any reason. They are interchangeable with CSTCC classes (but are a bit more expensive).



To enroll for these courses, please follow directions at <http://www.rodpc.org/campus/> or call toll free 1-866-547-3733

# Many Ways To Learn

## Center for Distributed Education (IMC 206)

Many of our courses are offered via hybrid classes, independent study, online or through the Regents Online Degree Program (RODP) program. These courses require students to be very self-motivated and well organized. Once registered for these courses, it is the student's responsibility to take the necessary steps to begin the course. Listed below, you will find some important information for these types of courses.

### Hybrid Classes:

Hybrid classes are a combination of traditional delivery and online delivery. That is, a hybrid course has a fixed meeting time and place for 50% (or more) of the hours required for the course each week. However, the remainder of the course materials and activities are delivered through the online format. For example, a traditional 3 credit hour class might meet on Tuesdays and Thursdays from 9:30 a.m. to 10:45 a.m. in H-107. The hybrid class would meet ONLY on Tuesday from 9:30 a.m. to 10:45 a.m. in H-107. The "Thursday" portion would be covered online through materials, assignments, and activities directed by the instructor and performed by the student anytime during the ensuing week.

### Independent Study:

*(Noted in the schedule as 95 section)*

In this type of course the student completes the coursework on their own with the instructor's assistance. Instructor approval is required to register. Once registered, the student MUST contact the course instructor for the syllabus and to make arrangements for completion of course assignments. There are no assigned class meeting times. If required, students take proctored tests either in the Chattanooga State Testing Center or an agreed upon off-site location. Textbooks usually accompany the course and can be purchased in the bookstore.

### Online:

*(Noted in the schedule as 97 section)*

In this type of course, material is presented via the Internet. Once registered, the student must access their course online using eLearn. This can be done after the first day of classes by clicking on the 'Log On eLearn Courses' button in the bottom right hand corner of the Chattanooga State home page - [www.chattanoogaestate.edu](http://www.chattanoogaestate.edu). Information is given on the logon page regarding eLearn ID and password as well as assistance with common problems, etc. (near bottom of the page). Typically, there are no assigned class meeting times, but this can vary by course. The class meetings, if required, would be conducted online. All course work is submitted via the Internet. Testing for the course is either online or proctored in the Testing Center or at an agreed upon off-site location. Textbooks usually accompany the course and can be purchased in the bookstore. There is an additional per course fee. Students MUST be computer literate, have a minimum 56K Internet access and an e-mail address. For courses involving streaming media, a cable, DSL or broadband connection is highly recommended.

### RODP:

*(Noted in the schedule as R50 section)*

Similar to classes offered "online" as noted above, these classes are offered via the Internet. Students should go to the RODP website <http://www.rodop.org> for (1) information on degree programs and classes, (2) each semester's calendar, and (3)

instructions on how to be admitted and registered. **Students should be aware that the RODP cut-off for class registration is usually a few days EARLIER than Chattanooga State's. Once registered, students are responsible for going to the RODP eLearn login page on the first day of classes to begin their studies: <http://eLearn.rodop.org>.** Students should get their books at <http://rodop.bkstr.com> (the RODP information site also has a link for the RODP bookstore). The Chattanooga State Bookstore does not carry RODP books. Students do not have to declare an RODP major to take RODP classes. RODP classes fulfill general education requirements the same way regular classes do. When students take RODP classes, they declare Chattanooga State as their "home institution." This means that any courses they take through RODP are counted as Chattanooga State classes. If students follow an RODP program of study (for example, to get an associate's degree in information technology), the degree they earn is awarded by Chattanooga State. For RODP classes, students must pay per hour tuition plus the RODP per hour fee. Students must pay for every "credit hour" regardless if they exceed the twelve credit hours of "full-time" status. Students are charged for credit hours over twelve due to the additional cost for online delivery, virtual bookstore, virtual library, online student services, and 24/7 technical help. For more information on fees, visit the website <http://www.rodop.org/fees.htm>. No enrollment overrides are allowed. For help with RODP classes, see your RODP Campus Contact.



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34-36	General Education Information and Courses
37	Removal of Entrance Deficiencies
34-37	Tennessee Board of Regents/University of Tennessee Transfer Track

### Associate of Science (A.S.) University Transfer

A.S. Transfer (Non-Specified)	Music
Accounting	Nutrition
American Sign Language Studies	Physics
Art	Political Science
Art Education	Pre-Cytotechnology
Biology	Pre-Dentistry
Broadcasting	Pre-Engineering
Business Administration	Pre-Law
Chemistry	Pre-Medical Technology
Early Childhood Education	Pre-Medicine
Economics	Pre-Occupational Therapy
Elementary Education	Pre-Optometry
Environmental Science	Pre-Pharmacy
Forestry, Fisheries and Wildlife	Pre-Physical Therapy
Geography	Pre-Veterinary
Graphic Design	Psychology
Health & Physical Education	Secondary Education
Information Systems	Social Work
Management	Sociology
Marketing	Surveying
Mathematics	Theatre Arts
	Wellness/Fitness Leadership
	TBR-UT Transfer

### Associate of Science (A.S.T.) University Transfer

Teaching

### Associate of Arts (A.A.) University Transfer

A.A. Transfer (Non-Specified)	Humanities
Accounting	Journalism
Art	Management
Broadcasting	Marketing
Business Administration	Mathematics
Chemistry	Music
Economics	Philosophy
English	Psychology
French	Religious Studies
German	Sociology
Graphic Design	Spanish
History	Theatre Arts
	TBR-UT Transfer

## General Education Requirements/Transfer Information

### Associate of Arts and Associate of Science General Transfer Degrees

Students who complete an associate degree are eligible to transfer to a senior level institution as a junior to complete a baccalaureate degree. Students transferring to a Tennessee Board of Regents university will have satisfied all the general education requirements by completing the associate degree at Chattanooga State. Students transferring to any other system (including the University of Tennessee system universities) should consult with the campus where they intend to go for general education requirements for specific majors. Students should be aware that a minimum grade of "C" is required in all prerequisite courses and specific courses. Courses in which a "D" grade is made may not transfer.

The following table presents an example of course work leading to an Associate of Arts or Associate of Science degree.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		Semester FALL	Hours SPR
Freshman			
ENGL 1010, 1020	Composition I, II	3	3
	History Sequence	3	3
	Hum/Fine Arts Gen. Ed. Elective	3	3
	Mathematics Gen. Ed. Elective	3	
	Social & Behavioral Sciences Gen. Ed. Elective	3	3
	Program Elective		<u>3</u>
		15	15
Sophomore			
SP 110	Fundamentals of Public Speaking	3	
	Literature Gen. Ed. Elective	3	
	Natural Sciences Gen. Ed. Elective	4	4
	Program Elective*	3	3
	Program Elective	3	3
	Program Elective		3
	Program Elective		<u>1</u>
		16	14
Total Hours: 60			

\*Six hours of a foreign language are required for the Associate of Arts degree.

### Associate of Science in Teaching

#### K-6 Curriculum

The Associate of Science Teaching Degree (AST) assists students to complete some of the professional teacher licensing standards at the community college level. Students who complete the degree requirements and graduate can transfer into a teacher education program in any TBR university.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	
		Semester FALL	Hours SPR
Freshman			
ENGL 1010	Composition I	3	
ENGL 1020	Composition II		3
ED 201	Foundations of Education	3	
EDPY 207	Educational Psychology		3
GEOG 1025	World Regional Geography		3
MATH 1410	Structure of Number System I	3	
MATH 1420	Structure of Number System II		3
PHYS 1310	Integrated Physics	3	
CHEM 1310	Integrated Chemistry		3
PO 110 or SO 110	Introduction to American Government or Introduction to Sociology	3	
		<u>15</u>	<u>15</u>
Sophomore			
ART 1030 or MUS 1030	Art Appreciation or Music Appreciation	3	

ENGL 2110	American Literature I (Humanities Electives)	3	
ENGL 2120	American Literature II (Humanities Electives)		3
SP 110	Fundamentals of Public Speaking		3
ECED 2060**	Development of the Exceptional Child	3	
HIST 2010	United States History I	3	
HIST 2020	United States History II		3
MATH 1530	Introductory Statistics		3
PSCI 1310	Integrated Earth & Space Science	3	
BIOL 1310	Integrated Biology		3
		<u>15</u>	<u>15</u>
Total Hours: 60			

\*Prerequisite: ECED 2060 - ECED 2020, 2040 or departmental consent.

Additional Degree Requirements:

- "C" or better required for all courses and a 2.75 cumulative grade point average (GPA) for all college level work.
- ACT > 22 or SAT > 1020 or Praxis I (Reading >174, Writing >173, Mathematics >173).
- Satisfactory rating on an index of suitability for the teaching profession.

### Tennessee Board of Regents Philosophy of General Education

The purpose of the Tennessee Board of Regents general education core is to ensure that college graduates have the broad knowledge and skills to become lifelong learners in a global community that will continue to change. Because course requirements in general education emphasize breadth, they are not reduced to the skills, techniques, or procedures associated with a specific occupation or profession. As a fundamental element of the baccalaureate degree, essential for full completion of all majors and minors, the general education core is fulfilled through lower division (freshman and sophomore) courses, but universities may add general education courses at the upper division as well.

General education provides critical thinking skills enabling students to discover authoritative answers to questions, and to solve challenging problems. Specifically, educated people practice and are literate in many forms of communication. They recognize their place in the history, culture, and diverse heritage of Tennessee, the United States, and the world. They appreciate the web of commonality of all humans in a multicultural world and are prepared for the responsibilities of engaged citizenship. They recognize the ethical demands of modern life. They demonstrate the skills and knowledge of the social and behavioral sciences to analyze contemporary society. They are familiar with the history and aesthetics of the fine arts. They understand and practice the scientific and mathematical view of the world.

Finally, Tennessee's general education core provides for its citizens the means to make a better living. It also, perhaps above all, enables its citizens to have a better life.

### General Education

Effective Fall Semester 2004, each institution in the State University and Community College System of Tennessee (The Tennessee Board of Regents System) shares a common lower-division general education core curriculum of forty-one (41) semester hours for baccalaureate degrees and the Associate of Arts and the Associate of Science degrees. Lower-division means freshman and sophomore courses. The courses comprising the general education curriculum are

contained within the following subject categories:

**Baccalaureate Degrees and Associate of Arts\* and Associate of Science Degrees**

<b>Communication</b>	<b>9 hours**</b>
<b>Humanities and/or Fine Arts</b>	<b>6 hours</b>
<b>Literature</b>	<b>3 hours</b>
<b>Social/Behavioral Sciences</b>	<b>6 hours</b>
<b>History Sequence</b>	<b>6 hours***</b>
<b>Natural Sciences</b>	<b>8 hours</b>
<b>Mathematics</b>	<b>3 hours</b>
<b>Total</b>	<b>41 hours</b>

*Foreign language courses are an additional requirement for the Associate of Arts (A.A.) and Bachelor of Arts (B.A.) degrees. Six hours of foreign language are required for the A.A. degree and twelve hours are required for the B.A.*

*\*\*Six hours of English Composition and three hours in English oral presentational communication are required.*

*\*\*\*Students who plan to transfer to Tennessee Board of Regents (TBR) universities should take six hours of United States History (three hours of Tennessee History may substitute). Students who plan to transfer to University of Tennessee System universities or to out-of-state or private universities should check requirements and take the appropriate courses.*

Although the courses designated by Tennessee Board of Regents (TBR) institutions to fulfill the requirements of the general education subject categories vary, transfer of the courses is assured through the following means:

- Upon completion of an A.A. or A.S. degree, the requirements of the lower-division general education core will be complete and accepted by a TBR university in the transfer process.
- If an A.A. or A.S. is not obtained, transfer of general education courses will be based upon fulfillment of complete subject categories. (Example: If all eight hours in the category of Natural Sciences are complete, then this “block” of the general education core is complete.) When a subject category is incomplete, course-by-course evaluation will be conducted. The provision of block fulfillment pertains also to students who transfer among TBR universities.
- Institutional/departmental requirements of the grade “C” will be honored. Even if credit is granted for a course, any specific requirements for the grade of “C” by the receiving institution will be enforced.
- In certain majors, specific courses must be taken also in general education. It is important that students and advisors be aware of any major requirements that must be fulfilled under lower-division general education.

A complete listing of the courses fulfilling general education requirements for all system institutions is available on the TBR website ([www.tbr.state.tn.us](http://www.tbr.state.tn.us)) under Transfer and Articulation Information. Specific courses offered at Chattanooga State that meet general education requirements are listed below:

**Communication (9 hours)**

ENGL 1010 Composition I

ENGL 1020 Composition II  
SP 110 Fundamentals of Public Speaking

**Humanities and/or Fine Arts (6 hours)**

ART 1010 Survey: Art History I  
ART 1020 Survey: Art History II  
ART 1030 Art Appreciation  
ENGL 2110 American Literature I  
ENGL 2120 American Literature II  
ENGL 2140 African American Literature  
ENGL 2210 English Literature I  
ENGL 2220 English Literature II  
ENGL 2410 Western World Literature I  
ENGL 2420 Western World Literature II  
HUM 1010 Introduction to the Humanities I  
HUM 1020 Introduction to the Humanities II  
HUM 2130 Mythology  
MUS 1030 Music Appreciation  
PHIL 1030 Introduction to Philosophy  
PHIL 2230 Ethics  
RELS 2030 Religions of the World  
THEA 1030 Introduction to Theatre

**Literature (3 hours)**

ENGL 2110 American Literature I  
ENGL 2120 American Literature II  
ENGL 2140 African American Literature  
ENGL 2210 English Literature I  
ENGL 2220 English Literature II  
ENGL 2410 Western World Literature I  
ENGL 2420 Western World Literature II

**Social & Behavioral Sciences (6 hours)**

EC 211 Principles of Economics (macro)  
EC 212 Principles of Economics (micro)  
GEOG 1025 World Geography  
PE 230 The Science of Fitness and Wellness  
PO 110 Introduction to American Government  
PO 112 Introduction to World Politics  
PY 101 General Psychology  
SO 110 Introduction to Sociology  
SO 216 Cultural Anthropology

**History Sequence (6 hours)**

Transfer students must complete a history sequence. HIST 2030 may be substituted for either HIST 2010 or 2020. This is the only substitution that is allowed in any of the History Sequences.

HIST 1010, 1020 Western Civilization I & II  
HIST 1110, 1120 History of World Civilizations I & II  
HIST 2010, 2020 United States History I & II  
HIST 2030 Tennessee History (for 2010 or 2020)

## American History Requirement

Students who plan to transfer to one of Tennessee's state-supported institutions should be aware of the following:

- Effective July 1, 1978 and afterwards, all students receiving bachelor's degrees from any of Tennessee's state-supported colleges or universities must have completed one unit of American History on the high school level or 6 semester hours (9 quarter hours) of college-level American history as required by TCA Statute 49-3253.
- The law allows one course in Tennessee History to be substituted for one of the required American history courses.
- Students who hold a GED Certificate are not considered to have satisfied this requirement automatically. Unless American History was completed in high school prior to receiving the GED, the student has a deficiency which must be removed in order to receive a baccalaureate degree from a Tennessee state-supported college or university.
- Although college-level American History may be used to remove a high school History deficiency, the reverse is not true. High school American History cannot substitute for college-level history required as part of an associate or baccalaureate degree program. A student who has taken American History in high school may be required to take American History in college as well.

Students who have not completed a full year of American History in high school are strongly encouraged to remove this deficiency before transferring to a senior institution. For students not subject to the 1989 Admission Requirements, completion of 6 hours from HIST 2010, HIST 2020, HIST 2030 (in any combination) will remove this deficiency and also count as the approved History sequence required for the AA or AS degree or, if the student prefers to take a non-U.S. history for the History sequence, as elective credit toward graduation. For students subject to the 1989 Admission Requirements, all 3 courses (9 hours) must be completed in order to satisfy the AA/AS requirement for a History sequence because one of the U.S. History courses must be used to remove the high school unit deficiency and can only count as an elective toward graduation.

## Natural Sciences (8 hours)

ASTR 1030	Astronomy
BIOL 1110	General Biology I
BIOL 1120	General Biology I
BIOL 1310	Integrated Biology
BIOL 2010*	Human Anatomy and Physiology I
BIOL 2020*	Human Anatomy and Physiology II
CHEM 1010	Introduction to Chemistry I
CHEM 1020	Introduction to Chemistry II
CHEM 1110	General Chemistry I
CHEM 1120	General Chemistry II
CHEM 1310	Integrated Chemistry
ESC 1110	Environmental Science I
ESC 1120	Environmental Science II
GEOL 1040	Physical Geology
GEOL 1050	Historical Geology

PHYS 1030	Physics Concepts
PHYS 1310	Integrated Physics
PHYS 2010	Non-Calculus-Based Physics I
PHYS 2020	Non-Calculus-Based Physics II
PHYS 2110	Calculus-Based Physics I
PHYS 2120	Calculus-Based Physics II
PSCI 1030	The Physical Environment
PSCI 1310	Integrated Earth & Space Science

\*BIOL 2010-2020 sequence must be completed to meet Natural Science requirement.

## Mathematics (3 hours)

MATH 1010	Contemporary Mathematics
MATH 1410	Structure of Number Systems I
MATH 1530	Introductory Statistics
MATH 1710	Pre-Calculus I
MATH 1720	Pre-Calculus II
MATH 1830	Calculus for Management, Life, and Social Sciences
MATH 1910	Calculus I with Analytic Geometry

## Math Placement

Students pursuing majors for which the math requirement would normally be calculus or pre-calculus may begin their college math at a higher level if they meet the criteria listed below. Most degrees at Chattanooga State require at least one college level math course. Meeting the criteria to place into a higher level course does not exempt the student from this requirement, nor is any credit granted for the course(s) the student is able to skip.

### Criteria

1. Three (3) high school math credits above the Algebra I level **and** a Math subscore of 25 on the ACT or corresponding SAT score.
2. Two (2) high school math credits above the Algebra I level **and** a Math subscore of 21 on the ACT or corresponding SAT score.

### Advanced Placement Course

Calculus with Analytic Geometry-I, MATH 1910  
Pre-Calculus II, MATH 1720  
or  
Calculus for Management, Life, and Social Sciences, MATH-1830

## Foreign Language

The Associate of Arts degree requires proficiency in a foreign language equivalent to one year of college-level work. Students who have completed 2 or more years of the same foreign language in high school may be able to skip one or both of the elementary level courses. No credit is granted for the course(s) the student is able to skip.

FREN	1010, 1020	Elementary French I, II
FREN	2010, 2020	Intermediate French I, II
GERM	1010, 1020	Elementary German I, II
GERM	2010, 2020	Intermediate German I, II
SPAN	1010, 1020	Elementary Spanish I, II
SPAN	2010, 2020	Intermediate Spanish I, II

Updated information may be available at the college's web site: <http://www.chattanoogaastate.edu>.

## Removal of High School Entrance Deficiencies

Completion of general education blocks also removes deficiencies in social studies, history, visual performing arts, science, geometry/advanced mathematics. Students entering Tennessee Public Institutions will be required to make-up any deficiency including foreign language before receiving a baccalaureate degree. It is strongly recommended that students remove all deficiencies as part of their associate degree program. Courses used to satisfy the deficiency in foreign language may be designated as electives or used to satisfy the Associate of Arts language requirement.

## Tennessee Board of Regents/ University of Tennessee Transfer Track

Students who wish to fulfill core curriculum requirements for institutions in both the Tennessee Board of Regents (TBR) System and the University of

Tennessee (UT) System may do so by completing the TBR-UT University Track Module. The Module consists of a sixty (60) semester hour block of courses in eight categories of subjects. The University Track Module incorporates the minimum degree requirements of all TBR and UT institutions and requires the completion of courses within the following subject categories:

**Category 1:** *Two English Composition Courses (normally 6 credit hours)*

**Category 2:** *Two Mathematics Courses (normally 6 credit hours)*

**Category 3:** *Two Science Courses (normally 6-8 credit hours)*

**Category 4:** *Five History and Humanities Courses (normally 15 credit hours)\**

\*Six credit hours of history are required. The type of history required varies among public universities in Tennessee. Check university catalogs to determine the proper history courses to take.

**Category 5:** *Two Social/Behavioral Science Courses (normally 6 credit hours)*

**Category 6:** *Two Multicultural or Interdisciplinary Courses or Two Foreign Language Courses (normally 6 credit hours)*

**Category 7:** *Two Physical Education Courses (normally 2 credit hours)*

**Category 8:** *Pre-major/Major Elective Courses (normally 12-15 credit hours)*

The choice of courses depends upon the intended major at the university to which transfer is planned. Students planning to transfer to a senior institution are expected to contact the senior institution in order to ensure that courses taken at Chattanooga State will transfer into the chosen major program. Courses to be transferred under the stipulations of the University Track Module must have been completed with the grade of C or better.



Chattanooga State campus.



*Chattanooga State C.C. Bond Humanities Building:  
Auditorium/Theatre, Humanities & Fine Arts Division and Theatre Arts.*

<http://www.chattanoogaastate.edu>  
**1-866-547-3733**  
 E-mail: [askjoe@chattanoogaastate.edu](mailto:askjoe@chattanoogaastate.edu)

Chattanooga State Technical Community College Official Bulletin, Volume XXXIII

Official EOE Statement

It is a Class A misdemeanor to misrepresent academic credentials. A person commits the offense of misrepresentation of academic credentials who, knowing that the statement is false and with the intent to secure employment at or admission to an institution of higher education in Tennessee, represents, orally or in writing that such person:

1. Has successfully completed the required course work for and has been awarded one (1) or more degrees or diplomas from an accredited institution of higher education;
2. **Has successfully completed the required course work for and has been awarded one (1) or more degrees for diplomas from a particular institution of higher education; or**
3. **Has successfully completed the required course work for and has been awarded one (1) or more degrees or diplomas in a particular field or specialty from an accredited institution of higher education.**

Chattanooga State Technical Community College does not discriminate on the basis of race, sex, color, religion, national origin, age, disability or veteran status in provision of educational programs and services of employment opportunities and benefits. This policy extends to both employment by and admission to Chattanooga State Technical Community College.

Chattanooga State Technical Community College does not discriminate on the basis of race, sex, or disability in its education programs and activities pursuant to the requirements of Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA) of 1990.

Inquiries and charges of violation concerning Title VI, Title IX, Section 504, ADA or the Age Discrimination in Employment Act (ADEA) or any of the other above referenced policies should be directed to the College's Affirmative Action Officer. Requests for accommodation of a disability should be directed to the ADA Coordinator at Chattanooga State Technical Community College.

Chattanooga State Technical Community College is one of 45 institutions in the Tennessee Board of Regents system, the sixth largest system of higher education in the nation. The Tennessee Board of Regents is the governing board for this system which is comprised of six universities, thirteen community colleges, and twenty-six area technology centers. The TBR system enrolls more than 80 percent of all Tennessee students attending public institutions of higher education. Crime statistics, rate, and institutional security policies and procedures are available upon request.

The Title IX Coordinator for your campus is:  
 Jerome Gober  
 Room 232D, CBIH Building, 697-4457

*This catalog is intended for information purposes only. Requirements, rules, procedures, courses and informational statements set forth herein are subject to change. Notice of changes will be conveyed to duly enrolled students and other appropriate persons at the time such changes are effected. The period during which the degree requirements set forth in this catalog shall remain in effect, subject to changes provided herein, shall not exceed five (5) years from the beginning of the Fall 2008 academic term, two (2) years for technical certificates.*



# Tennessee Technology Center Career Programs

Chattanooga State Technical Community College

Volume Number 34

2008-10

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<http://www.chattanoogastate.edu> or call toll free 1-866-547-3733  
E-mail: [askjoe@chattanoogastate.edu](mailto:askjoe@chattanoogastate.edu)

## Lottery Scholarship Information

# The Wilder-Naifeh Technical Skills Grant

It's **\$2,000 per year** to earn valuable job skills  
at Chattanooga State's **Tennessee Technology Center**

*Adults of any age and recent high school grads can qualify!*

- Study any of the many technical career programs offered at Chattanooga State's Tennessee Technology Center
- Enroll full- or part-time (*Some evening programs available.*)
- No high school diploma or GED required for most programs
- No minimum GPA or GED score required
- Be a TN resident for one year prior to May 1st

**These excellent programs will have you career-ready in as little as one year!**

*Air Conditioning/Refrigeration\**

*Aesthetics*

*Automotive Technology*

*Building Construction Technology §*

*Business Systems Technology*

*Collision Repair*

*Commercial Truck Driving \*\*\* †*

*Computer Operations Technology*

*Cosmetology \**

*Cosmetology Instructor \**

*Diesel Equipment Mechanics*

*Heavy Equipment Operator*

*Industrial Electricity*

*Industrial Electronics*

*Industrial Maintenance Mechanics*

*IV Therapy (not eligible for financial aid)*

*Landscape & Turf Management*

*Machine Tool Technology*

*Manicurist*

*Masonry*

*Massage Therapy*

*Medical Assistant (HS Diploma or GED required)*

*Motor Sports Vehicle Technology*

*Motorcycle & Marine Service Technology*

*Plumbing*

*Practical Nursing (HS Diploma or GED required)*

*Realtime Reporting: Scopist (HS Diploma or GED required)*

*Surgical Technology (HS Diploma or GED required)*

*Welding*

*All of the Wilder-Naifeh Grant programs – except the Realtime Reporting: Scopist Program (CSTCC East campus), Construction Technology Program, Masonry, and Plumbing*

*are available at Chattanooga State's Tennessee Technology Center at the Annicola Campus.*

*In addition select programs are offered at these locations:*

*\*Kimball Campus, \*\*Sequatchie Valley Campus, \*\*\*Dayton Campus, †Cleveland, §Sequoyah High School*

**Telephone today to learn about the simple application process.**

**(423) 697-4781**

*Fees to attend the Tennessee Technology Center Division are among the lowest charged by any college in the state, and out-of-state students do not pay additional fees.*



## Tennessee Technology Center Career Programs

Tennessee Technology Center programs are designed to be completed in one year (usually 1290 clock hours except as noted). However, some students may need more or less than the usual number of clock hours to achieve the level of competency required.

### Academic Retention Standards

Effective fall term 2007, a minimum grade point average of 2.00 (on 4.0 scale) is required each semester for continued enrollment in the TTC, except for those programs having higher retention/progression standards due to accrediting or licensing requirements. Students failing to achieve the minimum semester grade for the program will be suspended for one enrollment period.

The semester grade will reflect each student's progress in the following categories:

*Skill Proficiency (written tests, lab work)*

*Related Information (daily journals, math)*

*Worker Characteristics (attendance\*, participation, working with others)*

\*Regular and punctual class attendance is required.

Excessive absences and tardies will have an adverse effect on student progress. For each 1% of the assigned clock hours that a student is absent from class, 3.2 points will be deducted from the attendance grade. A student who has been absent for 11% or more of a semester will receive a failing grade for attendance. One point will be deducted from the final attendance grade for each tardy. A student is considered tardy if not in the classroom at the designated time for class to start. The attendance grade will be averaged in with the other course-related grades for the student's final semester grade.

In individual cases of extenuating circumstances, the dean may make exceptions to suspension. Requests for exceptions must be made in writing and be accompanied by full documentation.

### Readmission by the Dean from Suspension

Criteria considered in evaluating readmission requests are 1) the candidate's willingness to address those deficiencies that contributed to the suspension and 2) the likelihood that the student may succeed in pursuing his or her training objective.

### Tennessee Technology Center/A.A.S. Degree Articulation

Tennessee Technology Center students who hold a certificate of completion or diploma from a Tennessee Technology Center in an approved program, may be eligible to receive undergraduate semester hours of advanced standing toward an Associate of Applied Science degree in Applied Technology. For more information, see the appropriate major.

## Technical Diploma Programs

### Air Conditioning and Refrigeration

#### Technical Diploma

*Accredited by HVAC Excellence, an organization that establishes national standards for HVAC/R Programs*

This program covers the theory, application, operation, and maintenance of basic and advanced air conditioning/refrigeration systems.

#### Career Opportunities

Air conditioning/refrigeration technician, air-conditioning/refrigeration installation/maintenance/service, sales—retail and wholesale

**(423) 697-3173**

SUMMARY OF REQUIRED HOURS		Semester Clock Hours		
Course No.	Course Title	FALL	SPR	SUM
AC 000	Air Conditioning/Refrigeration Technology	450	450	390
Total Clock Hours: 1290				

*Note: Students register for AC 000 each term until all competencies are mastered*

### Automotive Technology

#### Technical Diploma

*Accredited by the National Automotive Technicians Education Foundation (NATEF)*

This ASE certified training program covers automotive electronics, engine performance, steering and suspension, manual transmissions and drive trains, automatic transmissions and transaxles, heating, ventilation and air conditioning, brakes, and engine repair and rebuilding. Specialized electronics are taught throughout as well as the proper use of tools and equipment.

#### Career Opportunities

Technician, shop foreman, service adviser, service manager

**(423) 697-4479 or 697-2439**

SUMMARY OF REQUIRED HOURS		Semester Clock Hours		
Course No.	Course Title	FALL	SPR	SUM
AM 000	Automotive Technology	450	450	390
Total Clock Hours: 1290				

*Note: Students register for AM 000 each term until all competencies are mastered.*

### Building Construction Technology

#### Technical Diploma

This program trains students in four areas of the construction trade - carpentry, electricity, masonry and plumbing.

**(423) 697-4451**

SUMMARY OF REQUIRED HOURS		Semester Clock Hours		
Course No.	Course Title	FALL	SPR	SUM
BL 000	Building Construction Technology	450	450	390
Total Clock Hours: 1290				

*Note: Students register for BST 000 each term until all competencies are mastered.*

## Business Systems Technology

### Technical Diploma

This program will teach students a wide variety of office functions including clerical and keyboarding skills, and the use of applications software and technology.

### Career Opportunities

Data entry, payroll clerk, receptionist/customer service representative, accounting clerk, information processor, bookkeeper, and administrative assistant

**(423) 697-4451**

Course No.	Course Title	SUMMARY OF REQUIRED HOURS		
		FALL	SPR	SUM
BST 000	Business Systems Technology	450	450	390
Total Clock Hours: 1290				

*Note: Students register for BST 000 each term until all competencies are mastered.*

## Collision Repair

### Technical Diploma

This course prepares students to work in automotive body repair and refinishing. The program focuses on automobile construction and repair and emphasizes hands-on activities. The course provides instruction on diagnosing damages and estimating repair costs, while covering the subjects included in the National Institute for Automotive Service Excellence (NIASE) certification tests "Body Repair" and "Painting and Refinishing."

### Career Opportunities

Auto body metal straightener, insurance adjuster, painter, repair cost estimator

**(423) 697-4780**

Course No.	Course Title	SUMMARY OF REQUIRED HOURS		
		FALL	SPR	SUM
AB 000	Collision Repair Technology	450	450	390
Total Clock Hours: 1290				

*Note: Students register for AB 000 each term until all competencies are mastered.*

## Computer Operations Technology

### Technical Diploma

This program is designed to provide students with first hand knowledge of the software, hardware, and operations of personal computers used in business and industry today; students will explore how the personal computer works, how data is processed, and how to apply the functions to solutions on the job. The program consists of studies in the major operating systems, diagnostics, and configuration of computers and their related peripheral devices.

### Career Opportunities

Information processing technician, personal computer hardware technician, microcomputer specialist, networking specialist

**(423) 697-4729**

Course No.	Course Title	SUMMARY OF REQUIRED HOURS		
		FALL	SPR	SUM
COT 000	Computer Operations Technology	450	450	390
Total Clock Hours: 1290				

*Note: Students register for COT 000 each term until all competencies are mastered.*

## Cosmetology

### Technical Diploma

This four-semester program prepares students to take the State Board of Cosmetology's practical and written examinations.

### Additional Admission Requirements

Applicants must have completed at least two years of high school (8 credits) or score 38 or higher on the GED.

### Career Opportunities

Color technician, esthetician, hair stylist, manicurist, make-up artist, shop manager

**(423) 697-4477 or Kimball (423) 837-9105**

**Grundy County High School (931) 692-5400**

Course No.	Course Title	SUMMARY OF REQUIRED HOURS			FALL	SPR	SUM	FALL
		FALL	SPR	SUM				
CY 000	Cosmetology	450	450	390			*	
Total Clock Hours: 1500*								

*\*1500 clock hours required for State Board licensure*

## Diesel Equipment Mechanics

### Technical Diploma

This program trains students in diesel engine mechanics.

### Career Opportunities

Diesel mechanic, heavy diesel equipment repair, mechanic helper, truck mechanic

**(423) 697-4778**

Course No.	Course Title	SUMMARY OF REQUIRED HOURS		
		FALL	SPR	SUM
DM 000	Diesel Mechanics	450	450	390
Total Clock Hours: 1290				

*Note: Students register for DM 000 each term until all competencies are mastered.*

## Industrial Electricity

### Technical Diploma

This program prepares students to install, maintain, and repair electrical systems and equipment.

### Career Opportunities

Apprentice electrician, cable TV installer, electrician's helper, electric motor repairer, electrical technician, journeyman electrician, satellite antenna installer

**(423) 697-3106**

Course No.	Course Title	SUMMARY OF REQUIRED HOURS		
		FALL	SPR	SUM
IE 000	Industrial Electricity	450	450	390
Total Clock Hours: 1290				

*Note: Students register for IE 000 each term until all competencies are mastered.*

## Industrial Electronics

### Technical Diploma

This program prepares students to repair and maintain "state of technology" electronic equipment.

### Career Opportunities

Computer maintenance, industrial controls system specialist, radio and television repair, industrial instrumentation specialist, telecommunications technician

**(423) 697-3238 or 697-3174**

SUMMARY OF REQUIRED HOURS		Semester Clock Hours		
Course No.	Course Title	FALL	SPR	SUM
ER 000	Industrial Electronics	450	450	390
Total Clock Hours: 1290				

*Note: Students register for ER 000 each term until all competencies are mastered.*

**Industrial Maintenance Mechanics  
Technical Diploma**

This program prepares maintenance personnel for industry. Students learn skills in electricity, welding, machine shop, hydraulics, pneumatics, air conditioning, general building maintenance, and robotics.

**Career Opportunities**

Electrical equipment maintenance technician, repair welder, robotics maintenance technician, maintenance foreman assistant, maintenance machinist, maintenance technician

**(423) 697-3175**

SUMMARY OF REQUIRED HOURS		Semester Clock Hours		
Course No.	Course Title	FALL	SPR	SUM
ID 000	Industrial Maintenance Technology	450	450	390
Total Clock Hours: 1290				

*Note: Students register for ID 000 each term until all competencies are mastered.*

**Landscaping and Turf Management  
Technical Diploma**

This program trains students for work with greenhouses, golf courses, public grounds, and residential landscaping.

**(423) 697-2580**

SUMMARY OF REQUIRED HOURS		Semester Clock Hours		
Course No.	Course Title	FALL	SPR	SUM
LM 000	Landscaping and Turf Management	450	450	390
Total Clock Hours: 1290				

*Note: Students register for LM 000 each term until all competencies are mastered.*

**Machine Tool Technology  
Technical Diploma**

This program gives students experience in machine tools, such as engine lathes, vertical and horizontal milling machines, pedestal and surface grinders, shapers, CNC Machining Centers, and Turning Centers.

**Career Opportunities**

CNC operator, CNC programmer, machine tool operator, maintenance machinist, manufacturing machinist, tool and die maker apprentice

**(423) 697-3176**

SUMMARY OF REQUIRED HOURS		Semester Clock Hours		
Course No.	Course Title	FALL	SPR	SUM
MT 000	Machine Tool Technology	450	450	390
Total Clock Hours: 1290				

*Note: Students register for MT 000 each term until all competencies are mastered.*

**Masonry**

**Building and Construction Institute of Southeast**

**Technical Diploma**

This program is designed to provide students with the necessary knowledge, skills and abilities in the safe and efficient performance of the residential masonry and concrete profession. Training will be competency based in accordance with the national center for Construction Education and Research (NCCER) curriculum and local Masonry/Concrete code(s). Training will consist of a specified common core and required competencies according to curricula. Training will include hands-on instruction and will require students to demonstrate learning outcomes through performance orientated evaluations.

**(423) 697-3174**

SUMMARY OF REQUIRED HOURS		Semester Clock Hours		
Course No.	Course Title	FALL	SPR	SUM
MB 000	Masonry	450	450	390
Total Clock Hours: 1290				

**Massage Therapy**

**Technical Diploma**

This program is designed to train students in the techniques and skills of massage therapy in preparation for becoming a licensed massage therapist. In addition, students will develop skills and techniques in medical massage. 1290 clock hours.

**(423) 697-3288**

SUMMARY OF REQUIRED HOURS		Semester Clock Hours		
Course No.	Course Title	FALL	SPR	SUM
MP 000	Massage Therapy	450	450	390
Total Clock Hours: 1290				

**Medical Assistant**

**Technical Diploma**

*Accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org), on recommendation of the Curriculum Review Board of the American Association of Medical Assistants' Endowment (AAMAE).*

This program develops the administrative knowledge and clinical skills needed to work in a physician's office. Graduates are eligible to write the National Certification Examination for Medical Assistants. Individuals convicted of a felony are not eligible to take the certification examination.

**Career Opportunities**

Hospital clinics, private physician offices, private medical clinics

**Additional Admission Procedures**

Additional admission procedures are required for this program. Please contact the program office.

**(423) 697-4438**

SUMMARY OF REQUIRED HOURS		Semester Clock Hours		
Course No.	Course Title	FALL	SPR	SUM
MO 000	Medical Assistant	450	450	390
Total Clock Hours: 1290				

## Motorcycle & Marine Service Technology

### Technical Diploma

This program prepares students for employment in the field of marine engine repair.

### Career Opportunities

Marine mechanic, parts salesman, service manager, shop foreman

**(423) 697-3178**

SUMMARY OF REQUIRED HOURS		Semester Clock Hours		
Course No.	Course Title	FALL	SPR	SUM
SE 000	Marine Engine Technology	450	450	390
Total Clock Hours: 1290				

Note: Students register for SE 000 each term until all competencies are mastered.

## Progression

A minimum grade of "B" is required for retention and progression in the program. Students failing to meet this standard will not earn clock hours toward graduation and will be suspended from the program.

### Career Opportunities

Doctor's office, home health care agencies, hospital, long-term care facility, nursing homes

SUMMARY OF REQUIRED HOURS		Semester Clock Hours		
Course No.	Course Title	FALL	SPR	SUM
LP 000	Practical Nursing	487	487	383
Total Clock Hours: 1357				

## Plumbing

### Building and Construction Institute of Southeast

#### Technical Diploma

This program will provide the necessary knowledge, skills and abilities in the safe and efficient performance of the residential plumbing profession. Training will be competency based in accordance with the National Center for Construction Education & Research (NCCER) curriculum and local plumbing code(s). Training will consist of a specified common core and required competencies according to curricula. Training will include hands-on instruction and will require students to demonstrate learning outcomes through performance oriented evaluations. 1290 clock hours.

**(423) 697-3174**

SUMMARY OF REQUIRED HOURS		Semester Clock Hours		
Course No.	Course Title	FALL	SPR	SUM
PM 000	Plumbing	450	450	390
Total Clock Hours: 1290				

## Realttime Reporting: Scopist

### Technical Diploma

Scopists are hired by court reporters to edit and proofread transcripts while the reporters work in court or depositions. According to the National Court Reporters Association (NCRA), there are an estimated 50,000 court reporters in the United States.

The Scopist Diploma will serve as the first year of the A.A.S. degree program in Realttime Reporting. (See "Realttime Reporting, A.A.S." in the A.A.S. degrees and technical certificates section of this catalog.)

### Career Opportunities

Scoping is an ideal career for someone who needs or prefers to work from home. A scopist uses a computer and software to edit transcripts, and all of the data is transferred via the Internet. Therefore, the job opportunities are not limited to Chattanooga and the surrounding counties. Thanks to online accessibility, scopists in Chattanooga can work for reporters anywhere in the United States or the world.

**(423) 697-4451**

SUMMARY OF REQUIRED HOURS		Semester Clock Hours		
Course No.	Course Title	FALL	SPR	SUM
RR 000	Realttime Reporting: Scopist I,II,III	450	450	390
Total Clock Hours: 1290				

## Practical Nursing (LPN)

### Technical Diploma

This three-semester program provides theoretical knowledge and clinical experiences needed for practical nursing. The graduate is eligible to write the National Council Licensure Examination for Practical Nursing (NCLEX-PN). Individuals who have been convicted of a crime other than a minor traffic violation could be ineligible for licensure in the State of Tennessee, even though they have successfully completed a nursing program.

A class of 40 students is admitted in the fall and spring semesters.

### Additional Admission Procedures

Additional admission procedures are required for this program. Applications are available all year on a first-requested basis. Please contact the program office.

**(423) 697-4447**

### Expenses

Additional expenses include nursing textbooks, liability insurance, student uniform, achievement tests, school pin, state board examination and other supplies.

## Surgical Technology

### Technical Diploma

#### Accredited by the Commission on Accreditation of Allied Health Education Programs

The Surgical Technologist maintains a sterile environment and makes instruments and equipment available to the surgeon during surgery. Graduates of this three-semester training program are eligible to write the National Certification Examination for Surgical Technologists.

### Additional Admission Procedures

Additional admission procedures are required for this program. Applications are available all year long. Please contact the program office.

**(423) 697-4447**

### Expenses

Additional expenses include textbooks, certification exam and other supplies.

### Progression

A minimum grade of "B" is required for retention and progression in the program. Students failing to meet this standard will not earn clock hours toward graduation and will be suspended from the program.

### Career Opportunities

*Doctor's office and hospital.*

SUMMARY OF REQUIRED HOURS		Semester Clock Hours		
Course No.	Course Title	FALL	SPR	SUM
OR 000	Surgical Technology	487	487	383
Total Clock Hours: 1357				

### Welding

#### Technical Diploma

This program teaches combination welding, basic oxyacetylene cutting and welding, shielded metal arc welding, metal inert gas welding, tungsten inert gas welding, and blueprint reading for welding.

### Career Opportunities

Combination welder, maintenance welder, mig welder, pipe welder, structural steel welder, tig welder

**(423) 697-3179**

SUMMARY OF REQUIRED HOURS		Semester Clock Hours		
Course No.	Course Title	FALL	SPR	SUM
WD 000	Welding Technology	450	450	390
Total Clock Hours: 1290				

*Note: Students register for WD 000 each term until all competencies are mastered.*

## Technical Certificates of Proficiency

### Aesthetics

#### Technical Certificate of Proficiency

The aesthetics program specializes in preventative skin care and offers instruction to keep skin healthy and attractive. The aesthetics course consists of 750 hours of instruction in both theoretical and practical skill development required for licensure by the Tennessee State Board of Cosmetology. Theory and practical precede laboratory activities and students must complete basic aesthetics curriculum which demonstrates competence in both theory and practical skills before being allowed to participate in laboratory activities.

**(423) 697-2634**

SUMMARY OF REQUIRED HOURS		Total Clock Hours	
Course No.	Course Title		
AE 000	Aesthetics	780	

### Commercial Truck Driving

#### Technical Certificate of Proficiency

This 7 1/2 week program trains students to drive commercial trucks, focusing on driving skills, safe operating practices, and proper record keeping.

### Additional Admission Requirements

Applicants must be at least 21 years of age.

### Career Opportunities

Truck driver, dispatcher, operations manager, safety supervisor, terminal

**(423) 875-8448**

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	Total Clock Hours
CD 000	Commercial Truck Driving		216

### Cosmetology Instructor Training

#### Technical Certificate of Proficiency

This 300 hour course is a presentation of concepts of instruction in cosmetology. Topics include history of teaching, educator characteristics, curriculum development-evaluation, and teaching assessment in techniques.

### Additional Admission Requirements

Applicants must have completed 1500 hours in the course of cosmetology and have a valid cosmetologist license.

**(423) 697-4477 or Kimball (423) 837-9105  
Grundy County High School (931) 692-5400**

SUMMARY OF REQUIRED HOURS		Semester Clock Hours	
Course No.	Course Title	Total Clock Hours	
CY 000	Cosmetology	300	

### Heavy Equipment Operator

#### Technical Certificate Of Proficiency

This 8 week program will provide the students with the necessary knowledge, skills and abilities required in the safe and efficient operation of specific pieces of heavy construction equipment and in preventative maintenance. Training will be available in Crawler Tractors, Excavators (Track-hoe) and Motorized Road Graders. The program is accredited and recognized by the respective industry as a regional training resource. Training will be competency based in accordance with the National Center for Construction Education & Research (NCCER) curriculum. Training will consist of a specified common core and required competencies for each piece of unique equipment.

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	Total Clock Hours
VCEO 000	Heavy Equipment Operator		275

**(423) 697-3174**

### IV Therapy

#### Technical Certificate of Proficiency

This course will present the concepts necessary to safely maintain peripheral IV therapy and to administer drugs. Topics to be covered include the following: related anatomy and

physiology, IV fluids, delivery methods, pharmacology and administration techniques related to selected drugs, preventing and monitoring for complications in IV therapy, legal and ethical issues, documentation standards, and the role of the RN supervisor. prereq: current PN or RN licensure.

SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Total Clock Hours
IV 000	IV Therapy	40

### Manicurist

#### Technical Certificate of Proficiency

The manicurist program is designed to train students in basic manipulative skills, safety, judgments, proper work habits and desirable attitudes necessary for entry level positions as a Nail Technician or a related career avenue. The nail technology course consists of 600 hours of instruction in both theoretical and practical skill development required for licensure by the Tennessee State Board of Cosmetology. Theory and practical precede laboratory activities and students must complete basic manicuring curriculum which demonstrates competence in both theory and practical skills before being allowed to participate in laboratory activities.

**(423) 697-2634**

SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Total Clock Hours
		1st Sem 2ndSem
MC 000	Manicurist	780

### Motor Sports Vehicle Technology

#### Technical Certificate of Proficiency

This program provides training for students who have an interest in learning about engine performance and basic chassis construction techniques related to all types of motor sport industry vehicles. To earn this 450-hour certificate, students attend part-time (112.5 hours) for four semesters or one semester of full-time attendance (450 hours) and concentrate in the following areas: engine machining, chassis welding, basic engine performance and advanced engine performance.

#### Career Opportunities

Chassis fabrication, engine machinist and performance engine technician.

**(423) 697-3178**

Course No.	Course Title	SUMMARY OF REQUIRED HOURS	Total Clock Hours
VC 000	Motor Sports Vehicle Technology		450

### Security+ Certificate

This certificate program is designed to add foundation-level skills in the security area for students that have completed the Computer Operations Technology program. Students will study general security concepts, communication security, infrastructure security, and the basics of Cryptography to protect data integrity.

#### Career Opportunities

*Computer Repair Technician, Help Desk Technician, Microcomputer Specialist, Information Processing Technician.*

SUMMARY OF REQUIRED HOURS

Course No.	Course Title	Total Clock Hours
ST 000	Security +	450



Tennessee Technology Center at Chattanooga State's Collision Repair Technical Diploma program.

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## Notice To Students

The College's course offerings and requirements are analyzed, scrutinized and revised for currency and quality. This catalog shows the offerings and requirements in effect at the time of publication. They may be changed or revoked. Adequate and reasonable notice will be given to students affected by any substantive changes.

This catalog is not intended to state contractual terms and does not constitute a contract between the student and the institution.

The institution reserves the right to make changes as required in course offerings, curricula, academic policies and other rules and regulations affecting students to be effective whenever determined by the institution. These changes will govern current and formerly enrolled students. Enrollment of all students is subject to these conditions.

Current information may be obtained from the following sources:

- Admission Requirements* – Admissions Office
- Course Offerings* – Department or Division Offering Course
- Degree Requirements* – Academic Affairs
- Fees and Tuition* – Bursar's Office

<http://www.chattanoogaastate.edu> or call toll free 1-866-547-3733  
E-mail: [askjoe@chattanoogaastate.edu](mailto:askjoe@chattanoogaastate.edu)

## History

Chattanooga State Technical Community College's history shows its commitment to the community and its ability to adapt.

When it opened in September 1965 on Fourth and Chestnut Streets, the College was known as Chattanooga State Technical Institute, a two-year, coeducational, college level institution. It was the state's first technical college, and Southeast Tennessee's first public institution of higher education. In 1967, the College moved to its present location; since then, it has grown into a multi-million dollar complex.

Chattanooga State Technical Institute's goal was to prepare students with marketable technical skills that would bridge the gap between the engineer and the craftsman. The technical programs offered AS and AE degrees and certificate programs, while remaining flexible to students and industry needs.

In 1973, Chattanooga State Technical Institute turned into Chattanooga State Technical Community College. Senate Bill 1010 assured the College would:

- provide comprehensive one and two-year occupational, college parallel, continuing education, and community service programs;
- provide quality technical and scientific occupational programs;
- serve as a regional technical school to train engineering technicians or technical workers in the fields of production, distribution, or service.

Chattanooga State's mission expanded to include vocational education on July 1, 1981, when the State Area Vocational-Technical School merged with the College. That merger was made permanent by the Tennessee legislature effective July 1, 1983.

Today, Chattanooga State Technical Community College continues to emphasize two-year technical programs and the expanded dimension of the comprehensive community college. Thus, the College is committed to meeting the needs of Chattanooga and Hamilton, Rhea, Sequatchie, Marion, Bledsoe, and Grundy counties.

## Mission Statement

### *Purpose:*

*Transform the lives of individuals and develop the capacities of business, industry and the communities within the Chattanooga State service area and beyond through the power of technical and postsecondary education.*

### *Standing:*

Chattanooga State is nationally recognized for entrepreneurial initiatives, excellence in student support, curricular innovation, use of technology, and responsiveness to its community. The College is a leader in community, economic and workforce development, the use of advanced technologies in instruction, life-transforming support services based on a culture of care for all students and employees, and maintaining an environment of open access to learning where high academic standards and personal integrity are prized. Chattanooga State affords equal opportunity to all persons.

### *Commitments:*

Chattanooga State is committed to these objectives:

- Selecting and supporting faculty and staff members known for superior teaching, applied research and professional service.
- Encouraging all employees to grow personally and professionally and create community awareness of their capabilities.
- Providing educational programs and services that are of high quality, timely, created through scholarly program design and are responsive to community needs.
- Instilling a desire for lifelong learning and a love of knowledge in all members of the College family.
- Fostering a climate of success for all students through counseling, support groups, financial aid, career planning, advisement, library facilities, laboratories, tutoring, co-curricular activities, sports and recreation.

- Ensuring that all of these mission commitments are publicly accountable and accomplished through the careful utilization of resources, strategic planning, financial controls, employee professional development, public-private partnerships, and alternative funding, where possible.

### *Description:*

Chattanooga State is a comprehensive, regionally accredited community college in the Tennessee Board of Regents College System. Founded in 1965, Chattanooga State offers a wide array of programs and services including:

- Degree and certificate study for career preparation and Advancement
- University parallel (transfer) studies leading to associate degrees
- Partnerships with secondary schools, state and community agencies, and the private sector
- Non-credit coursework (including CEU study)
- Transitional Studies (reading, writing and basic math)
- Adult Education/GED preparation/English as Second Language
- Technological and occupational training
- Cultural diversity and environmental health initiatives

Chattanooga State serves a six-county area of Southeast Tennessee and bordering counties of north Georgia and Alabama as an open-entry postsecondary institution offering over 50 majors of study toward these degrees and certificates:

- Associate of Arts
- Associate of Science
- Associate of Applied Science
- Technical Certificates
- Institutional Certificates
- Tennessee Technology Center Diplomas and Certificates



# Academic Programs

Associate Degree Programs— take RI 100 your first semester for best chance to succeed.

DEGREE	MAJOR (within degree)	CONCENTRATION (within major)	
Associate of Arts _____	General		
Associate of Science _____	General		
Associate of Science in Teaching _____	K-6		
Associate of Applied Science _____	Accounting Technology		
	Applied Technology _____	Technology Education Technology Management	
Associate of Applied Science _____	Engineering Technology _____	Civil Engineering Technology	
		Construction Engineering Technology	
		Design/Drafting Engineering Technology	
		Manufacturing Engineering Technology	
		Mechanical Engineering Technology	
		Motor Sports Engineering Technology	
		Radiation Protection Engineering Technology	
		Dental Hygiene	
		Early Childhood Education	
		Electrical/Electronic Engineering Technology _____	Automated Controls
Computer Systems			
Networking Technology			
Fire Science Technology _____	Emergency Medical Care		
	Emergency Service Supervision and Administration		
	Fire Suppression		
Health Information Management			
Human Services Specialist			
Industrial Maintenance Technology _____	Chemical		
	Electromechanical		
	End User Support		
Information Systems Technology _____	Network Management		
	Programming		
	Construction Management		
Management _____	Entrepreneurship		
	General Management		
	Health Services Management		
	Office Management		
	Retail Management		
	Graphic Design		
	Media Technology		
Web Based Design			
Nursing			
Paralegal Studies			
Physical Therapist Assistant			
Radiologic Technology			
Realtime Reporting _____	Broadcast Captioning		
	CART Reporting		
	Judicial Reporting		
Respiratory Care			
Veterinary Technology			



Middle College High School students who are also Chattanooga State Jo/Jo's study in the Augusta R. Kolwyck Library.

Academic Programs continued on next page

Academic Programs

Academic Programs continued

Certificate Programs

Technical Certificate of Credit \_\_\_\_\_

- CAD Technology
- Cardiovascular Sonography
- Computed Tomography
- Dental Assisting
- Diagnostic Medical Sonography
- Food Science and Technology (Pending TBR Approval)
- Information Security Technical Certificate
- Information Systems Technology
- Magnetic Resonance Imaging
- Nuclear Medicine Technology
- Office Systems Specialist
- Professional Actor Training Program
  - Acting: Beginning
  - Acting: Intermediate
  - Acting: Advanced
  - Acting: Professional
- Pharmacy Technician
- Radiation Therapy Technology
- Supervision

Technical Diploma (clock hour) \_\_\_\_\_

- Air Conditioning and Refrigeration
- Automotive Technology
- Building Construction Technology
- Business Systems Technology
- Collision Repair
- Computer Operations Technology
- Cosmetology
- Diesel Equipment Mechanics
- Industrial Electricity
- Industrial Electronics
- Industrial Maintenance Mechanics
- Landscaping and Turf Management
- Machine Tool Technology
- Masonry
- Massage Therapy
- Medical Assistant
- Motorcycle & Marine Service Technology
- Plumbing
- Practical Nursing
- Realtime Reporting: Scopist
- Surgical Technology
- Welding

Technical Certificate of Proficiency (clock hour) \_\_\_\_\_

- Aesthetics
- Commercial Truck Driving
- Cosmetology Instructor
- Heavy Equipment Operator
- IV Therapy
- Manicurist
- Motor Sports Vehicle Technology
- Security+ Certificate

Regents Online Degree Programs

DEGREE	MAJOR (within degree)	CONCENTRATION (within major)
Associate of Arts _____	General Studies	
Associate of Science _____	General Studies	
Associate of Applied Science _____	Professional Studies _____	Information Technology

## Admissions

### General Admissions Requirements

Chattanooga State has an open door admission policy. The College is open to all persons, regardless of race, color, religion, sex, age, national origin, veteran status, or physical, mental or educational disability.

Admissions requirements and procedures vary, depending on the student's goals and classification. Each category has its own requirements and procedures. However, the following apply to all applicants:

- Applicants should meet physical standards appropriate to their occupational choices.
- An admission application is not complete until the Admissions Office has received all required documents. An applicant may be denied admission until all are received.
- Males between 18 and 26 must certify registration with Selective Service before they can register for classes.
- The State of Tennessee requires all students who plan to enroll full-time to provide proof of two immunizations with the measles, mumps and rubella (MMR) vaccines. Contact Admissions for detailed information. (Exempt if born before 1957 or graduated from a Tennessee Public High School 1999 or after.)
- All first-time students must submit a completed Hepatitis B Health History Form prior to enrollment.

In addition to the admission requirements/procedures listed below, some programs have extra requirements, procedures, and deadlines. See the specific program in the "A.A.S. Degrees & Technical Certificates" section of this catalog for more information.

### Admissions Procedures - How To Apply

#### Regular Admission

A regularly admitted student is one who is pursuing an associate degree or Tennessee Technology Center program from Chattanooga State.

#### Associate Degree Programs

##### First Time Freshmen

- Submit an application to the Admissions Office and pay the non-refundable application fee.
- Submit an official high school transcript or General Education Development (GED) transcript. An official transcript has the granting institution's seal and is either mailed directly to the Admissions Office, hand delivered in a sealed school envelope, or faxed with cover direct from the school.
  - High School graduates must hold a regular high school diploma from a regionally accredited school. The high school transcript must be received after the date of graduation, showing the student's graduation date with final grades posted. For Tennessee high school graduates, transcript must include entry that indicates the student passed the required proficiency test battery. NOTE: Certificate of attendance and Special Education are not equivalent to regular high school diploma.
  - Minimum scores for GED Certificate holders are based upon when the GED test was taken and are as follows:
    - JANUARY 1, 2002 OR LATER**
      - Minimum score: 2,250
      - Minimum sub-score: 410
      - Minimum sub-score average: 450
    - JANUARY 1, 1997 THROUGH DECEMBER 31, 2001**
      - Minimum score: 45
      - Minimum subscore: 20
    - PRIOR TO 1997**
      - Minimum score: 45

Minimum subscore: 35

Graduates of a non-regionally accredited or non-state approved high school will be required to take the test.

- Test Requirements  
For applicants under 21: Submit ACT (American College Testing Program) or SAT (Scholastic Aptitude Test) scores. Scores are valid if taken within three years of the first semester of attendance and are used for advising and placement purposes. Additional assessment may be required.

*Note: Students without the ACT (or SAT) may take the ACT residual test available in the Testing Center (valid for admission only at Chattanooga State); fee required. Residual test scores cannot be used for Tennessee Lottery eligibility.*

For applicants 21 or older: Take COMPASS assessment test in reading, writing, and math or submit valid (within three years of the first semester of attendance) ACT or SAT scores.

#### Transfer Students

- Submit an application to the Admissions Office and pay the non-refundable application fee.
- Submit official transcript(s) from all colleges previously attended. An official transcript has the granting institution's seal and is either mailed directly to the Admissions Office, is hand delivered in a sealed school envelope or faxed with cover direct from the school. Transcripts are evaluated and credit may be given for equivalent courses completed at regionally accredited institutions. Transfer credits will not be used in computing the student's GPA at Chattanooga State. Students transferring from non-regionally accredited institutions follow the same procedures as first time freshmen. Credits from non-regionally accredited institutions may be evaluated on an individual basis or may be validated by examination. See "Alternative Sources of Credit" for information on procedures and-fees.
- Testing and Placement  
Transfer students who have not earned credits in college-level English composition or college-level, algebra-based math will be assessed in writing and math based on a valid ACT score or other appropriate assessment test. Chattanooga State accepts assessment and placement, as well as equivalent Transitional Studies courses, from all TBR schools. Assessment and placement from other non-TBR institutions, as well as Transitional Studies course credits, may be approved by Chattanooga State's Transitional Studies director. Testing is not required for students who have any of the following from a regionally accredited college:
  - successful completion of 60 hours of college level courses
  - associate degree
  - baccalaureate degree

Transfer students are held to the same standards as other Chattanooga State students. Transfer students deficient in a Basic Academic Competency cannot continue in a related college-level course until they have satisfactorily met the exit criteria of the appropriate Transitional Studies course(s).

- Transfer students pursuing an AA or AS must also submit official high school transcripts or GED scores. This is waived for students who:
  - graduated from high school (or GED) before 1989, or
  - transferred 60+ hours of college level work, or
  - have a baccalaureate or associate degree
- Grade Point Average  
Transfer students must be eligible to return to the institution they transferred from and meet the academic retention standards of Chattanooga State. Students not meeting these criteria may be admitted to Chattanooga State after not attending any college for at least one term (not including summer). Such students are admitted on probation their first term and can be suspended at the end of the term if they do not meet Chattanooga State's academic retention standards. (See "Academic Retention Standards" in the "Academic Regulations" section.)

**International Students**

The Records Office handles international student admissions, including U.S. BICE (Bureau of Immigration and Customs Enforcement) requirements.

**International Students Requirements**

- meet all requirements for admission as a degree-seeking student
- provide minimum TOEFL score of 500
- provide English translation of high school and/or post-secondary school transcripts
- take English and Reading components of placement exam if no transfer courses from institution using English as primary language
- furnish evidence of financial capability
- provide medical certification verifying freedom from tuberculosis
- have medical and hospitalization insurance

**Language Proficiency**

Applicants whose native language is not English must satisfy one of the following requirements.

- submit a TOEFL score (minimum = 500/paper based, 173/computer-based, or 61/internet-based) **and** take English components of Compass. Students with valid ACT or SAT scores less than 3 years old may elect to submit scores for placement
- provide an official transcript documenting graduation from an American high school
- provide an official transcript documenting satisfactory completion (grade C or better) in college-level English Composition I from a U.S. college or university

**Mandatory Placement**

- Students under 21 will be assessed for Transitional Studies placement according to ACT (or corresponding SAT) scores. Students over 21, GED students, and international students have the option of using ACT/SAT scores (taken within 3 years prior to the first day of the student's entering term) OR taking assessment tests in reading, writing, and math. Students with an ACT composite score of 26 or higher are placed at college level in all areas. An ACT score less than 19 in the subject areas of reading, writing, or math requires placement in Transitional Studies or further assessment.
- Students not required to take an assessment may request to be tested.
- Instructors may recommend testing for students who were not assessed, but later show deficiencies. If a student is then determined to be deficient in a Basic Academic Competency at the Transitional Studies level, he/she may be withdrawn from the class(es) with a grade of "W." As a result, the student may not re-enroll until the exit criteria of the appropriate Transitional Studies course(s) has been satisfactorily met.
- A student's placement may be adjusted based on further holistic assessment.
- Re-testing for assessment may be available for an additional fee. See Director of Transitional Studies for options and approval to retest.

**High School Unit Requirements**

Beginning fall semester 1989, students entering a Chattanooga State program designed for transfer to a four-year institution must have the following high school credits:

- 4 units English
- 3 units Algebra I or Math for Technology II; Algebra II; and Geometry/Advanced Math  
OR Integrated Mathematics I, II, and III
- 2 units Natural/Physical Science (1 unit must have a lab)
- 1 unit Social Studies

- 1 unit United States History
- 2 units A single Foreign Language
- 1 unit Visual/Performing Art (effective Fall 1993)

High school deficiencies in English or Algebra I or Algebra II may be removed by scoring 19 or higher on the ACT sub score; scoring at college level on placement tests other than ACT; or completing Transitional Studies requirements. Completion of general education blocks also removes deficiencies in social studies, history, visual performing arts, science, geometry/advanced mathematics. Students entering Tennessee Public Institutions will be required to make-up any deficiency including foreign language before receiving a baccalaureate degree. It is strongly recommended that students remove all deficiencies as part of their associate degree program. Courses used to satisfy the deficiency in foreign language may be designated as electives or used to satisfy the Associate of Arts language requirements.

**Notes:**

- Applicants who graduated from high school or received a GED before 1989 are not subject to the 1989 Admission Requirements.
- Applicants who graduated from high school and have an ACT composite score of 26 or higher will have met all high school unit requirements except for foreign language and visual/performing arts.
- Applicants who received a General Education Development (GED) Certificate or an American Council on Education (ACE) External Diploma in 1989 or thereafter are considered to have met all high school unit requirements except those in foreign language and visual/performing arts. (However, such students are not exempt from the "American History Requirement" mandated by the Tennessee General Assembly as a condition of receiving a bachelor's degree from one of Tennessee's state-supported colleges or universities.)
- For applicants holding a baccalaureate degree or an associate degree designed for transfer, all high school deficiencies will be waived upon presentation of a transcript verifying completion of the degree.
- The qualifications and needs of applicants who volunteer information about a handicapping condition will be assessed on an individual basis. Assessment will include an evaluation of the applicant's potential for success in college and the determination of any exceptions which may be warranted.
- Applicants who are non-Tennessee residents are subject to the same admission requirements as Tennessee applicants.
- The High School Unit Requirements do not apply to students enrolled in Associate of Applied Science degrees or Technical Certificates of Credit.

**Tennessee Technology Center Programs**

- Submit an application to the Admissions Office (with non-refundable fee).
- Be 18; or (if under 18) have a high school diploma, from a regionally accredited school, GED, or be a designated Tech Prep program participant.
- Testing
  - Practical Nursing, Medical Assistant, and Surgical Technology applicants must take the Nursing Entrance Test (NET).
  - Other applicants must take the Tennessee Technology Center's standard entrance exam or COMPASS or ACT (Math 15-16 DSPM 0800 and Reading 12-18 DSPR 0800). (This is waived for applicants with a baccalaureate or associate degree.)
- If applying for financial aid, submit:
  - Official high school transcript or GED transcript, or
  - Official transcript(s) from each college or university attended,

or

- A passing score on the Ability to Benefit Test (given by the Testing Center by appointment only).

### Technical Certificate of Credit Programs

- Submit an application to the Admissions Office (with non-refundable fee).
- Be admitted as a Special Student (see below).
- Testing requirements, if any, are determined by the program's content.

If a student enrolled in a Technical Certificate of Credit program later changes to degree-seeking status, all regular admission requirements, including assessment, must be met. Likewise, a regularly admitted student pursuing an associate degree may concurrently pursue a Technical Certificate of Credit, but this provision does not alter any requirements for regular admission.

#### Additional Admission Requirements

Some Technical Certificate of Credit programs have additional requirements, procedures, and deadlines which must be met. See the specific program in the "A.A.S. Degrees & Technical Certificates" section of this catalog for information.

### Special Students

A Special Student is one who takes credit courses without working toward a degree. Special Students must:

- Submit an application to the Admissions Office (with non-refundable fee).
- Be 21, or (if under 21) have a regular high school diploma from a regionally accredited school or GED.
- Testing
- Meet course prerequisites. (Transcripts may be required for advisement.)

Some Technical Certificate of Credit programs require testing before admission. Testing may also be required in order to take certain courses (see below). Though Special Students are not required to complete normal assessment procedures, they are responsible for having the requisite knowledge and skills to succeed in their course(s).

#### Limitations:

- Special Students cannot enroll in a college level English or math course or in a course with an English or math prerequisite until they (1) satisfy the course's Mandatory Assessment Requirements, or (2) show successful completion of an appropriate college level English and/or algebra-based math course.
- Special Students are not eligible for financial aid unless enrolled in an approved Technical Certificate of Credit program.
- There is no limit on the number of credits Special Students may carry per term other than those stated in the Academic Load policy.
- Special Students are not restricted in how many credits they can earn.

When special students change to degree seeking status, ALL regular admissions requirements must be met prior to registration regardless of the number of credit hours earned as a Special Student.

#### Transient Students

Students who are regularly enrolled in another college may attend Chattanooga State as transient students. Transient students-must:

- Submit an application to the Admissions Office (non-refundable fee).

- For each semester attending, submit a letter of good standing from their regular college, dated after the end of the last term attended.
- Meet course prerequisites. (Transcript may be required for advisement.)
- If taking English or math, show successful completion of appropriate college level English and/or algebra-based math course(s), or satisfy the course's Mandatory Assessment Requirements.

**Note: They are not eligible to receive financial aid through Chattanooga State. If a transient student changes to Chattanooga State degree seeking status, ALL admissions requirements must be met prior to registration.**

### Early Admission—Submit an application to the Admissions Office with nonrefundable application fee.

1. Early admission is available to high school students who-have:
  - completed the 9th, 10th, and 11th grades with a 3.2+ GPA on a 4.0 scale or the equivalent.
  - ACT composite score of at least 22.
  - written statement from their high school principal or counselor specifying the college courses that will be substituted for the remaining high school courses needed for high school graduation.
  - written endorsements from their high school counselors and from their parents or guardians.

The student will leave the high school at the end of the junior year and matriculate into Chattanooga State. The Chattanooga State courses will substitute for courses needed for graduation from high school. The high school principal or counselor, or designee, will determine appropriateness of the courses before the student's matriculation.

The student is awarded senior credit after successfully completing the college freshman year. Since 4 units of English is required for high school graduation, each student will enroll in freshman English, plus American History and Economics if not already completed in high-school.

2. **Dual Enrollment**—The Dual Enrollment Program provides college courses for qualified high school honor students. Students receive college and high school credit simultaneously. These courses are offered during the school day on the high school campus, or students may attend one of Chattanooga State's sites with the parent's and principal's or counselor's permission. All courses are taught by properly credentialed Chattanooga State instructors.

Prospective dual enrollment students: sophomore (by exception), junior, or senior high school students with a minimum of 3.0 GPA and an ACT composite score of 19 or above. Additionally:

- For English—ACT English score of 19 required; open to seniors only
- For Math—ACT math scores required: 21 for Pre-Calculus II (MATH 1720); 25 for Calculus (MATH 1910)

3. **Middle College High School**—Courses are offered during the day at the Chattanooga State main campus located on Amnicola Highway. Students will matriculate into Chattanooga State with parent and principal's or counselor's permission. SACS qualified instructors teach all courses. Since 4 units of English are required for high school graduation, each student will enroll in an English course developed and taught by a

Continued on next page

Hamilton County teacher, housed on the Chattanooga State campus for this purpose.

Each Middle College student will enroll in other courses defined as necessary to complete the Carnegie units that are required for high school graduation. These courses are included with the standard curriculum offered at Chattanooga State and are taught by full-time Chattanooga State professors. Middle College High School students may take any scheduled course that is appropriate for the completion of high school requirements other than English. Students receive both college and high school credit simultaneously for these college courses.

Middle College High School students meet the following criteria:

- Have completed the 9th, 10th, or 11th grade.
- Have an ACT composite score of at least 19 or a demonstration of ability by exception.
- Provide a written statement of recommendation from principal or counselor and parent.
- Have completed all necessary paperwork for college entrance.
- Have been selected for participation by the Middle College High School screening committee.
- Will be dual enrolled with the college.

#### **Middle College High School graduates may also earn Chattanooga State's associate degree.**

MCHS graduates can use their college courses to meet associate degree requirements. After Middle College students have completed their high school requirements, they can:

- Apply for re-admission as an associate degree major.
- Provide a letter of intent to graduate (MCHS) from the Middle College principal.
- Enroll in remaining courses to complete the associates degree.
- Submit an application for graduation.

4. **Academically talented/gifted students** enrolled in grades 9–12 in Tennessee may, with the high school principal and appropriate personnel's approval, take college courses from a Tennessee college if the student presents an official high school transcript showing a 3.2 GPA on a 4.0 scale, if such placement is a part of the student's Individual Education Program (IEP) as established by the multi-disciplinary team process.

5. **Alternative Educational Opportunities for High School Students - (For High School Juniors and Seniors) College Access Program**

The College Access Program is a dual credit transitional studies program that allows high school students to take courses that meet college requirements while at the same time obtaining credit necessary for high school graduation. CAP courses are numbered below the 100 level. The CAP program is designed for students whose ACT scores indicate a need for transitional courses. Course offerings include Math and Writing. To enroll in the College Access Program, high school students must complete a college admission application and obtain a signed permission form from the Parent and the Principal. Students are allowed up to \$300 per semester or a total of \$600 per year from the Tennessee Dual Enrollment Lottery Grant.

#### **Tennessee Technology Center Program**

The Tennessee Technology Center (TTC) offers dual credit programs that allow high school students to take courses that meet post-secondary career education requirements while at the same time obtaining credit necessary for high school graduation. The TTC program is designed for students who wish to get started on an industrial/technical career. TTC credits are based on clock-hours completed. To enroll in a TTC Program, high school students must complete an admission application for Chattanooga State, pass the TTC Admissions test, and obtain a signed permission form from the Parent and high school Principal. Participating high schools must have a signed agreement with the TTC at Chattanooga State. Students are allowed up to \$300 per semester or a total of \$600 per year from the Tennessee Dual Enrollment Lottery Grant. Once high school graduation is complete, students can continue TTC enrollment with a lottery sponsored Wilder-Naifeh Technical Skills Grant.

#### **Audit**

A student may audit college-level or Tennessee Technology Center courses. Auditing may be denied based on available space or if restricted by program of study.

Students may enroll in any combination of audit and credit courses.

Students cannot audit Transitional Studies courses.

Payment of the regular course fee is required. The student participates in class, but is not required to do assignments or take tests.

Audit hours may not be converted to credit later or used to replace an earlier grade.

#### **Senior Citizens and Persons With Disabilities**

Tennessee residents who are totally and permanently disabled or who are senior citizens (age requirement defined below) may take courses at Chattanooga State for a reduced rate. A "Maintenance Fee Reduction Request," available from the Admissions Office, must be completed at the time of registration each semester in order to receive the discount or waiver. Normal admission (or readmission) requirements apply.

**Audit**—To receive a maintenance fee waiver for auditing, a person must:

- be 60+ or permanently disabled
- meet Tennessee residency requirements
- provide proof of age or disability before registering
- register for AUDIT on first day of class if space is available in course(s)
- pay all other applicable fees

**Credit**—To receive discounted maintenance fees on credit courses, a person must:

- be 65+ or permanently disabled
- register for credit on first day of class if space is available in course(s)
- meet Tennessee residency requirements
- provide proof of age or disability before registering
- have satisfied all prerequisites or other criteria required for the course(s)
- pay all other applicable fees

## Readmission

A student who did not attend the preceding term (summer excluded) must:

- Reapply for admission (no fee)
- Submit official transcripts from any college attended since leaving Chattanooga State (if applying for regular admission status)
- Complete any remaining admission requirements

## Alternative Sources of Credit

College credit for prior learning may be given to students who demonstrate satisfactory achievement and proficiency-by:

### Credit by National Examination

Chattanooga State awards credit for successful completion of the following nationally recognized college-level examinations offered by the College Entrance Examination Board (CEEB):

### Advanced Placement (AP)

AP tests are given to 11th and 12th grade students. Scores must be three or higher to receive credit.

### College Level Examination Program (CLEP)

CLEP scores must be at the 50th percentile to get credit. Chattanooga State's Testing Center arranges the tests. Students who have taken CLEP exams elsewhere should have official scores sent to the Records Office.

Credits earned by testing appear on the student's transcript with a grade of "CE," which carries no quality points and is not included in the student's GPA.

No limit is set on the number of hours that can be earned by AP or CLEP other than the restrictions imposed by the Graduation Residency Requirement.

Transfer program students should talk to their intended college or university about accepting AP and/or CLEP credit.

### Credit By Departmental Examination

With the approval of an instructor, dean, and the Vice President for Academic Affairs, a student can earn credit for some college-level courses by passing a special departmental examination(s). Contact division offices for details.

Conditions and Restrictions:

- The student must be currently enrolled in credit work at Chattanooga State and have 2.5 cumulative GPA.
- The student must show the academic department he/she has the knowledge, skills, and/or competencies covered by the course. Permission to take a proficiency exam may be denied if the department decides the student's request is invalid. The department's decision is final.
- Proficiency examinations may validate credits taken at unaccredited institutions. Students must show by official transcript that the credits were previously earned.
- The regular course fee is charged for each test, in addition to maintenance fees paid for courses in which the student is actually registered (even if the student is full-time).
- Credits earned by testing appear on the student's transcript with a grade of "CE," which carries no quality points and is not used in computing the student's GPA.
- Proficiency tests may not be used to repeat coursework or to remove a grade of "I" or "F."
- A student may take the proficiency test for a specific course only once.
- Credits earned by testing do not satisfy the Graduation Residency

Requirement.

- No limit is set on the total number of credits that can be earned by examination other than the restrictions imposed by the Graduation Residency Requirement.
- Proficiency examinations are not available for all courses.

Students planning to transfer should talk to their intended college or university about accepting proficiency test credit.

### Credit for Life Experience

Individuals who have not earned an associate or baccalaureate degree may be eligible to petition to receive credit for work experience and/or certified professional programs. A student who has previously taken the petitioned course may not request Credit for Life Experience. Credit hours earned by Life Experience are not considered part of the College's Graduation Residency Requirement.

Credit for Life Experience may be granted by:

- Verification of College Credit Recommendation in the *Directory of the National Program on Non-collegiate Sponsored Instruction* (published by the University of the State of New York and the State Education Department of New York).
- OR-
- Up to nine (9) semester hours may be granted upon submission of a portfolio documenting professional experience that directly relates to the content of specific courses offered by Chattanooga State AND approval of this portfolio by a Faculty Committee. The portfolio process must be initiated at least two semesters before graduating. A non-refundable assessment fee, equivalent to the per-credit-hour maintenance/tuition fee, must be paid prior to faculty assessment of the student's portfolio. Step-by-step procedures are listed in the Student Handbook. Assessment by portfolio is allowed only if credit by exam (including CLEP) is not available.

### Military Service Credit

Credit may be granted for appropriate educational experience in the armed services in accordance with evaluation in the American Council on Education *Guide to the Evaluation of Education Experience in the Armed Services*. Veterans should submit documentation of previous training to the Veterans Affairs Office.

Students who have completed Basic Training with any military branch of the United States to include Reserves, National Guard or a Police or Fire Academy, may receive two credits for physical education activity courses. One credit is allowed for each six months of continuous active duty to a maximum of two credits.

### American Council on Education (ACE)

Chattanooga State may give credit for appropriate educational experience listed in *The National Guide to Educational Credit for Training Programs* sponsored by the American Council on Education. The program is national in scope, and the Tennessee Higher Education Commission is a participating agency. Each request will be considered on its own merit and must have the approval from the appropriate division.

### Orientation

Orientation is required for all first-time degree-seeking students.

## Residency Classification

The following determines in-state and out-of-state status for fees and tuition purposes for college credit courses. The fee policies are defined by the State University and Community College System of Tennessee:

- Everyone domiciled\* in Tennessee is classified in-state for fee, tuition, and admission purposes.
- Everyone not domiciled in Tennessee is classified out-of-state for said purposes.
- The domicile of an “unemancipated person”\*\* is that of his or her parent (i.e., father or mother, or non-parental guardian or legal custodian provided the guardianship or custodianship was not created primarily to create in-state status).
- Tennessee Technology Center students who are out-of-state residents do not pay additional fees because of residency.
- Unemancipated students of divorced parents are in-state when one parent, regardless of custodial status, is domiciled in Tennessee.
- A graduate of any out-of-state high school must prove Tennessee residency before receiving in-state tuition status.
- The spouse of a student classified as in-state shall also be classified as in-state.
- International students will pay out-of-state tuition.
- Students classified by Immigration as a Permanent Resident, Resident Alien, Refugee, or Immigrant may be charged in-state fees if domiciled in Tennessee.
- Part-time students who are not domiciled in Tennessee but who are employed full-time in Tennessee, are classified out-of-state but are not required to pay out-of-state tuition. The student must provide proper documentation each semester.
- Chattanooga State is able to award out-of-state fee waivers to a limited number of out-of-state students residing in border counties.

\*Domicile—a person’s true, fixed, and permanent home and place of habitation; it is the place where he or she intends to remain, and to which he or she expects to return when he or she leaves without intending to establish a new domicile elsewhere.

\*\*Emancipated person—a person who is eighteen years old, and whose parents have entirely surrendered the right to his/her care, custody, and earnings and are no longer under any legal obligation to support or maintain him/her.

Contact the Admissions Office for more information.

## Veterans

The Veterans Affairs Office is located in Student Aid-Office.

To receive benefits, eligible students must:

- Apply to the Department of Veterans Affairs for educational benefits.
- Be enrolled in an associate degree program or in an Tennessee Technology Center program.
- Submit a copy of DD 214 and DD-2384, if applicable.
- Register for classes.

**Eligibility for Deferment of Payment of Tuition and Fees by Certain Eligible Students Receiving U.S. Department of Veterans Affairs or Other Governmentally Funded Educational Assistance Benefits**

Service members, veterans, and dependents of veterans who are eligible beneficiaries of U.S. Department of Veterans Affairs education benefits or other governmentally funded educational assistance, subject to the conditions and guidelines set forth in Tennessee Code Annotated 49-7-104 as amended, may elect, upon formal application, to defer payment of required tuition and fees until the final day of the term for which the deferment has been requested. Application for the deferment must be made no later than

14 days after the beginning of the term, and the amount of the deferment shall not exceed the total monetary benefits to be received for the term. Students who have been granted deferments are expected to make timely payments on their outstanding tuition and fees balance once education benefits are being delivered, and eligibility for such deferment shall terminate if the student fails to abide by any applicable rule or regulation, or to act in good faith in making timely payments. This notice is published pursuant to Public Chapter 279, Acts of 2003, effective July 1, 2003.

## Qualifying Courses

A student receiving veteran benefits can only be paid for courses listed in the catalog as required for his/her designated major.

## Tennessee Technology Center Programs

Students receiving veteran benefits who are enrolled in Tennessee Technology Center programs are certified for clock-hour certificates. Credit may be given for previous education or training as determined by the instructor and approved by the Vice President for Academic Affairs at initial enrollment.

## Full-time Status

**The Department of Veterans Affairs accepts, as full-time, students who meet either of the following criteria:**

- degree-seeking students taking 12 or more credit hours per-semester.
- Tennessee Technology Center students enrolled in clock hour programs meeting at least 22 hours per week.

## Academic Fresh Start

Veterans are not eligible for Academic Fresh Start.

## Veterans Brochure

Brochures with more information are available in Veterans Affairs.



*The Corn Ballet, from the Chattanooga State Music Department's Musical of Musicals.*



## Academic Regulations

Any exceptions to the following Academic Regulations must have the Vice President for Academic Affairs' recommendation and the President's approval.

### General Expectations

The College can change the calendars, curricula, degree requirements, course offerings, and all academic regulations any time the faculty, the President, or the Tennessee Board of Regents believes such changes are in the best interests of the students and the College.

By registering, a student accepts all published academic regulations, including those here and in any other official announcement.

### Academic Fresh Start

"Academic Fresh Start" is a plan of academic forgiveness provided for undergraduate students who have demonstrated academic responsibility following their return. The Academic Fresh Start allows the calculation of the quality point average and credit hours toward graduation to be based only on work after returning to college.

#### Eligibility

- Separation from all institutions of higher education for a minimum of 4 years.
- Readmit or apply as degree-seeking student to Chattanooga State.
- Prior to completion of 15 hours of degree coursework, obtain an Academic Fresh Start application and an Academic Plan form from the Records Office and return to Records Office upon completion.
- Completion of 15 semester hours of earned degree coursework with a minimum GPA of 2.50 for all work attempted.

#### Terms of the Academic Fresh Start

- Academic Fresh Start is granted only once and is irrevocable.
- The student's permanent record will remain a record of all work; however, the student will forfeit the use for degree or certification purposes all college or university degree credit earned prior to the 4 year separation upon granting of the Fresh Start.
- Previously satisfied Transitional Studies requirements are not forfeited. Students who did not complete their Transitional Studies requirements during their previous enrollment must meet current requirements and these courses do not count toward the 15 hours of coursework required to be eligible for Academic Fresh Start.
- The student's transcript will note the Academic Fresh Start and state that the grade point average and credit totals are based only on the work beginning with the Academic Fresh Start.
- A student transferring to another institution should contact that institution to see what impact an Academic Fresh Start will have prior to implementing the program at Chattanooga State.

For more information, contact the Records Office.

*Note: Veterans are not eligible for benefits as Academic Fresh Start participants.*

### Academic Honors

All honors recognition at commencement is based on the college-level GPA and work completed at the end of the fall term before graduation.

#### Commencement Honors

Chattanooga State recognizes exceptional degree-seeking students by granting honors at graduation as follows:

Summa cum laude	4.0 GPA
Magna cum laude	3.75–3.99 GPA
Cum laude	3.50–3.74 GPA

Honors recognition at commencement is based on the college-level GPA at the end of the fall term before graduation. If grades in courses completed during the final term(s) cause the student to qualify for a higher honors designation, it will be noted on the diploma.

#### Dean's List

Students completing 12 or more hours of college level work with a GPA of 3.5 or higher will make the Dean's List for that semester. (Dean's list recognition is based on calculations at the end of the semester and cannot be updated later to reflect grade changes, such as removal of Incompletes.)

#### Scholars on the River

##### Honors Program

The Chattanooga State Honors Program provides an enriched curriculum and educational experiences for motivated students. The program is designed for students who desire to maximize their learning experience. **Students admitted to the Honors Program are eligible for in-state tuition rates.** Honors Program students who have completed at least 12 hours of honors courses and maintain a cumulative 3.5 GPA or higher in college level courses receive special recognition at graduation. All successful Honors students will be eligible for presidential letters of recommendation.

Members of the Honors Program work with Alpha Beta Mu, the college chapter of Phi Theta Kappa, as a part of Chattanooga State's *Scholars on the River*. Together the students participate in enrichment activities as well as college and community service.

The Honors Program is open to students who meet at least one of the following criteria:

- **ACT composite score of 25 or higher**
- **SAT score of 1130-1160**
- **High school GPA of 3.5 or higher**
- **GPA of 3.5 or higher based on a minimum of 12 hours of college level courses**

Upon the recommendation of a faculty member, exceptional students who do not meet the above criteria may be admitted into the program after approval by the Honors Program Director.

Students must maintain a cumulative college level GPA of 3.25 or higher to maintain good standing in the Honors Program.

##### Phi Theta Kappa

Phi Theta Kappa is the international two-year college honor society to recognize outstanding academic achievement and provide opportunities for developing leadership, service, fellowship and continued academic excellence.

All full-time and part-time students who have completed 12 college-level credit hours with a cumulative GPA of 3.5 are eligible for membership. Invitations are sent to eligible students each fall and spring semester. Members pay a one-time fee and must maintain a college level GPA of 3.25 or higher to remain in good standing. Graduating members may purchase a Phi Theta Kappa stole to wear at graduation.

Members of Alpha Beta Mu, the college chapter of Phi Theta Kappa, work with members of the Honors Program as a part of Chattanooga State's *Scholars on the River*. Together the students participate in enrichment activities as well as college and community service.

## Who's Who Among Students In American Junior Colleges

Full-time students with 30 completed hours and a GPA of 3.3 or higher may apply for Who's Who. Applicants are screened by a committee and reviewed by faculty members before the final selection is made.

## Academic Load

Definition: The total semester hours of credit for all courses taken during the semester. Also referred to as "credit load," "course load," or "class load."

### Full-time Students

**Recommended credit load:** 15–18 hours.

**Minimum credit load:** 12 hours.

**Maximum credit load:** 19 hours.

**Overload: 20–22 hours.** Enrollment in more than 19 credit hours must be approved in advance by the Vice President for Academic Affairs. A student requesting an overload should have a cumulative 3.0 GPA. The maximum number of hours permitted is 22.

### Part-time Students

A student who carries an academic load of less than 12 hours is considered part-time.

### Tennessee Technology Center Students

A full-time load for a Tennessee Technology Center student is 30 or more clock hours per week

Tennessee Technology Center enrollments are limited to enrollment in one program per term.

Tennessee Technology Center students who wish to take credit courses while enrolled in an Tennessee Technology Center program may do so subject to the following restrictions:

- Requests for concurrent registration must be submitted before registration in either division takes place.
- All course prerequisites, including any mandatory testing, must be met and appropriate course fees paid.
- When concurrent registration has been approved, schedule changes cannot be made without TTC and Academic Affairs approval and cannot be made via self-service.

## Academic Retention Standards

Academic standing is based on the student's grade point average and is posted at the end of each term. The standing designation becomes part of the permanent record and does not change even if the GPA changes due to repeated courses.

### Good Standing

The minimum college-level GPA required to receive a degree is 2.0. To be enrolled in good standing, a student must earn the minimum cumulative combined GPA below for the total number of semester credit hours attempted.

*Semester Quality Hours Attempted	Required Cumulative GPA
0.0 – 14.0	No Minimum
14.1 – 26.0	1.0
26.1 – 40.0	1.4
40.1 – 48.0	1.7
48.1 – 56.0	1.9
above 56	2.0

\*Quality hours attempted are shown on the transcript under QHRS.

Note: The following grades are shown under Attempted Hours (AHRS) but not used in calculating GPA for probation/suspension purposes: W(withdrawal), S(satisfactory), N(no credit), and AU(audit).

## Academic Probation

Any student who fails to attain the progression standards listed will be placed on academic probation for the next enrolled semester.

## Academic Suspension

Any student on academic probation who fails to attain either the cumulative standard or a 2.0 GPA for the current semester will be suspended for the next semester. The summer semester cannot be counted as the semester of suspension, nor can a suspended student enroll in summer-school.

A student who re-enrolls at Chattanooga State after an academic suspension will be placed on post-suspension probation. If the student earns:

1. the cumulative standard, he/she will be in good standing.
2. a 2.0 GPA for that semester but is still below the cumulative standard, he/she will remain on probation.
3. less than a 2.0 GPA for that semester and is still below the cumulative standard, he/she will be placed on a twelve month suspension.

Note: Transfer students who enter on probation (or academic suspension via the appeal process) must make a 2.00 GPA during the first term of enrollment or will be suspended for one year. Students who enter on appeal must meet all other conditions of the appeal as well.

## Appeal of Academic Suspension

A student may appeal his/her academic suspension. Suspension appeal forms, which include the procedures for an appeal, are available in the Career Planning and Counseling Center. Appeals hearings are usually held the first day of registration each semester. Students should ask about suspension appeals as early as possible.

If an appeal is granted, the student will be eligible to enroll that semester in post-suspension probation status and must meet the conditions set by the appeals committee. If the conditions are not met, the student will be suspended for twelve months. Students may not appeal during this twelve-month suspension.

## Tennessee Technology Center

The Tennessee Technology Center academic retention policy can be found in the "Tennessee Technology Center Programs" section of this catalog.

## Change of Registration (Drop/Add)

A "Registration and Drop/Add" form is used to add or drop a course, change from one course section to another, or change course registration from credit to audit or from audit to credit. (This form cannot be used to completely withdraw from school. See "Withdrawal From College.") Forms must be submitted to the Admissions office for processing. Students may not drop Transitional Studies courses except for extraordinary reasons and with special permission from the Director or his/her representative.

## Deadlines

The academic calendar published by the Records Office each semester indicates the deadlines for making various

registration changes. The following policies apply:

- Courses dropped during the first two weeks of the term will not appear on the student's transcript.
- With advisor approval, student can drop/add online according to the term calendar.
- A grade of W shall be recorded for course(s) dropped prior to the Drop Deadline, which is not later than two-thirds into the semester.
- Exceptions to Drop Deadline are approved by the Vice President for Academic Affairs under extenuating circumstances only.
- A grade of W shall be recorded for Tennessee Technology Center courses dropped at any point in the semester.
- If a student stops attending class and does not officially withdraw, he/she will receive a failing grade (F) for that-course.
- For consideration of full refund, drop must be prior to first day of the term.

## Change of Status

It is the student's obligation to notify the Records Office of any change in name, social security number, address, or major. Name and/or social security number changes require documentation. Failure to do so can cause serious delay in handling student records and in notification of emergencies at home. Any major change requires that all admissions requirements be completed before future registration. Change of Status forms are in the Records Office and on the Web.

A change of major must be received during the first two weeks of the academic term. Any changes after that time will be effective with the next academic term.

**Note: If mail is returned indicating insufficient address, a registration hold is placed on the student's records until the address is corrected with the Records-Office.**

## Class Attendance

Students obligated for all the work that may be assigned and for regular class attendance. The student is responsible for all assigned work in the course; absences, excused or unexcused, do not absolve him/her of this responsibility.

The instructor sets the attendance requirements for a class. At the beginning of the term, the instructor will distribute the class attendance policy, including an explanation of any grade penalties that result from failure to comply with the policy. An unsatisfactory attendance record may negatively affect the final grade. It is each student's responsibility to know the attendance policy in each of his/her classes. **Please note: non-attendance will not result in an automatic drop/withdrawal from course(s) and can result in grades which negatively affect the student's academic record.**

Students who are members of school sanctioned organizations will not incur grade penalties for classes not attended or class assignments/exams missed while representing Chattanooga State at scheduled events. At the beginning of each semester, the student must present a letter of organizational membership and a tentative activity schedule that has been developed and signed by the organization sponsor. It is also the student's responsibility to notify the teacher in advance of any class he/she will miss. The student must complete missed assigned work/exams. Scheduled completion time will be at the discretion of the instructor.

Unsatisfactory attendance may result in a repayment

of any financial aid received. Financial Aid students must attend all classes for which they register.

**Note: If a student withdraws on or after the first day of class, but never attends the class, that class will not count when calculating financial aid eligibility and the student's financial aid will be adjusted accordingly.**

All veterans will be reported to Veterans Affairs when they have been excessively absent.

## Class Cancellation

The College can cancel any class with fewer than the minimum number of students enrolled as set by the institutional guidelines; however, all courses are given the opportunity to make.

## Classification

A student is a freshman until he/she completes 33 semester hours in college level courses. Transfer credits are included in determining classification.

## Co-op Credit

College credit may be earned through Chattanooga State's Cooperative Education program and applied toward graduation, with the following restrictions:

1. Co-op courses may be used as Unrestricted Elective credit in career programs (Associate of Applied Science-degree).
2. A course substitution approved by the appropriate dean is required for co-op credit to be used to satisfy degree requirements other than Unrestricted Elective.
3. Co-op credit may not be used to satisfy General Education requirements.
4. Co-op credit may not be used as elective credit in transfer programs (Associate of Arts or Associate of Science degrees).

## Course Substitutions

A substitution for a general education course will be considered only if course requested is on the approved general education list (one general education course for another) and meets the requirements/goals of the major. Only under unavoidable and exceptional circumstances will the College permit deviation from the prescribed curricula. In cases where this is necessary, the student must have advisor clearly state in writing the desired substitution and reason for the request. Course substitutions must be approved by the student's adviser, the appropriate department head and dean, and the Vice President for Academic Affairs. A substitution is not allowed for courses for which a grade of D or F has been earned.

## Diplomas

Unclaimed diplomas will be held in the Records Office for one (1) academic year after each graduation.

## Dropping a Class

See “Change of Registration.”

## Grading Policy

Chattanooga State uses a grading system designed to show the level of mastery the student has achieved in a course. Minimum acceptable achievement is what is deemed necessary to enter the next level course or, at the program level, to enter a four-year college, or to be qualified to work in a specific career. The letter grades below are based on documented mastery of a set of specific instructional competencies. The competencies and objectives for each course are listed in the course syllabus.

Letter Grade	Quality Points (Per Semester Hour)	
A	4.0	Indicates consistently superior performance. Mastery level should be a minimum average of 90.
B	3.0	Indicates consistently above-average performance. Mastery level should be a minimum average of 80.
C	2.0	Indicates satisfactory performance. Mastery level should be a minimum average of 70.
D	1.0	Indicates less than mastery level performance with a minimum average of 65. A course in which a D grade has been earned cannot be used as a prerequisite for another course. <i>Note: A grade of “C” or better is required in all prerequisite courses and in specific courses listed in the program summary of required hours.</i>
F	0.0	Indicates failure to achieve minimum standards.
I	0.0	Incomplete. Given at the instructor’s discretion to students who have not fulfilled all course requirements at the end of the grading period. Counts as an F, both in computing the GPA and for purposes of satisfying course prerequisites. The deadline for removing an Incomplete is determined by the instructor, but must be no later than two weeks before the end of the next semester. An exception to rule is anyone who has applied for graduation. If incomplete grades in courses satisfying degree or certificate requirements are not removed within two weeks of the end of the term, the student’s degree or certificate will not be posted until the following-term. <i>Note: If course requirements are not satisfied by the deadline, the “I” grade is changed to “F” on the student’s transcript.</i>
IF	0.0	Incomplete/Failure. Indicates student failed to complete the requirements of a course in which he/she had received an Incomplete.
W		Withdrawal. Indicates the student has withdrawn from the course. Does not count in the GPA.
AU		Audit. Indicates that the student elected to enroll in the course for no grade or credit. Audits do not replace previous grades.
CE		Credit by Examination. This designation is used for both institutional and national exams (AP and-CLEP).
CL		Credit for Life Experience. The CL is not counted in the GPA.
S/N		Satisfactory/No Credit. Selected courses may be offered on a competency based grading system. If the student satisfactorily meets the minimum competencies, credit (S) will be awarded. Students not meeting minimum competencies will not receive credit (N).

## Calculation of Grade Point Average (GPA)

Chattanooga State transcripts indicate two grade point averages—a “college only” average and a “combined” average. The college only GPA consists of hours taken in college level courses. The combined GPA includes hours taken in both college level and Transitional Studies courses. The college only GPA is used to calculate the GPA required for graduation and to determine honors. The combined GPA is used to determine suspension, probation, eligibility for financial aid, and athletic eligibility.

The GPA for the Tennessee Education Lottery Scholarship is calculated to determine potential scholarship eligibility. All grades including transfers, repeats, and withdrawals are used to determine eligibility.

**Note: Grades of W are shown on the transcript under the heading of Attempted Hours (AHRS) but are not used in calculating GPA. But, they may affect a student’s financial aid eligibility.**

## Repeating a Course

For increasing mastery or GPA (and only for these purposes), students may repeat courses in which their final grades are C or lower.

Students may only repeat a course with a B or higher with the approval of the Vice President for Academic Affairs.

When a course is repeated, only the last grade received is calculated in the cumulative GPA. However, if a course is repeated more than twice, the third and all later grades are included in computing the cumulative GPA.

## Appeal of a Grade

**Prior to requesting the appeal of a final course grade, the student should read the following statement.**

Course grades assigned by faculty members are final unless there is evidence that the grade was influenced by consideration of race, color, religion, sex, marital status, disability or national origin, arbitrary or capricious action or other reasons not related to the academic performance of the student. In all cases, the student shall assume the burden of proof with respect to the allegations.

In the event the student elects to file an appeal, the student is required to refer to and abide by the guidelines provided below. All information provided for this appeal must be legible. **Pending resolution of the appeal request, the final course grade stands.** If the student fails to present the Final Course Grade Appeal Request within the time frames specified within these guidelines, the student’s final course grade stands. To ensure fair and equitable treatment for all students, the steps provided below are to be followed in sequential order beginning with Step 1. Fair and appropriate resolution may occur at any of the six steps provided below.

### Steps For Appeal of a Grade:

1. The student must review his/her grade with the course instructor if the student believes the final course grade is incorrect. The student has thirty (30) calendar days from the day grades are due in the Records Office of the term in which the grade was earned to consult with the instructor in an effort to review the final grade assigned. If, for any reason, the instructor is unavailable, the student should contact the instructor’s supervisor to review the course grade. If thirty (30) calendar

days have passed from the day grades were due in the Records Office of the term in which the grade was earned prior to the student completing STEP 1, the final course grade stands. Possible outcomes of the Final Course Grade Appeal are:

- A) The final course grade remains as assigned by the course instructor.
  - B) The final course grade is changed by the course instructor to a new grade, which may be higher or lower than the initial grade assigned by the course instructor.
  - C) If the Final Course Grade Appeal Request warrants further review, the matter must be referred to the Instructor's Immediate Supervisor.
2. Should further review be requested, the student has ten (10) calendar days from the date provided by the instructor (supervisor) at Step 1 to present this form with the appropriate signatures and supporting documentation to the instructor's Department Head/Program Director. The Department Head/Program Director shall discuss the appeal with the instructor and the student.
  3. Should further review be requested, the student has five (5) calendar days from the date listed in Step 2 to present this form with the appropriate signatures and supporting documentation to the instructor's Division Dean. The Division Dean shall discuss the appeal with the instructor and the student within fifteen (15) calendar days of the receipt of the *Student Final Course Grade Appeal Request* and supporting documentation. The Division Dean, in collaboration with the Department Head/Program Director, shall prepare a written decision regarding this grade appeal. A copy of the Division Dean's written decision shall be provided to the student, course instructor (and/or supervisor), Department Head/Program Director, and the Vice President for Academic Affairs. Possible outcomes of the Final Course Grade Appeal are:
    - A) The final course grade remains as assigned by the course instructor.
    - B) The final course grade is administratively changed to a new grade, which may be higher or lower than the initial grade assigned by the course instructor.
    - C) If it is determined that the Final Course Grade Appeal Request warrants further review, the matter must be referred to the Student Academic Appeals Committee chairperson.
  4. Should further review be warranted, the Division Dean has ten (10) calendar days to send a copy of his/her written decision, the *Student Final Course Grade Appeal Request*, the evidence and any other supporting data, correspondence and/or records from both parties to the Student Academic Appeals Committee (SAAC). The written request for a hearing shall state the facts of the appeal. The Student Academic Appeals Committee (SAAC) shall notify the student, the instructor (and/or supervisor), Department Head/Program Director, Division Dean and the Vice President for Academic Affairs of the time and location of the hearing. This hearing shall be held within fifteen (15) calendar days of the receipt of the *Student Final Course Grade Appeal Request* and supporting documentation. The Student Academic Appeals Committee shall function as a review board. After thorough review of the case,

the committee shall prepare and submit a written recommendation regarding the final course grade appeal request to the Vice President for Academic Affairs. The committee shall also provide all materials received for the case including but not limited to the *Student Final Course Grade Appeal Request*, all evidence and other supporting data, correspondence and/or records from both parties to the Vice President for Academic Affairs.

5. Upon receipt of the recommendation and materials from the Student Academic Appeals Committee, the Vice President for Academic Affairs shall review all documents received from the Student Academic Appeals Committee and shall prepare his/her written final decision regarding the grade appeal within ten (10) calendar days. A copy of the written decision shall be provided to the student, course instructor and/or supervisor, Department Head/Program Director, Division Dean and President of Chattanooga State Technical Community College. Possible outcomes of the Final Course Grade Appeal are:
  - A) The final course grade remains as assigned by the course instructor.
  - B) The final course grade is administratively changed to a new grade, which may be higher or lower than the initial grade assigned by the course instructor.
6. Upon receipt of the recommendation and materials, the President of Chattanooga State Technical Community College shall review all documents received from the Vice President for Academic Affairs and shall prepare his/her written final decision regarding the grade appeal within ten (10) calendar days. The President of Chattanooga State Technical Community College retains full responsibility for the final decision rendered. A copy of the written decision shall be provided to all parties involved. Possible outcomes of the Final Course Grade Appeal are:
  - A) The final course grade remains as assigned by the course instructor.
  - B) The final course grade is administratively changed to a new grade, which may be higher or lower than the initial grade assigned by the course instructor.

## Graduation Requirements

All requirements for degrees and/or certificates must be completed before the credential can be posted to the student's transcript or a diploma awarded. This includes removal of any incomplete grades in courses needed to satisfy degree or certificate requirements. Incompletes not removed within two weeks of the end of the term will delay posting the credential until the following term.

All candidates for graduation for a given academic year (Fall, Spring, or Summer) may participate in Chattanooga State's annual commencement exercises even though all requirements for graduation may not have been met. However, such participation in no way confirms completion of requirements or official graduation. Students not completing all requirements by the end of the summer term following commencement must reapply.

## Application and Fee

A student must submit an application and pay the non-

refundable application fee by the end of October in order to be considered a candidate for graduation. This deadline applies to all candidates for a given academic year, including summer completers.

### Applicable Catalog

A student may obtain a degree or certificate based on the requirements in the catalog in force when he/she entered the College or under a later catalog in effect for any term he/she is enrolled. However, a student can only use one catalog.

**Time Limitation.** Counting from the first term covered by the catalog, requirements for associate degrees and Technical Certificates of Credit remain in effect for a period of five years and Tennessee Technology Center programs for two-years.

### Double Degree

A student may earn, simultaneously or consecutively, multiple degrees only when the majors completed lead to different degrees, e.g., one leads to the A.A.S. and the other to the AS. All requirements for both degrees must be met, and the student must complete at least 20 semester hours not included for the first degree. The cumulative grade point average (GPA) for all college-level work must be 2.0 or higher.

### Double Major

A double major is the completion of two or more majors leading to the same degree. (At Chattanooga State, double majors are available only in A.A.S. degree programs.) All requirements for each major must be met. The second major must include at least 20 hours not applied to the first major. The cumulative grade point average (GPA) for all college level work must be 2.0 or higher.

**Note:** Graduation with two or more concentrations in the same major is not considered a double major (see below).

### Double Concentration

Students may complete more than one concentration in the same major; however, both concentrations must be completed at the same time.

### Degree/Technical Certificate of Credit

Students may receive both a degree and a Technical Certificate of Credit by completing all requirements listed in the SUMMARY OF REQUIRED HOURS for each.

### Double Certificate

All requirements for both Technical Certificates of Credit must have been met and at least one-third of the hours required for the second certificate must not have been required for the first certificate.

### Grade Point Average

**Associate Degree**—The cumulative grade point average (GPA) for all college level work must be 2.0 or higher.

**Technical Certificate of Credit**—All courses required for the Technical Certificate of Credit must be completed with a grade of C or better.

### Graduation Residency Requirements

**Associate Degree**—The final twenty (20) semester credit hours before graduation must be completed at Chattanooga State. (Only credits earned in college level courses apply

toward satisfying this requirement.)

**Note:** Credit hours accumulated as a Special Student are not applicable to the final twenty-four (24) semester hours required for an associate degree.

**Technical Certificate of Credit**—A minimum of seventy-five percent (75%) of the required hours for a Technical Certificate of Credit must be completed at Chattanooga State. A maximum of twenty-five percent (25%) of the required hours for a Technical Certificate of Credit may be completed through approved alternative sources such as transfer or tech prep credit, credit for life experiences or by exam.

**Tennessee Technology Center Programs**—Credit may be given for previous education or training as determined by the instructor and approved by the Vice President for Academic Affairs at the time of the student's initial enrollment.

### Exit Testing

All degree candidates are required to test for general achievement. Major testing may also be required in selected fields. These tests are used to evaluate Chattanooga State's academic programs. Exit testing must be completed before the Records Office can post the degree or issue a diploma. Until the degree is posted, a student is not considered to have graduated.

### Indebtedness

Students should pay off any debts to the College as soon as possible. No diploma, certificate, or academic transcript will be issued to a student who has not settled outstanding College debts with the Vice President for Business and Finance. A student may be prohibited from attending classes or taking final examinations after the due date of any unpaid obligation.

## Privacy Rights of Students

### A. Definitions

**Educational Records.** Those records, files, documents, and other materials which (1) contain information directly related to a student, and (2) are maintained by Chattanooga State or by a person acting for the College. Educational records do not include (1) personal notes, (2) records available only to law enforcement personnel, (3) employment records.

**Student.** Any person who is or has been enrolled at Chattanooga State. Wherever "student" is used in reference to personal rights, an eligible parent of a dependent student has similar rights. This "eligible" parent is one who has satisfied Section 152 of the Internal Revenue Code of 1954, and who presents proof of such to the Records Office. Normally, this will be a written affirmation by the student and the parent declaring that the student is a dependent for Federal Income Tax purposes.

**Directory Information.** The student's name, address, telephone listing, photograph, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student. At the time the student registers for courses, the student may notify the Records Office, in writing, that directory information for that student may not be released. This notification must be received within ten (10) days of registration.

*Access.* To have access to an educational record is to be allowed to see the original record.

### B. Release of personally identifiable student educational records

Chattanooga State shall not permit access to, or the release of any information in the educational records of any student that is personally identifiable, other than directory information, without the written consent of the student, to any party other than the following:

1. Chattanooga State officials and staff who have legitimate educational interests, including the support of honor societies and academic excellence.
2. Officials of schools in which the student seeks admission.
3. Appropriate persons in connection with a student's application for, or receipt of, financial aid.
4. Federal or State officials as defined in paragraph 99.31 of the regulations concerning this law.
5. State and local officials authorized by state statutes.
6. Organizations or persons conducting studies for, or on behalf of Chattanooga State for the purpose of assisting in accomplishing the College's stated goals, when such information will be used by such organizations or persons and subsequently destroyed when no longer needed for the intended purpose.
7. Accrediting organizations, to carry out their functions.
8. Parents of a student as defined in section 152 of the Internal Revenue Code of 1954 (written consent may be allowed from either of these separated or divorced parents subject to any agreement between the parents or court order). In the case of a student whose legal guardian is an institution, a party representing that institution may have access to the records.
9. In compliance with judicial order or subpoena, providing that the student is notified in advance of the compliance.
10. Appropriate persons in connection with an emergency if such knowledge is necessary to protect the health and safety of a student or other persons.

*Note:* With the exception of Chattanooga State officials and staff who have been determined by the College to have legitimate educational interests, all individuals and agencies who have requested or obtained access to a student's record will be noted in a record which is kept with each student's educational record. A request must be in writing stating the purpose of the request. This record will also indicate specifically the legitimate interest that the person or agency had in obtaining the information.

### C. Procedure for Accessing Educational Records

The student requests the custodian to allow him/her to pursue the educational record. The student may ask for an explanation and/or a copy of the given educational record. After consultation with the custodian, errors may be corrected at that time by that custodian. Thereafter, if the student believes the record to be accurate in content, he/she should acknowledge with his signature and the date; if the student believes the record content to be inaccurate, he/she then may submit a request for an informal hearing before the Appeals Committee. The request, and the challenge, must be presented in writing to the Records Office which will request a meeting of the Appeals Committee. The Appeals Committee Chairperson will acknowledge receipt of the challenge and notify the student of time and place for the first meeting convenient to the student. The Appeals Committee will convene with the student within forty-five (45) days from the date of the request allowing the student to present relevant evidence, and allowing the student to be represented by an individual of his/her choice at his/her own expense, including an attorney if so desired. The student will be afforded all of his/her rights under Due Process as delineated in the Student Handbook. The decision rendered by the Appeals Committee shall be based solely upon the evidence presented at the hearing. The decision must include a summary of the evidence and the

reasons for the decision.

*Note:* This procedure does not provide for a hearing to contest an academic grade.

### D. Right of Access Does Not Include:

1. Financial records of parents or any information therein.
2. Confidential letters and statements of recommendation which were placed in the educational records prior to January 1, 1975.
3. Records to which access has been waived by the student. (This applies only if a student, upon request, is notified of the names of all persons making confidential recommendations and, if such recommendations are used solely for the purpose they were intended.)

**E. Educational Records** may be destroyed except that a student shall be granted access prior to destruction if such is requested.

### F. Complaints

Students have the right to file a complaint with the U.S. Department of Education concerning alleged failures by Chattanooga State to comply with the requirements of FERPA.

The Office that administers FERPA is:  
 Family Policy Compliance Office  
 U.S. Department of Education  
 600 Independence Avenue, SW  
 Washington, DC 20202-4605

## Probation/Suspension

See "Academic Retention Standards" in this section.

## Retention of Records

The Records Office is required to maintain certain student records permanently. However, Registration and Drop/Add forms and Transcript requests will be maintained for only one year.

## Transcripts

An official Chattanooga State transcript will be sent to another institution or organization upon a student's written request. Unofficial transcripts are available online for current students. There is no fee for this-service.

*Note:* Transcripts are not released if the student has an outstanding obligation to the college.

## Transcript Evaluations

The College accepts transfer credits from other colleges. Official transcripts from each institution a student attended are evaluated upon receipt in Admissions. A grade of "D" or higher is required for transfer. However, a course in which a "D" grade has been earned may/may not be used to satisfy degree requirements or prerequisites. Any "C or better" requirements must be met. Transfer credits are not used in computing a student's GPA at Chattanooga State, but are counted in Earned Hours.

Credits from non-regionally accredited institutions may be evaluated on an individual basis (contact the Records Office for a "Petition of Transfer Credit" form) or may be validated by examination (See "Alternative Sources of Credit" for information on credit by exam).

The GPA for the Tennessee Education Lottery Scholarship includes all courses to determine eligibility.

## Undecided Majors

Chattanooga State's "undecided" or "undeclared" major is the Associate of Science, general transfer degree. To learn about Chattanooga State's degree programs and majors visit the Career Planning and Counseling Center (Student Center – 423-697-4421), the Educational Planning and Advising Center (Student Center – 423-697-4483), or one of our academic divisions. A change of major must be received during the first two weeks of the academic term and submitted to the Records Office. Any changes after that time will be effective with the next academic term. The Change of Status form is available in the Admissions and Records Office or on the web.

## Withdrawal from College

A release from enrollment from all classes becomes official only after completion of the withdrawal process, which is initiated in the Career Planning and Counseling Center. Failure to attend class or discontinued attendance is not official withdrawal. Not withdrawing officially will cause a student to fail and could jeopardize later re-enrollment.

The consequences of completely withdrawing from school depend on when the student withdraws. For more information, see "Change of Registration (Drop/Add)." For specific deadlines, see the Records Office's academic calendar.



*One of Chattanooga State's 2008 Media Technology graduates.*



## Financial Aid

The Financial Aid Office helps students pay for college. Eligibility for financial aid is based on financial need, merit, availability of funds and the ability to maintain satisfactory academic progress. To qualify a student must:

- Have a high school diploma, a GED, a certificate of completion of a home study program recognized by the state of Tennessee, or, for Tennessee Technology Center students, pass the Ability to Benefit Test;
- Be a U.S. Citizen or permanent resident;
- Submit the Free Application for Federal Student Aid (FAFSA) to determine financial need;
- Be accepted for admission or currently attending Chattanooga State;
- Be enrolled in an approved degree or certificate program;
- Submit all verification documents as requested by the Financial Aid Office;
- Meet Chattanooga State's satisfactory academic progress standards for financial aid recipients;
- Not be in default on a Federal Student Loan or owe a repayment on a Federal Pell Grant;
- If male and born after 1959, be registered with Selective Service;
- Have a valid Social Security Number.

Students may be eligible for financial aid through any or all of the following sources:

- **Chattanooga State Academic Performance Scholarships** cover in-state tuition and fees and provide an allowance for books and supplies. Entering freshman must have a cumulative 2.9 high school GPA. Some continuing students are also eligible.
- **Tennessee Education Lottery** awards are for Tennessee Residents who meet specific guidelines for scholarship and grant programs. Contact the Financial Aid Office for more information.
- **Minority Grants** are for first-time African American and Native American freshmen with at least a 2.0 high school GPA. Currently enrolled, continuing, and transfer students may also be eligible.
- **Federal Pell Grants** are for students with financial need who are enrolled in an eligible program and who do not have a bachelor's degree.
- **Federal Supplemental Educational Opportunity Grants** (FSEOG) are for students with exceptional financial need who are enrolled in an eligible program and who do not have a bachelor's degree.
- **Tennessee Student Assistance Awards** (TSAA) are for Tennessee students with demonstrated need who are enrolled or accepted as a student at an eligible Tennessee institution.
- **Federal Work Study Programs** are for at least half-time students who are eligible to work on campus.
- **Federal Subsidized Stafford Loans** are for at least half-time students who are maintaining satisfactory progress.
- **Federal Unsubsidized Stafford Loans** are for middle-income borrowers who do not qualify for federal interest subsidies under the Federal Stafford Loan program.
- **Federal Plus Loans** are for the parents of at least half-time students.
- **Institutional Work Programs** are for students who work on campus, but not through the Federal Work Study Program.
- **Veterans Benefits** are for students who have served on active duty and for the children and/or spouses of disabled or deceased veterans whose disability or death was service-connected.
- **Military Assistance** is for students serving in the Armed Forces.
- **Vocational Rehabilitation** is for eligible students with occupational handicaps.
- **Employment Benefits** are for students who get financial assistance or tuition reimbursement from their employers.

## Financial Aid Refund, Withdrawal, and Repayment Policies

### Refund

Class withdrawal refunds will be calculated using the TBR refund policy published in Chattanooga State's Class Schedule. Any refund due for class(es) dropped before the 14th day will be returned to the student; after the 14th day, refunds will be returned to the Department of Education.

### Withdrawal and Repayment

Students who withdraw from all classes prior to completing more than 60% of the term will have their eligibility for aid recalculated based on the percent of the term they completed. E.g., a student who withdraws completing only 30% of the term will have "earned" only 30% of any Title IV aid received. The remaining 70% is considered "unearned" and must be returned.

When the total amount of unearned aid is greater than the amount returned by Chattanooga State from the student's account, the student is responsible for repaying the difference. Loan amounts are returned by the student to the lender according to the terms of the promissory note.

The Financial Aid Office will notify the student of the amount of repayment due. The student has 20 calendar days after notification to repay in full or make satisfactory repayment arrangements with the Financial Aid Office. Students owing repayment are ineligible for additional Title IV aid unless arrangements can be made for deducting balances from future awards.

For more detailed information on these policies and procedures for withdrawal, contact the Financial Aid Office.

### Satisfactory Academic Progress Standards For Federal Financial Aid Eligibility (Credit Hour Programs) Effective July 1, 2004

Chattanooga State has established policies to monitor the academic progress of all financial aid applicants and recipients (full-time and part-time) in accordance with federal regulations. All financial aid recipients must be enrolled in a program (associate degree, certificate or Tennessee Technology Center certificate diploma) that has been approved by the Department of Education. Students must make reasonable progress toward completing their stated educational goal in order to receive funds. Chattanooga State complies with federal regulation by using both qualitative (grade point average) and quantitative (number of credit hours) measures to monitor a student's progress.

Associate Degrees and Technical Certificates

#### I. Completion Rate

A. Students must earn a minimum of **67% of all credit hours attempted at Chattanooga State by the end of each spring term**. Grades of A, B, C or D count as earned credit.

B. Grade values of "W", "I", "F" and "AU" are not passing grades and will count against the student.

#### II. Cumulative Grade Point Average

A. **Financial aid recipients must meet the college's good standing requirements in order to maintain eligibility.** To be enrolled in good standing, a student must earn the minimum cumulative combined grade point average (GPA) below for the total number of semester credit *hours*

*attempted*, as shown below.

Attempted Hours	Required Cumulative GPA
0.0 - 14.0	No Minimum
14.1 - 26.0	1.0
26.1 - 40.0	1.4
40.1 - 48.0	1.7
48.1 - 56.0	1.9
above 56	2.0

(The hours attempted include developmental and collegiate hours)

B. GPA is calculated when grades are processed at the end of each semester.

### III. Time Limitations

A. *A student will be allowed to receive financial assistance until he/she has attempted a maximum of 150% of the hours required to complete their program of study.* Most associate degree programs require 60 hours; therefore the maximum *attempted* hours is 90. The maximum *attempted* hours limit for technical and associate degrees that differ from the standard 60 will be calculated according to the length of each program. Technical Certificates will be evaluated individually because required hours for programs differ.

B. The calculation of attempted hours will include *all hours* transferred to Chattanooga State as well as all hours attempted at Chattanooga State.

C. R/D (transitional studies) such as DSPM (developmental math) or DSPW (developmental writing) credits above 30 hours will be counted in the calculation of attempted hours for each student.

D. The Student Aid Office reviews the maximum time limitation at the end of each semester.

### IV. Notification

A. **All student aid recipients are provided a copy of satisfactory academic progress guidelines at the time they are awarded student aid.** Standards are also published in the catalog and can be found on the student aid web site.

B. When it is determined that a student is ineligible for student aid, they will be notified promptly in writing.

### V. Reinstatement of Student Aid (There are two ways in which a student may reestablish student aid eligibility.)

A. **A student may re-establish student aid eligibility by completing a minimum of 6 hours at his/her own expense.** The classes taken must satisfy requirements needed for the completion of the student's degree. The student must pass all classes attempted with a minimum 2.0 grade point average (GPA). Students who choose to enroll for more than the minimum hours required for reinstatement must pass all classes attempted with at least a 2.0 GPA.

B. The appeal must be *in writing and must be accompanied by appropriate supporting documentation.*

C. If not satisfied with the decision of the Student Aid Academic Standards Committee, the student may request a meeting to make a personal appeal.

D. Personal appeals can be made to the Student Aid Appeals Committee, a subcommittee of the Student Aid Academic Standards Committee.

E. Committee members assigned to hear personal appeals will be different from those who made the decision to deny the student's original request.

F. A student whose financial assistance is reinstated as the result of an appeal **must meet all conditions established in order to continue student aid eligibility.**

G. All decisions of the Student Aid Appeals Committee are final.

H. Students will not be granted more than 3 appeals during their matriculation at Chattanooga State.

### VII. Returning & Transfer Students Who Are New Aid Applicants

A. Transfer students must meet all satisfactory progress standards.

B. Students who do not meet satisfactory progress guidelines, but have never received student aid at any institution will be given one semester of probation in order to establish eligibility. Students failing to meet satisfactory academic progress during this period will become ineligible for financial assistance the following semester.

### VIII. Exceptions

A. Chattanooga State reserves the right to deny or cancel a student's financial assistance in the event of extraordinary circumstances that may not be covered in this policy. However, the college guarantees prompt notification of ineligibility and explanation of the appeal process.

### Tennessee Technology Center Students

In order to get financial aid, Tennessee Technology Center Division students must (1) have a high school diploma, a GED, or pass the Ability to Benefit Test, AND (2) be enrolled for at least 30 clock hours per week if full time. Students enrolled for less than 30 hours per week are not considered full time, and their awards will be prorated based on part-time enrollment. **Part-time Tennessee Technology Center students are ineligible for student loans.**

#### Qualitative Standards

A grade of C or better is required.

#### Quantitative Standards

Chattanooga State Tennessee Technology Center programs count as one academic year in length (except Cosmetology).

Tennessee Technology Center students must complete 91% of the enrolled hours to remain eligible for later financial aid payments. Unexcused absences exceeding 9% must be made up before the student can receive future financial aid.

#### Time Frame

The maximum time frame for an Tennessee Technology Center student to receive financial aid is 1.5 times the number of clock hours needed to complete a certificate.

### Appeals

Financial aid termination can be appealed in writing to the Financial Aid Appeals Committee, which meets before classes begin and throughout the semester as needed. Students are encouraged to submit, in writing, any significant circumstances that would affect their ability to make satisfactory academic progress. Consideration will be given for extenuating circumstances, such as a student's illness or hospitalization, or death in family.

### Prorating of Funds

Registration in non-standard term classes (Examples: Flex, RODP, Urban League and classes that do not run the full semester) will result in prorating (reducing) financial aid, including loans. **Financial aid is awarded based on the number of weeks of class instruction.**

## Financial Information

### Fee Policy

All fees are due when the student registers or pre-registers. Registration is not complete until fees are paid or when the initial minimum payment under the deferred payment plan has been paid. The fees are subject to change at any time by the Tennessee Board of Regents. Please view current fees at: [www.chattanoogaastate.edu](http://www.chattanoogaastate.edu).

### Fee Schedule

The fee schedule is available on the College's web site, and at campus locations.

Out-of-state residents who work full-time in Tennessee may attend classes part-time at in-state fee rates, upon completion of an out-of-state employment form. This form must be completed for each term.

Maintenance fees for Summer are not capped at 12 credit hours. Students will be charged the per hour fee for every hour enrolled.

**Note:** The regular maintenance fee and tuition, not to exceed the maximum, will be charged for repeating a course for which a grade of "E" has been received in a previous term.

**Regents Online Degree Program (RODP)**—The fees for RODP students will be the current part-time per hour charge of the home institution for the maintenance fee and for the out-of-state fee, as applicable, plus an online course fee. (Since the RODP Online Course Fee is considered a "special course fee," TBR, UT and other state employees who are entitled to a fee waiver are still required to pay this fee.) RODP students are not required to pay the General Access Fee. This fee is included in the RODP Online Course Fee. Regents degree courses are all charged per hour and viewed separately from on-campus courses so as not to mix with the full-time cap applicable to on-campus courses and other online courses that are not part of the Regents Degree Program, and distance education courses. For more information, visit: <http://www.TN.regentsdegrees.org>.

**Senior Citizens and Persons with Disabilities**—Senior citizens and persons with disabilities may qualify for discounted maintenance fees.

### Fees Charged in Addition to Maintenance and Tuition:

**Application Fee**—Paid one-time. Non-refundable.

**CDE Fee**—Per Distributed Education class (non-refundable).

**Credit by Examination Fee**—The regular course fee is charged for each special examination before the test.

**Credit for Life Experience Fee**—A non-refundable assessment fee, equivalent to the per-credit-hour maintenance/tuition fee, must be paid prior to faculty assessment of the student's portfolio.

**General Access Fee**

**Graduation Fee**

**Handicapped Parking Violation**

**ID Card Replacement Fee**

**Late Registration Fee**

**Parking Violations**

**Private Music Fee**

**Special Course Fees**—If the College must pay for special facilities, those costs will be assessed as a laboratory fee.

**Technology Access Fee:**

- For credit courses per credit hour.
- For Tennessee Technology Center courses.

### Eligibility for Deferment of Payment of Tuition and Fees by Certain Eligible Students Receiving U.S. Department of Veterans Affairs or Other Governmentally Funded Educational Assistance Benefits

*Service members, veterans, and dependents of veterans who are eligible beneficiaries of U.S. Department of Veterans Affairs education benefits or other governmentally funded educational assistance, subject to the conditions and guidelines set forth in Tennessee Code Annotated 49-7-104 as amended, may elect, upon formal application, to defer payment of required tuition and fees until the final day of the term for which the deferment has been requested. Application for the deferment must be made no later than 14 days after the beginning of the term, and the amount of the deferment shall not exceed the total monetary benefits to be received for the term. Students who have been granted deferments are expected to make timely payments on their outstanding tuition and fees balance once education benefits are being delivered, and eligibility for such deferment shall terminate if the student fails to abide by any applicable rule or regulation, or to act in good faith in making timely payments. This notice is published pursuant to Public Chapter 279, Acts of 2003, effective July 1, 2003.*

### Refund Policies

Refund percentages are based on billable hours, not amounts paid. Students who officially withdraw from school entirely, full-time students who drop to part-time, or part-time students who drop one or more classes may get a refund.

100% of fees are refunded for (1) drops or withdrawals before the first day of the term, (2) cancelled classes, and (3) the death of a student during the term.

### College Credit Courses

75% of fees are refunded for drops or withdrawals during the first 14 calendar days of a term or within an equivalent period for a short term course.

25% of fees are refunded for 25% of a term following the 75% period. No refunds will be made beyond the 25% period.

### Tennessee Technology Center Courses

75% of fees are refunded for drops or withdrawals during the first 10% of the class hours.

50% of fees are refunded for drops or withdrawals during the first 20% of the class hours. No refunds will be made after 20% of the class hours have been completed.

The Vice President for Business and Finance may make an exception to these policies. Requests for exceptions should be submitted in writing, along with supporting documentation, directly to the Vice President or his/her designee.

STOPPING PAYMENT ON A CHECK DOES NOT CONSTITUTE PROPER WITHDRAWAL. Refund policies subject to change fall 2007.

### Dishonored Checks

Checks tendered in payment of fees are normally deposited immediately by the College and should be drawn only against accounts with sufficient balances. Every effort will be made to collect on checks dishonored for any reason. A fee will be charged for dishonored checks.

A STUDENT IS NOT REGISTERED UNTIL ALL FEES ARE PAID.

## Adult Education/GED

Chattanooga State conducts day and evening Adult Education/GED classes on the main campus and throughout the community for anyone 17 or older. All classes have individualized instruction.

The program includes:

- Registration and orientation session.
- Computerized instructional lab.

- Reading program.
- English as a Second Language (ESL) classes.
- GED practice tests.

**(423) 697-2529**

## Athletics

Chattanooga State provides National Junior College Athletic Association (NJCAA) Division I competition in women's fast-pitch softball, women's and men's basketball, and baseball. Chattanooga State's teams are often nationally

ranked, and student athlete scholarships are plentiful. Team members are recruited locally and regionally. Students interested in tryouts are welcome.

**(423) 697-3370**

## Business and Community Development Center

The Business and Community Development Center offers a wide range of services, including personal interest continuing education classes, short-courses, teleconferences, certification classes, and customized skills training delivered on-site to business and industry. It also provides job profiling and analysis, skill assessment, and WorkKeys

skill development training for area employers. WorkKeys helps employers match employee skills to those required for satisfactory performance in specific jobs. Once skills gaps are identified, Chattanooga State can deliver training programs to help bridge them.

**(423) 697-3100**

## Career Planning and Counseling Center

Confidential personal, career, and academic counseling is available to help students define and achieve their goals and succeed in college. Services include individual and group counseling, crisis intervention, tutoring, issue-related workshops, support groups, "How to Learn" workshops, Transitional Studies advising, drug awareness activities

and information about self-help groups. Career counseling resources include group and individual career counseling, career inventories and interpretations, a career library, workshops for people returning to college or enrolling for the first time; and support groups for various types of students.

**(423) 697-4421**

## Center for Distributed Education

Chattanooga State offers "anytime, anywhere" education through its Center for Distributed Education. Both credit and non-credit courses are delivered remotely via a variety of methods—Regents Online Degree Program (RODP) and other online courses, video, CD-ROM, and traditional correspondence. All credit courses have the same content

and transferability as on-campus courses.

For additional information, visit the Center for Distributed Education web site at <http://www.chattanoogastate.edu/cde> or e-mail [CDE@chattanoogastate.edu](mailto:CDE@chattanoogastate.edu).

**(423) 697-4408, 2592 or 1-800-207-8202**

## Child Development Center

The Child Development Center serves Chattanooga State employees and students on a space-available basis. The Center also serves as a demonstration/observation area for

Early Childhood Education, Psychology, Nursing, and Allied Health programs. Monthly fees are charged for participation.

**(423) 697-4412**

## Disabilities Support Services

Disabilities Support Services arranges for accommodations for students with documented disabilities so that they have equal access to programs and activities offered by the College. Accommodations may include readers, scribes, interpreters, notetakers, assistive listening systems, and adaptive computer equipment. Students with disabilities must provide current documentation

of their disability prior to receiving accommodations. Disabilities Support Services also assists students in linking to appropriate campus and community services, such as counseling, tutoring, registration assistance, financial aid, and Vocational Rehabilitation.

**(423) 697-4452**

## Educational Planning and Advising

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The Educational Planning and Advising (EPA) office assists students in the realization of their educational goals. Professional advisers are available to advise students in

developing and following an appropriate educational plan.  
**(423) 697-4483**

## Internationalizing Initiative

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Chattanooga State offers a wide array of opportunities for gaining knowledge, perspective and appreciation of the increasing diversity of America and the dynamics of participating in the global economy. These opportunities include: courses in world cultures and religions, an international

students club, focused studies on the business climates and structures of other countries, art and music of other nations, Plaza Communitaria for Hispanic students, and many more activities.

**(423) 697-4475**

## Library Services

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The Augusta R. Kolwyck Library is located on the Instructional Materials Center's first floor, with a branch at Chattanooga State East. The Kimball Site students use Jasper Public Library, while the Dayton Site students use Bryan College Library or Dayton Public Library. Sequatchie Valley students may use the Pikeville Public Library. Students located elsewhere may contact the Dean of Library Services who will make arrangements for those students to have access to library services.

Holdings (as of December 2006) include 66,677 print books; 46,172 online books; 284 print magazine subscriptions; 20,000+ online magazine subscriptions; 3,574 videotapes; 75 DVDs; 779 CDs; and 905 audiotapes. Students can search more than a dozen online databases containing journal articles, news stories, literary and

biography information, as well as complete books. The library's catalog and these other resources can be searched through the Internet site at <http://library.chattanoogastate.edu>.

The library staff provides individualized and classroom instruction on research for students, faculty, and staff. Reference librarians are available during all hours the library is open.

The library is open to everyone. Students can use their Chattanooga State picture I.D. cards to check out books. Residents of Tennessee, North Georgia, or Northeast Alabama with a current driver's license may apply for a Chattanooga State library card.

**(423) 697-4448**

## Media Services

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Media Services is located in the IMC building on the first floor. The staff offers a variety of services in the audio/visual field. They offer a library of 5,000 tapes with over 150 monitors across the campus which are wired to a master control room in the media services center. Via a closed

circuit phone in each classroom, videos can be viewed by selecting the number of the video, which is obtained from the instructor, and can be viewed in the classroom.

**(423) 697-4405**

## Middle College High School

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This cooperative program between Hamilton County Board of Education and Chattanooga State allows high school students to enter the College and take college credit courses at the same time as high school requirements are completed. As students graduate from Middle College High School, they will have already earned a number of college

credits—occasionally with enough credits to earn the Associate degree.

**See page 53 for more admission information**

**(423) 697-3226.**

## Scholars on the River

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Scholars on the River consists of the Honors Program and Phi Theta Kappa which provides an enriched curriculum and related informal educational experience for able and highly motivated students.

Test and GPA requirements are located in the General Information/Academic Regulations/Academic Honors section of this course catalog.

**(423) 697-2463**

## Student Life

The Student Life Office offers many opportunities and experiences to students that compliments and expands the classroom experience. Student representatives work with programming and are active in every phase delivering a first class student life program. This office also distributes the

*Student Handbook*, which contains descriptions of campus clubs and organizations, a monthly calendar of major campus events, and the Student Code of Conduct.

**(423) 697-4475**

## Tennessee Small Business Development and Resource Center

Chattanooga State, with area partners, operates the Tennessee Small Business Development and Resource Center at 100 Cherokee Blvd. The Center promotes entrepreneurial education, supports small business start-ups, and provides access to capital. It enhances small businesses through

counseling, planning assistance, the First Tennessee Small Business Computing Center, a comprehensive resource library, the TVA Small Business Video Center, seminars, and courses.

**(423) 756-8668**

## Testing Center

The Testing Center offers regularly scheduled tests, tests by special appointment, and unscheduled tests.

**(423) 697-4461**

### *Regularly Scheduled Tests*

- ACT Residual Test
- ACT ASSET
- Career Abilities Placement Survey (CAPS)
- Computerized Placement Testing (COMPASS)

### *Tests by Special Appointment*

- General Educational Development (GED)
- Nursing Entrance Test (NET)
- Health Occupations Basic Entrance Test (HOBET)
- Ability to Benefit (ATB)
- Certified Electronic Technician (CET)
- Regents Online Degree Program (RODP)
- Special Proctored Exams for other colleges/businesses

### *Unscheduled Exams*

- Make-up Exams
- Exams for Distance Education Courses
- COPS Career Inventory
- Myers Briggs
- 16 PF Personality Profile
- Strong Interest Inventory

## Transitional Studies

The Transitional Studies Program offers foundation courses in English, mathematics, reading and Psychology of Learning for students who need additional preparation for college level-courses.

### Transitional Studies Policies and Procedures:

- *Valid ACT/SAT scores, COMPASS or other assessment is needed* to determine Transitional Studies course placement. Students who have taken the COMPASS/ASSET exam at another institution must have their transcript and test scores sent to the College.
- Transitional Studies requirements must be completed during the student's initial terms of enrollment. A grade of "C" or higher is required for progression to the next course. Auditing is not allowed.
- Students may not withdraw from a Transitional Studies course

except for extraordinary reasons and with special permission from the Transitional Studies Director.

- Instructional labs provide tutoring and supplementary materials.
- Placement in Learning Strategies (DSPL 0800) is required for students who place into two or more subject areas of DSP courses. This course is no longer offered at Chattanooga State. To complete requirements for this course, register for RI 100, College and Personal Success, and complete the course with a grade of at least a "C."
- Credit hours earned for Transitional Studies do not satisfy degree requirements for an associate degree; however, may be corequisites or prerequisites for credit courses and must be completed prior to graduation.

**(423) 697-3221**

## WAWL Radio

The purpose of the WAWL is to serve as a learning lab for students enrolled in the Media Technologies degree program where they are able to receive valuable hands-on experience in the art of radio broadcasting.

Page	Contents
71-72	Course Listing By Subject Abbreviation
72	How To Read Course Description/Example
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74-110	Course Descriptions By Subject Abbreviation

## Course Listing By Subject Abbreviation

The following is a list in alphabetical order of Chattanooga State courses by subject abbreviation code.

For example, *ENGL=English, FI=Fire Science* and *WD=Welding*.

Courses numbered *000* or *0000* are *Tennessee Technology Center* (vocational) courses and carry clock-hour credit.

Course numbers beginning with *0* (e.g. 0700) are *Transitional Studies* or other remedial-type courses.

Course numbers beginning with *1* (e.g. 101, 1010) are *freshman* level.

Course numbers beginning with *2* (e.g. 201, 2010) are *sophomore* level.

ID	Course Title	Page	ID	Course Title	Page	ID	Course Title	Page
AA	Graphic Design (formerly Advertising Arts).....	74	DM	Diesel Equipment Mechanics.....	82	HE	Health Information Mgt.....	88-89
AB	Collision Repair.....	74	DSPM	See Mathematics.....	82	HIST	History.....	89
AC	Air Conditioning and Refrigeration...74		DSPR	Reading.....	82	HMSC	Homeland Security.....	89
AE	Aesthetics.....	74	DSPS	See Psychology.....	82	HP	American Sign Language.....	89-90
AM	Automotive Technology.....	75	DSPW	See English.....	82	HR	Human Services.....	90
ART	Art.....	75	EA	Emergency Medical Services.....	83	HS	Health Science.....	90
ASTR	Astronomy.....	76	EC	Economics.....	83	HUM	Humanities.....	91
BIOL	Biology.....	76	ECED	Early Childhood Education.....	83	HZ	Hazardous Materials.....	91
BL	Building Construction Technology...76		ED	Education.....	83-84	ID	Industrial Maintenance Mechanics...91	
BST	Business Systems Technology.....76		EDPY	Education Psychology.....	84	IE	Industrial Electricity.....	91
BU	Accounting.....	76	EE	Electrical/Electronic Engineering Technology.....	84	IS	Insurance.....	91
CD	Commercial Truck Driving.....	77	EG	Engineering Transfer (Pre-Engineering).....	85	IY	Interdisciplinary Studies.....	91
CHEM	Chemistry.....	77	ENGL	English.....	85-86	IV	IV Therapy.....	91
CI	Civil Engineering Technology.....77		EO	Heavy Equipment Operators.....	86	JS	Job Skills Development.....	91
CJ	Criminal Justice.....	77,78	ER	Industrial Electronics.....	86	LA	Paralegal Studies.....	91-92
CNAP	Cisco Network Academy Program.....	78	ESC	Environmental Science.....	86	LM	Landscaping and Turf Management..92	
CO	Mass Communications.....	78	ET	Engineering Technology.....	86	LP	Practical Nursing (LPN).....	92
COT	Computer Operations Technology.....79		EZ	Electrical/Electronic Engineering Technology (DuPont).....	86-87	MATH	Mathematics.....	92-93
CP	Cooperative Education.....	79	FI	Fire Science.....	87	MB	Masonry.....	93
CS	Information Systems.....	79-80	FM	Financial Management.....	87	MC	Manicurist.....	93
CT	Chemical Technology.....	80	FOST	Food Science Technology.....	88	MD	Mechanical Engineering Technology.....	93-94
CY	Cosmetology.....	81	FP	Financial Planning.....	88	MG	Management.....	94-95
DANC	Dance.....	81	FREN	French.....	88	MN	Maintenance Technology.....	95
DAST	Dental Assisting.....	81	GEOG	Geography.....	88	MO	Medical Assistant.....	95
DD	Computer-Aided Design Technology.....	81,82	GEOG	Geography.....	88	MOTR	Motor Sports Technology.....	95
DH	Dental Hygiene.....	82	GEOG	Geography.....	88	MP	Massage Therapy.....	95
			GEOG	Geology.....	88	MRI	Magnetic Resonance Imaging.....	95
			GERM	German.....	88			

continued on next page

Course Listing By Subject Abbreviation continued

ID	Course Title	Page	ID	Course Title	Page	ID	Course Title	Page
MS	Military Science.....	96	PHED	Physical Education(Activity Courses)	101-102	SE	Motorcycle & Marine Service Technology .....	106
MT	Machine Tool Technology.....	96	PHIL	Philosophy .....	102	SO	Sociology .....	106
MUS	Music .....	96-97	PHYS	Physics .....	102	SP	Speech.....	106
MY	Mammography.....	97	PM	Plumbing.....	102	SPAN	Spanish.....	107
MZ	Mechanical Engineering Technology (DuPont) .....	97	PO	Political Science .....	102-103	ST	Security +.....	107
ND	Dietary Manager.....	98	PSCI	Physical Science .....	103	TFAP	Technology Foundations in Basic Anatomy & Physiology .....	107
NM	Nuclear Medicine Technology .....	98	PT	Physical Therapist Assistant.....	103	TFMA	Technology Foundations in Mathematics.....	107
NS	Nursing (RN).....	98-99	PY	Psychology.....	103	THEA	Theatre .....	107,108
NU	Health Physics .....	99	PZ	Powerhouse Operations .....	104	TM	Computed Tomography .....	108
NW	Network Management .....	99-100	QA	Quality Technology .....	104	US	Diagnostic Medical Sonography. 108-110	
OF	Office Administration.....	100	RC	Respiratory Care.....	104	VETT	Veterinary Technology .....	110
OR	Surgical Technology.....	100	REAL	Realtime Reporting.....	104-105	VC	Motor Sports Vehicle Technology ..	110
OS	Occupational Safety.....	100	RELS	Religious Studies .....	105	WD	Welding.....	110
PC	Pharmacy Technician.....	101	RI	Renaissance Institute .....	105	WMST	Women's Studies.....	110
PE	Physical Education (General Courses) .....	101	RR	Realtime Reporting: Scopist.....	105	YT	Cosmetology Instructor Training.....	110
PET	Position Emission Tomography .....	101	RS	Real Estate .....	105			
			RT	Radiologic Technology .....	105-106			

How to Read Course Descriptions

How To Read Course Descriptions

Example:

reactions and equations, stoichiometry, kinetics, and measurement techniques and calculation; 1120 lab includes quantitative analysis; for students in the science or engineering; class may be taken for credit or 1110: CHEM-1010 or equivalent. Prereq: MATH-1710 or 1740. [E]

**◆ CHEM 1310 Chemistry (3)**  
 This course is an integrated approach to basic principles of chemistry. Integration will be between lab and lecture activities as well as between this and other areas of science. Major topics of study include physical and chemical properties of matter, atomic structure, kinetic-molecular theory and phase changes, chemical bonding, chemical reactions, types of properties of chemical reactions, water and aqueous solution chemistry, acid-base chemistry and pH, nomenclature and formula writing, naming and structure recognition of simple covalent, simple organic and biological molecules. Class 2 hours, lab 3 hours. Prereq: PHYS 1310 [E]

**CHEM 2010/2020 Organic Chemistry I,II (4)**  
 Prerequisite, corequisite and/or concurrent. A prerequisite is a course which should be completed prior to enrolling in the selected course. A corequisite is a course which must be taken at the same time as the selected course. Concurrent means the course may be taken before or at the same time as the selected course.

**CHEM 2990 Special Topics in Chemistry (1-5)**  
 Detailed study of a specific chemistry topic; repeatable for credit on different topics. Prereq: Department head and instructor's consent. [on demand]

**CI 111 Construction Blueprint Reading (2)**  
 Basics of proposal writing in construction industry based on sound estimates and takeoffs from budget and project prints; numbering sequence on Specifications Institute Master Format System's numbering sequence; computer applications. Prereq: CI-101 or instructor's consent. [on demand]

**CI 116 Construction Planning and Scheduling (3)**  
 Provides a working knowledge for planning and scheduling of construction projects; C.P.M., Precedence Method, PERT, Bar Charts, arrow diagrams, and computer applications. [on demand]

**CI 164 Construction Estimating (3)**  
 Construction estimating techniques/applications related to technical aspects required for quantity takeoffs in construction estimate preparation; the Construction Specifications Institute Master Format System's numbering sequence; computer applications. Concurrent: DSPM-0850. [S]

**Surveying I,II (4,4)**  
 Concepts and practices of surveying; lab 4 hours. 174-Theory of measurement notes; methods of obtaining horizontal and vertical distances, angles and directions; use of levels, transits, theodolites, and total stations; construction surveying, curves and volumes. 274-E.D.M. use and theory, traversing practice, adjusting methods, plotting a plat, computing the area and making topographic maps; State Plane coordinates, Public Land surveys; Photogrammetry and satellite surveying. Concurrent for 174: MATH-1720. Prereq for 274: CI-174, MATH-1720; or instructor's consent. [174-S, 274-F]

**CI 202 Construction Financial and Cost**

Prefix or subject abbreviation, GEOL= Geology

Course number

Course title

Number of semester credit hours

Brief description of course content

If the course has a lab component, a breakdown of the amount of time per week spent in class and lab will be shown here. Some clinical courses may show the total amount of time spent in clinic for the entire semester.

Term(s) offered:  
 E=Every,  
 F=Fall,  
 S=Spring,  
 Su=Summer.



## Regents Online Degree Programs—Associate's and Bachelor's

### Regents Online Degree Programs offered by Chattanooga State

<b>Degree:</b>	Associate of Applied Science
<b>Major:</b>	Professional Studies
<b>Concentration:</b>	Information Technology
<b>Degree:</b>	Associate of Applied Science
<b>Major:</b>	Nursing
<b>Degree:</b>	Associate of Applied Science
<b>Major:</b>	Health Information Technology
<b>Degree:</b>	Associate of Arts
<b>Major:</b>	General Studies
<b>Degree:</b>	Associate of Science
<b>Major:</b>	General Studies

### Additional Regents Degrees

<b>Degree:</b>	Bachelor of Professional Studies
<b>Major:</b>	
<b>Concentration:</b>	Information Technology or Organizational Leadership
<b>Degree:</b>	Bachelor of Interdisciplinary Studies
<b>Major:</b>	
<b>Concentration:</b>	General Studies/Liberal Studies/ University Studies

### Teacher Education Online

*Each of the six Tennessee Board of Regents universities will be addressing online programs for teacher education. Details at website.*

### Courses Renamed as of 2008

From	To
AA 106 Design	AA 106 Design Principles
AA 107 Illustration	AA 107 Introduction to Illustration
AA 108 Advertising Concepts	AA 108 Design Concepts
AA 116 Topography	AA 116 Basic Topography
CS 151 Building Web Sites	CS 151 Introduction to Adobe Flash
CS 152 Multimedia Projects	CS 152 Introduction to Adobe Dreamweaver
CS 242 Introduction to Scripting Languages	CS 242 Javascript for Designers
CS 250 Advanced Web Pages	CS 250 Active Server Pages
DD 227 Inventor	DD 227 Inventor I
ENGL 2110 American Masterpieces I	ENGL 2110 American Literature I
ENGL 2120 American Masterpieces II	ENGL 2120 American Literature II
ENGL 2210 English Masterpieces I	ENGL 2210 English Literature I
ENGL 2220 English Masterpieces II	ENGL 2220 English Literature II
ENGL 2410 Literature of the Western World I	ENGL 2410 Western World Literature I
ENGL 2420 Literature of Western World II	ENGL 2420 Western World Literature II
HIST 2050 Appalachian History: Colonial Times to Present	HIST 2050 Appalachian History: From the 14th Century to the Present
HS 111 Healthcare Overview	HS 111 Introduction to Healthcare Professions
MD 246 Reactor Theory I	MD 246 Reactor Theory
NU 204 Introduction to Nuclear Technology	NU 204 Introduction to Health Physics and Industrial Hygiene
PY 213 Abnormal Psychology	PY 213 Introduction to Abnormal Psychology

## Course Descriptions

*Descriptions of courses offered by the College are listed alphabetically by the subject abbreviation code.*

### LEGEND

- ◆Fulfills a General Education requirement
- \*Transitional Studies course (not generally transferable; not applicable to credit hours required for a degree or certificate)

A grade of "C" or better is required in all prerequisite courses!

Students should be prepared for the use of computer technology in ALL classes!

#### AA - Graphic Design (formerly Advertising Arts)

##### AA 106 Design Principles (3)

Intro to the basic visual elements and principles of 2-dimensional design; surface, depth, perspective, scale, size, shape, line, movement, balance, texture, value, contrast, emphasis, rhythm, light, unity, variety; components, structure and use of color. The student will be introduced to problem identification, analysis, brainstorming, and idea refinement, as they relate to the above principles. Required of all students in Media Technologies program concentrations. [F]

##### AA 107 Intro to Illustration (3)

A studio course with an emphasis on illustration techniques using traditional media. Creative interpretation and disciplined draftsmanship for the visual communication of ideas will be stressed. Projects will include study of linear perspective, isometric and human figure indication drawing systems for advertising. Line art, black and white, and color media used. [S]

##### AA 108 Design Concepts (3)

Intro to creative problem solving; study of using textual and graphic communication; methods of idea/concept and content generation; focus is on strong visuals, typographic elements and presentation skills. [F]

##### AA 116 Basic Typography (3)

Intro to the terminology, technology and design aspects of typography and visual communication; topics include typographical anatomy, type characteristics, basic digital text composition and layout utilizing type as a primary visual. Emphasis will be on understanding the foundations of typography and its effective use in graphic design. Prereq: AA 106. [S]

##### AA 140 Computer Applications for Graphic Design I (3)

Intro to macintosh computers; basic operations and industry standard terminology; intro to use of mainstream graphic design software, involving electronic preparation of basic to intermediate level designs; projects incorporating page layout and pre-press production techniques including typesetting, image manipulation, color models, bindery and finishing methods. [F,S]

##### AA 190 Photography for Designers (3)

Intro to basic techniques, processes and terminology of digital still photography as applied to imagery for print media; emphasis is placed on the workflow processes for preparing and correcting images to be used in print. Prereq: Concurrent AA 246 or instructor's consent. [S]

##### AA 209,210 Graphic Design I,II (3,3)

Intermediate to advanced creative problem solving. *209*-Application of design principles and techniques to logo/trademarks and basic identity design using type as a major design element. *210*-Advanced identity design including application of identity elements to collateral elements and working in a team environment. Prereq for *209*: AA 08, AA 116, concurrent AA 245; Prereq for *210*: AA 209, concurrent AA 246, [209-F, 210-S]

##### AA 215,217 Advertising Design I,II (3,3)

*215*—Study of basic tools, terms, and kinds of print advertising; design process from conception to pre-press production; incorporation of conceptual exercises to meet clients' specific needs. *217*— Advanced problems in ad design: creation of ad campaigns incorporating the mass media; individual projects for portfolios to include computer and layout techniques. Prereq for *215*: AA 108, AA 116, concurrent AA 245; Prereq for *217*: AA 215 [215-F, 217-S]

##### AA 221 Design Internship (3)

On the job training in graphic design, advertising, illustration or related commercial art with area design firms, advertising agencies or other businesses directly engaged with graphic design or the graphic arts; lab, minimum of 10 hours per week. Prereq: Faculty Advisor's approval. [E]

##### AA 222 Portfolio (3)

Visual presentation techniques, design of basic personal identity system and preparation of portfolio; editing of work, organizing, formatting, presenting the design portfolio; preparation for entry into job market; participation in group portfolio presentation to area professionals required. To be taken final Spring semester prior to graduation. [S]

##### AA 240 Computer Applications for Graphic Design II (3)

Digital document generation; digital page layout and production in an industry standard

page layout application, preparing electronic "mechanicals" for output; basic draw program techniques. Intro to digital imagery; creation and editing of pixel based imagery in an industry standard image editing application. Prereq: AA 106, AA 140 or instructor's consent. [S]

##### AA 249 Special Topics in Graphic Design (1-3)

Intro to selected issues and/or problems in graphic design; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

#### AB - Collision Repair

##### AB 000 Collision Repair Technology

Current collision repair procedures; collision repair and refinishing of each part; auto welding, sheet metal repair, body and frame straightening; painting car body and interior/exterior parts; preparing written damage estimates; running successful body shop; hands-on activities emphasized; 30 clock hours/week. [E]

#### AC - Air Conditioning/Refrigeration

##### AC 000 Air Conditioning/Refrigeration Technology

Theory, application, operation and maintenance of air conditioning and refrigeration systems; 30 clock hours/week. [E]

#### AE - Aesthetics

AE 000 The aesthetics program specializes in preventative skin care and offers instruction to keep skin healthy and attractive. The aesthetics course consists of 750 hours of instruction in both theoretical and practical skill development required for licensure by the Tennessee State Board of Cosmetology. Theory and practical precede laboratory activities and students must complete basic aesthetics curriculum which demonstrates competence in both theory and practical skills before being allowed to participate in laboratory activities.

**AM - Automotive Technology****AM 000 Automotive Technology**

ASE certified training in Automotive Electronics; Engine Performance; Steering and Suspension; Manual Transmission & Drive Train; Automatic Transmission & Transaxles; Heating, Ventilation & Air Conditioning; Brakes; Engine Repair & Rebuilding; 30 clock hours/week. [E]

**ART - Art****ART 1001 Artist in Residence (1-3)**

Visiting artists interact with students in lectures and workshops: 2 workshops for 1 credit; 3 workshops for 2 credits; 4 workshops for 3 credits; repeatable; maximum of 3 hours applicable toward a degree. [F,S]

**◆ART 1010,1020 Survey: Art History I,II (3,3)**

Visual arts within western civilization. *1010*—Near East, Aegean, Greece, Rome, early Christian, Byzantium, early medieval, Romanesque, Gothic eras. *1020*—Renaissance, baroque, rococo, neoclassic, romantic, moderns and post moderns. [1010—F, 1020—S]

**◆ART 1030 Art Appreciation (3)**

Study of significant works of art throughout history to heighten perception and enjoyment of the visual arts; consideration of formal elements in representative works of various styles, forms, and periods. [E]

**ART 1060 Making Art Safely (1)**

Survey of health and safety concerns in the field of visual arts; overview of chemicals used in diverse media; tips on studio design, safe use of materials and tools, and on how to stay informed; for artists and hobbyists. [on demand]

**ART 1110 Life Drawing I: Fine Arts Studies (4)**

Beginning to advanced studies from figure and still-life objects. Line and value studies emphasizing observation and accurate spatial and proportionate rendering; intro to composition. *1120*— [F,S]

**ART 1120 Life Drawing II (4)**

Focus on sustained studies, composition, value modeling, and detail rendering; practice with live models and still life; in-depth study of drawing media; intro to personal imagery and contemporary concepts. Must be taken in sequence.

**ART 1210 Three Dimensional Design: Fine Arts Studies (4)**

Design elements as they operate in 3-D; projects deal with real space and 3-D materials, may involve both relief and free-standing forms. [on demand]

**ART 1250 Stone Carving (3)**

Study of the direct method of carving alabaster and soapstone; use of hand, electric and pneumatic tools. [on demand]

**ART 1260 Outdoor Sculpture Fabrication (2)**

A class in metal sculpture based on the fundamental of public art. Course includes designing art for public areas and the metal fabricating of the art work. Must have some experience in metal fabricating, joining and finishing; repeatable; maximum of 4 hours applicable toward a degree. Prereq: Permission of Department. [F,S]

**ART 1310 Color: Fine Arts Studies (4)**

An introduction to color perception, theory and application as applied to fine arts, on a two dimensional plane. Areas studied include; theoretical and harmonic systems, color interaction and pigment/color mixing and historical, psychological and symbolic implications of color. [S]

**ART 1400 Beginning Photography (1)**

Beginning photography course; intro to the darkroom, photography as art, and significant historical and contemporary photographs; emphasizes camera work and aesthetics of an image; must provide own 35mm camera. [F,S]

**ART 2030 Art Structure (4)**

Broad spectrum course using various techniques to develop art appreciation across a range of cultures and periods; emphasis on the contemporary; intro to a variety of materials, methods, and concepts employed by artists. [on demand]

**ART 2100 Metal Casting (3)**

Metal casting, using the lost wax method; various mold making techniques utilized. Prereq: ART 1210. [on demand]

**ART 2160 Art Education (4)**

Emphasizes understanding of child art as basic to good teaching and parenting; range of materials and procedures appropriate to preschoolers and 1st–6th graders; teaching art appreciation at elementary level. [on demand]

**ART 2200 Clay Portraiture and Torso (3)**

Life study of the human head and torso in clay; proportions and anatomy stressed. Prereq: ART-2610. [on demand]

**ART 2310,2320 Painting and Composition I,II (4,4)**

Painting techniques in oil and/or acrylics. *2310*—Focus on developing color relationships and spatial and composition skills; studies may include abstract, still life, landscape, and/or figurative subject matters. *2320*—Stresses technical skills in sustained personal image composition; some assigned problems but focus on student's choice of non-objective, abstract, surreal, pop, or realistic direction. Must be taken in sequence. Prereq for 2310: ART-1110. (ART-1120 recommended.) [F,S]

**ART 2410,2420 Photography and Darkroom I,II (4,4)**

Fine art approach to photography; darkroom work and oral critiques; must provide own 35mm camera. *2410*—Black and white photography and printing; image, personal symbolism, avant garde composition, content,

and photographs as art statements. *2420*—Photography as expressive communication and art; creative approach to lighting methods, camera and paper use, film type, developing, enlarging, and mounting; focus on personal imagery and content. Must be taken in sequence. [F,S]

**ART 2430 Color Photography (4)**

Intro to techniques and theory of color photographic process; processing slides, negative film, and color printing; design, composition and perceptual aspects of color; focus on creative expression. Prereq: ART-2410. [on demand]

**ART 2450 Digital Photography I (3)**

Fine art approach to digital imaging. Basic techniques, equipment, trends and processes used in creating imagery as personal expression. Basic computer experience and digital camera required. [on demand]

**ART 2610,2620 Ceramics I,II (4,4)**

Studio in ceramics; focus on design and creative hand building, glazing and wheel-throwing. *2610*—Beginning techniques. *2620*—Intermediate techniques. Must be taken in sequence. [F,S]

**ART 2770 Field Studies of American Art (1-3)**

A class which includes travel within the United States, specifically to study art in American museums and galleries outside of the local area; repeatable; maximum of 1 hour applicable toward a degree. Extra fee payable to department. [F,S]

**ART 2780 Art Internship Studies (4)**

A course of work experience in the arts community. Prereq: Permission of instructor. [F,S]

**ART 2790 Intermediate Studio (3)**

Continued practice in technical expertise while expanding compositional and expressive components in chosen studio area; repeatable. Prereq: advanced standing in emphasized media and instructor's consent. [F,S]

**ART 2990 Special Topics in Art History or Theory (1-3)**

Art history/theory; topics change each term and include African-American art, photographic media history, experimental art surveys, art criticism or aesthetics, museum site learning via art travel in U.S. or abroad; repeatable for credit on different topics. [on demand]

**ART 2991 Special Topics in Studio Art (1-4)**

Media processes/studio techniques; topics change each term and include assemblage, stone-carving, watercolor, conceptual art, or workshops in clay, photography, drawing, wood-working, painting, matting, framing, or slide making; repeatable. [on demand]

**ASTR - Astronomy****◆ASTR 1030 Astronomy (4)**

Intro to astronomy; history and methods of astronomy, formation of the solar system, and physical characteristics of the sun, planets, moons, and minor members of the solar system (asteroids, meteoroids, and comets); class 3 hours, lab 3 hours. [S]

Auto Body Repair, See "AB-Collision Repair"

**BIOL - Biology****BIOL 1060 Introduction to Human Biology (4)**

Human anatomy and physiology related to body systems; relationship between structural and functional roles of system components; special focus on disease and homeostasis; basic histology and terminology; not intended for transfer; class 3 hours, lab 3 hours [F,S] (Note: credit will not be allowed for both BIOL 1060 and PC 115.) [F,S]

**◆BIOL 1110,1120 General Biology I,II (4,4)**

Class 3 hours, lab 3 hours. *1110*—Chemical concepts related to biology: cell structure and function, photosynthesis, respiration, cellular control, cell division, Mendelian and molecular genetics, ecological concepts. *1120*—Evolutionary principles, survey of the Kingdoms: Archebacteria, Eubacteria, Protista, Fungi, Plantae, Animalia; study of plant and animal biological systems. Must be taken in sequence. [E]

**◆BIOL 1310 Integrated Biology (3)**

An integrated approach to biological lecture topics and lab activities concerning cell structure and function; interaction between living things and environment; energy for life; heredity and reproduction; diversity of living organisms; evolution for life. Class 2 hours, lab 3 hours. Prereq: PHYS 1310 and CHEM 1310 [E]

**BIOL 1430 Nutrition (3)**

Nutrients and their relation to human growth, development and maintenance; role of foods and their nutrients on sociological, physiological, and psychological well-being; food records analysis and nutritional knowledge application. [E]

**◆BIOL 2010,2020 Human Anatomy and Physiology I,II (4,4)**

Structure, function, interrelationships and homeostasis of body organ systems; biochemical, cytological and histological studies integrate dissection, experimentation, 3-D visualization, and computer applications; focus on critical thinking and clinical application; class 3 hours, lab 3 hours. *2010*—Integumentary, skeletal, muscular, and nervous systems. *2020*—Endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems; includes immunity, metabolism, fluid-electrolyte dynamics, and genetics. Must be taken in sequence. [E]

**BIOL 2050 Plant Morphology (4)**

Analysis of the structure, reproductive processes, and evolutionary relationships of the main nonvascular and vascular plant groups; class 3 hours, lab 3 hours. Prereq: BIOL-1110 or equivalent. [F]

**BIOL 2230 Microbiology (4)**

Microbial morphology and physiology; focus on energy relationships, genetics, microbial control, immune responses and human pathogens using portal of entry approach; class 3 hours, lab 3 hours. Prereq: BIOL-1110 or 2010. [E]

**BIOL 2990 Special Topics in Biology (1-4)**

Detailed study of a specific topic in biological sciences; repeatable for credit on different topics. Prereq: Department head and instructor's consent. [on demand]

**BL - Building Construction Technology****BL 000 Building Construction Technology**

A 1,290 hour program that trains students in four areas of the construction trade - carpentry, electricity, masonry, and plumbing.

Broadcasting, See "CO-Mass Communications"

**BST - Business Systems Technology****BST 000 Business Systems Technology**

Communication, data records management, business math and English, office computer applications and procedures, personal/professional development; 30 clock hours/week. [E]

**BU - Accounting****BU 114,115 Principles of Accounting I,II (3,3)**

Principles, practices and techniques of accounting. *114*—Emphasis on basic functions for proprietorship and partnership. *115*—Emphasis on partnership, corporation and managerial accounting; analysis of financial statements. Must be taken in sequence. [E]

**BU 185 Federal Taxes (3)**

Study of individual income tax; includes issues in form preparation such as tax credits, tax rates, capital gains and losses, and personal deductions. [F]

**BU 201 Accounting Internship (3)**

Work experience in career specialties related to accounting technology; 9 hours/week at approved local business without compensation. [S]

**BU 204,205 Intermediate Accounting I,II (3,3)**

Theory and structure of financial statements; emphasizes generally accepted accounting principles. Must be taken in sequence. Prereq: BU 115. [204—F, 205—S]

**BU 210 Business Tax Reporting (3)**

Surveys local, state, and federal tax regulations for proprietorships, partnerships, corporations and nonprofit organizations; includes payroll, business, excise, and sales taxes. Prereq: BU 115, 185; or instructor's consent. [S]

**BU 211 Legal Environment of Business (3)**

Principles of law governing business transactions: contracts, sales and agency. [E]

**BU 212 Business Law (3)**

Principles of law governing business transactions: business organizations, property laws, commercial paper, secured transactions, and business legal environment. Prereq: BU 211 [S]

**BU 224 Cost & Budgeting (3)**

Study of cost accounting principles and procedures using accounting as managerial tool; emphasis on cost determination methods. Prereq: BU 115. [F]

**BU 235 Fraud Examination (3)**

Covers the principles and methodology of fraud detection and deterrence. Topics include skimming, cash larceny, check tampering, register disbursement schemes, billing schemes, payroll and expense reimbursement schemes, non-cash misappropriations, corruption, accounting principles and fraud, fraudulent financial statements, and interviewing witnesses. Prereq: BU 114 or 1 year relevant experience and instructor's consent. [on demand]

**BU 250,251 Accounting Information Systems I,II (3,3)**

Core concepts in using commercial application software in accounting information systems; integrates software application projects with course topics; experience with computer applications required. 251 includes internal controls as they relate to EDP and systems for managerial decision making. Must be taken in sequence. Prereq: BU-114. [250—F, 251—S]

**BU 255 Professional Review in Accounting and Taxation (3)**

Condensed professional review of financial/managerial accounting and income taxation topics. Prereq: BU-115, 185, 204, 224. Concurrent BU-205. [S]

**BU 299 Special Topics in Accounting (1-3)**

Study of selected accounting and related topics of current and special interest. Prereq: BU-115 and/or faculty consent. [on demand]

Business Accounting, See "BU-Accounting"

Business Law, See "BU-Accounting"

Business Management, See "MG-Management"

Cardiopulmonary Resuscitation (CPR), See "PHED-Physical Education—General Courses"

**CD - Commercial Truck Driving****CD 000 Commercial Truck Driving**

Basic commercial truck operation principles and skills; safe operation, vehicle documentation, and proper load; all federal, state and local law compliance; minimum age of 21 required for program admission; 7.5-week course; 30-clock hours/week. [E]

**CHEM - Chemistry****◆CHEM 1010,1020 Introduction to Chemistry I,II (4,4)**

Principles of chemistry; not for chemistry majors; class 3 hours, lab 3 hours. 1010—Atomic and molecular structure, bonding, equation writing and stoichiometry, compound classification, gas, liquid and solid states, solutions, acids/bases. 1020—Basics of organic and analytical chemistry; organic compound families, their preparation and reactions; qualitative and quantitative analytical methods. Must be taken in sequence. Prereq: DSPM-0800. [1010—E, 1020—S]

**CHEM 1060 Survey of Organic and Analytical Chemistry (3)**

Second semester of principles of chemistry without lab; credit not given for both CHEM-1020 and CHEM-1060; CHEM-1020 substitutes for CHEM-1060, but not vice versa. Prereq: CHEM-1010 or equivalent. [on demand]

**◆CHEM 1110,1120 General Chemistry I,II (4,4)**

Properties of matter related to atomic and molecular structure; element and compound reactions and equations, stoichiometry, kinetics, and measurement techniques and calculation; 1120 lab includes qualitative analysis; for students in the field of science, medicine, or engineering; class 3 hours, lab 3 hours. Must be taken in sequence. Coreq for 1110: MATH-1710 or 1740. [E]

**◆ CHEM 1310 Integrated Chemistry (3)**

This course is an integrated approach to basic principles of chemistry. Integration will be between lab and lecture activities as well as between this and other areas of science. Major topics of study include physical and chemical properties of matter, atomic structure, kinetic-molecular theory and phase changes, chemical bonding, chemical reactions, types of properties of chemical reactions, water and aqueous solution chemistry, acid-base chemistry and pH, nomenclature and formula writing, naming and structure recognition of simple covalent, simple organic and biological molecules. Class 2 hours, lab 3 hours. Prereq: PHYS 1310 [E]

**CHEM 2010,2020 Organic Chemistry I,II (4,4)**

Aliphatic and aromatic hydrocarbons, stereochemistry, monofunctional and some polyfunctional compounds; basic separation, purification, synthesis and identification techniques emphasized in lab; for science and preprofessional majors; class 3 hours, lab 3 hours. Must be taken in sequence. Prereq for CHEM 2010: CHEM-1120. [2010—F, 2020—S]

**CHEM 2990 Special Topics in Chemistry (1-5)**

Detailed study of a specific chemistry topic; repeatable for credit on different topics. Prereq: Department head and instructor's consent. [on demand]

**CI - Civil Engineering Technology****CI 101 Construction Licensing (2)**

Basic concepts and practices in construction; emphasis on project contracts, elementary blueprint reading, scheduling, field operations, construction law, purchasing and cost control; Satisfactory/No Credit grading. [on demand]

**CI 102 Construction Calculations (3)**

Applied mathematics for the construction industry; covers basic math, applied algebra, applied trigonometry, and intro to construction estimating. [on demand]

**CI 103 Construction Project Administration (3)**

Establishing and controlling the flow of documentation on a construction project; focus on communication between owners, developers, architects, construction managers, facilities managers, general contractors, subcontractors, and vendors. [on demand]

**CI 110 Construction Safety (3)**

Knowledge for efficiency in the workplace; safety professionals and typical workplace accidents and injuries; preventive measures and developing, initiating, and evaluating safety training programs; [F,S]

**CI 111 Construction Blueprint Reading (2)**

Basics of proposal writing in construction industry based on sound estimates and takeoffs from budget-grade project prints; numbering sequence of the Construction Specifications Institute Master Format System. Prereq: CI-101 or instructor's consent. [on demand]

**CI 116 Construction Planning and Scheduling (3)**

Provides a working knowledge for planning and scheduling of construction projects; C.P.M., Precedence Method, PERT, Bar Charts, arrow diagrams, and computer applications. [on demand]

**CI 164 Construction Estimating (3)**

Construction estimating techniques/applications related to technical aspects required for quantity takeoffs in construction estimate preparation; the Construction Specifications Institute Master Format System's numbering sequence; computer applications may be covered. Concurrent: DSPM-0850. [S]

**CI 174,274 Surveying I,II (4,4)**

Fundamental concepts and practices of surveying; class 2 hours, lab 4 hours. 174—Theory of measurements and field notes; methods of obtaining horizontal and vertical distances, angles and directions; use of levels, transits, theodolites, and total stations; construction surveying, curves and volumes.

274—E.D.M. use and theory, traversing practice, adjusting methods, plotting a plat, computing the area and making topographic maps; State Plane coordinates, Public Land surveys; Photogrammetry and satellite surveying. Concurrent for 174: MATH-1720. Prereq for 274: CI-174, MATH-1720; or instructor's consent. [174—S, 274—F]

**CI 202 Construction Financial and Cost Analysis (2)**

In-depth study of financial and cost accounting means and methods related to small and medium sized construction companies, general contractors, and subcontractors. Prereq: CI-101 or instructor's consent. [on demand]

**CI 224 Hydraulics & Hydrology (3)**

Intro to fluid mechanics, hydrostatics, hydrodynamics, and hydrology; hydraulic devices, open channels, culverts, storm sewer, culvert and detention pond design; lab work parallels class work; class 2 hours, lab 2 hours. Concurrent: MD-134. [F]

**CI 231 Construction Materials Testing (3)**

Intro to lab practices in measuring construction material properties like soil, concrete, steel, wood, timber, asphalt; tests based on ASTM standards; class 2 hours, lab 2 hours. Concurrent: MD-134. [F]

**CI 233 Contracts and Specifications (3)**

Study of engineering contracts and specifications; business and legal issues, engineering ethics, competitive bidding, contracting procedures, general and technical specifications, and inspection procedures for contract enforcement. Prereq: Instructor's consent. [F,S]

**CI 242 Structural Steel (3)**

Analysis, design, and detailing of elementary structural steel; emphasis on structural components rather than entire structure. Prereq: MATH-1720. Concurrent: MD 134. [S]

**CI 243 Reinforced Concrete (3)**

Analysis, design, and detailing of elementary reinforced concrete structures; emphasis on structural components rather than entire structure. Prereq: MATH-1720. Concurrent: MD-242. [S]

**CI 298 Special Topics in Civil Engineering Technology (1-4)**

Specialized topics and/or problems in civil engineering technology; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

**CI 299 Special Topics in Civil Engineering Technology with Lab (1-4)**

Specialized topics and/or problems in civil engineering technology; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

**Criminal Justice****CJ 1010 Introduction to Criminal Justice (3)**

This course is an overview of the criminal

justice system. It is a broad-based interdisciplinary analysis of the philosophy, history, and processes of criminal justice's major components: police; courts; and corrections. It also addresses special issues including juvenile justice, drugs and crime, and terrorism. [F,S]

### **CJ 1070 Introduction to Criminal Law (3)**

This course is an overview of both substantive and procedural law related to the definitions, investigations, processing, and punishment of crimes. It provides an overall understanding of the articulation between law and the criminal justice system. Areas of study emphasize the nature and history of criminal law; criminal defenses; legal and social dimensions of crime; victims; punishment; and sentencing. [F,S]

### **CJ 2110 Information Systems in Criminal Justice (3)**

An introduction to the basic principles and use of the criminal justice information management tools through computer based systems.. [F]

### **CJ 2500 Crime and Media (3)**

Analyzes the role of the mass media in affecting our judgement, our attitudes, our perceptions of crime, and societal reaction to crime in general; how public knowledge of crime is fundamentally derived from the media, along with the creation of "fear of crime." It is the mass media that plays a significant role in the interpretation of criminality and our criminal justice system. [S]

### **CJ 2600 Corrections (3)**

An overview of the American correctional system, its philosophy and historical evolution. Emphasis on court procedures; alternatives to imprisonment; functions of the American correctional system; analysis of the punishment versus rehabilitation debate; and contemporary issues. Prereq: ENGL 1010[S]

### **CJ 2700 Introduction to Law Enforcement**

An overview of the American Police, including the philosophy and historical evolution behind the police force. Emphasis on policing procedures; crime prevention and control; functions of law enforcement; problems and needs facing the police; and contemporary issues. Prereq: ENGL 1010 [F]

### CNAP - Cisco Network Academy Program

#### **CNAP 1010,1020,1030,1040 CISCO Network Academy Program I,II,III,IV (4,4,4,4)**

Preparation for CISCO Network Academy Program Exam; class 3 hours, lab 3 hours. 1010-Introduction to how computers communicate with one or more computers. Includes the basic theories of electricity and electro-magnetism, data collision and collision detection. Topics include the OSI model and the peer to peer relationship that exists between similar OSI layers as computers connect, exchange data, and disconnect. TCP/IP, structured cabling project, and design and documentation. 1020-Wide area networks are discussed. CISCO routers are studied in

operational detail. The student learns how to use the Command Line Interface and how to configure CISCO routers. The OSI and TCP/IP models are compared and the student learns how these models interact. Various routing protocols are studied. IP addressing and sub-netting are thoroughly discussed and practiced. The student is introduced to network troubleshooting methods. 1030-The student continues learning new theories and applications including Virtual Local Area Networks, Access Control Lists, Virtual Private Networks, Wide Area Networks, Point to Point Protocol, Frame Relay, ISDN and Novell IPX. Application of gained knowledge is applied in the threaded case study throughout the semester. At the end of the semester, the student presents the solution to a complex network design scenario. 1040-Multiprotocol networks using LAN and WAN interfaces, NAT and PAT configurations on specific routers, Dynamic Host Configuration Protocol (DHCP), comparisons and contrasts between various WAN technologies. Must be taken in sequence. [1010-F, 1020-S, 1030-F, 1040-S]

### CO - Mass Communications

#### **CO 110 Introduction to Mass Communications (3)**

Survey of mass communications field; overview of mass media (TV, radio, newspapers, and magazines), their role and effect in society, and how they work together. [F,S]

#### **CO 202 Broadcast Announcing (3)**

Examination of broadcast communication principles and effective announcing techniques; lab and broadcast experiences cultivate on-air personality and announcing skills. [F,S]

#### **CO 204 TV Production (3)**

Practice and study in basic elements of television production; focus on studio facilities, equipment, and techniques. [F,S]

#### **CO 205 Radio and Television News Writing and Editing (3)**

Practice and study of preparing news for radio and television broadcasting. Prereq: CO-110, ENGL-1010, keyboarding skills. [F,S]

#### **CO 210 Communications Practicum (3)**

Classroom and supervised lab work in broadcast communications; FCC rules and regulations, operating procedures, radio station format, and program development; class 1 hour, lab 6 hours. Prereq: CO-110, 202. [F,S]

#### **CO 219 Internship in Television Communications (3)**

Field experience in television with supervision by College faculty and cooperating broadcast stations; written reports relating to the field experience; lab 9 hours. Prereq: Instructor's consent. [F,S]

#### **CO 221,231 Media Writing I,II (3,3)**

221-Introduction to language skills and factual

writing style for the mass media. News writing, information gathering and interviewing. 231-Researching, structuring, writing, and evaluating new stories, and practice in writing for public relations and advertising. Theoretical perspectives of news and other media information, comparisons among the media. Prereq for 221: CO 110, ENGL 1010. Prereq for 231: CO 221. [F,S]

#### **CO 230 Remote Television Production (3)**

Intensive practical experience in multi-camera remote television broadcasting; focus on production, direction, camera and audio operation, electronic graphics use, satellite news gathering and uplinking; class 2 hours, lab 2 hours. [F,S]

#### **CO 232 Public Relations (3)**

Introduces strategic issues and effective practices of communication between organizations and their constituencies. Includes the study of public opinion research, media relations, public communication campaigns, consumer identity, and representational ethics. Students gain practical experience in writing news releases, conducting surveys, and designing integrated campaigns. Prereq: ENGL 1010. [S]

#### **CO 240 News and Sports Broadcasting (3)**

Techniques and methods used by Radio-TV news and sports broadcasters; focus on reporting, writing, management of resources and on-camera presentation. Prereq: CO-202-or-204 or instructor's consent. [on demand]

#### **CO 241 Non-linear Video Editing (3)**

Master and employ advanced electronic video editing skills by completing various editing assignments utilizing a variety of linear and non-linear editing technologies and techniques. Prereq: CO 110. [F]

#### **CO 249 Special Topics in Mass Communications (3)**

Specialized topics in the field of mass communications; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

#### **CO 281 Media Management (3)**

This course deals with various media management functions, models, and operations. Topics will include advertising planning, media, strategy, creative execution, consumer behavior, campaign management, and the role of advertising agencies and governmental regulations. Prereq: CO 110, ENGL 1010. [S]

Computer Programming, See "CS-Information Systems"

Computer Repair, See "ER-Industrial Electronics"

Computer Science, See "CS-Information Systems"

Construction, See "CI-Civil Engineering Technology"

**COT - Computer Operations Technology****COT 000 Computer Operations Technology**

Computer components and functions; data; software applications; hardware assembly and repair; system diagnostics; networking; programming; 30 clock hours/week. [E]  
Security+ Certificate

Court Reporting, See "REAL-Realtime Reporting"

CP - Cooperative Education

**CP 101,102,103,104,105,106 Cooperative Education Work Experience I,II,III,IV,V,VI (1-3 each)**

Combines off-campus work with on-campus study, allows students to gain marketable job skills and develop self-confidence and interpersonal skills; credit based on hours worked; approved for unrestricted elective credit in career programs (A.A.S.). Satisfactory/No Credit.

Creative Writing, See "ENGL-English"

**CS - Information Systems****CS 101 Computer Literacy (3)**

Information about the nature of a computer applied to the roles that computers play in society; intro to the use and operation of microcomputers and commercial applications software packages; basic components of a computer, computer applications, data processing careers, electronic spreadsheets, databases, intro to word processing, and issues in computing. [E]

**CS 104 Fundamentals of Information Systems (3)**

Overview of the information systems discipline; base number systems, computer, data, and file organization, career opportunities, and current technology concepts. [E]

**CS 105 Intro to Microsoft Office 2007 (1)**

This course will introduce the Office 2007 user interface and the new or updated features of Microsoft Word, Excel and Powerpoint. It is intended for students who already know and are familiar with Office 2003. The course will not cover the basics of how to use Office Applications. Prereq: CS 101 or permission of instructor. [E]

**CS 108 Internet Applications for Educators (3)**

History of the Internet and classroom application; focus on accessing Internet resources. [Su]

**CS 109 Maintaining Classroom Technology (3)**

Covers basic skills needed to set up and maintain technology in the classroom. [Su]

**CS 114 Concepts of Programming (3)**

Basic concepts of traditional computer program design, design tools, and an intro to object technology. [E]

**CS 124 Visual BASIC I (3)**

Intro to the concepts of computer program design through the Visual BASIC language. Use of controls, forms, code modules, functions and procedures to create Windows applications. [F,S]

**CS 140 Internet Foundations (3)**

Fundamentals of Web Site Design - domains, Web hosting, evolution of browsers and HTML/XHTML, current standards in Web design, basic techniques for creating and maintaining Web pages using software tools, basic understanding of issues related to use of scripting, Web page interactivity, accessibility and multimedia. Prereq: CS 101 or equivalent, or proof of computer competency. [F,S]

**CS 150 Principles of Web Site Design (3)**

Concepts and principles for designing Web sites; basics of creating Web pages using XHTML and Cascading Style Sheets; enhancing a Web site with color, images, tables and other page elements; and publishing a Web site to a Web server. [on demand]

**CS 151 Introduction to Adobe Flash (3)**

This course covers the fundamental concepts of Adobe Flash. In this course students will learn step-by-step instruction that will guide them through creating, modifying, and enhancing Flash CS3 files. Extensive in-class projects reinforce critical skills by requiring students to apply them to real-world scenarios. [on demand]

**CS 152 Introduction to Adobe Dreamweaver(3)**

This course covers the fundamental concepts of Adobe Dreamweaver with a strong emphasis on design. In this course students will learn all the basic functions of Dreamweaver, from developing a complete Web site to fully understanding how to get Web sites up and running on the Web. [on demand]

**CS 155 Web Graphics (3)**

Basic concepts of Adobe Photoshop with an emphasis on techniques for working with images for Web design. Covers how to work with image file formats, layers and selection techniques, adding type to images and the use of color in Web Pages. Students will also learn how to prepare images for the Web by cropping images, creating thumbnail images, optimizing images, creating slices and image maps, and creating animated GIFs. [S]

**CS 160 Java Programming I (3)**

160—An introductory course in the Java programming language. Course includes object-oriented techniques and development of simple applications. [S]

**CS 161 Java Programming II (3)**

Covers advanced features. Must be taken in sequence or have instructor's consent. Prereq: CS 160. [F]

**CS 178 Fundamentals of UNIX (3)**

Overview UNIX system administration; booting and shutting down, root account, controlling processes, file system organization, drivers

and the kernel, networking, security, daemons, and other UNIX concepts. Prereq: CS-176 [on demand]

**CS 185, C++ Programming Language I (3)**

Intro to computer program design concepts and development using the C++ programming language; orientation towards syntax, usage, modularity of program design, and development of program libraries; credit not allowed for both CS-185 and EG-225. Prereq for 185: CS 124 or CS 160 or instructor's consent. [S]

**CS 190 Introduction to Macintosh (3)**

Intro to Macintosh computers; basic operation, maintenance and terminology; intro to use of mainstream advertising and graphic design software; projects include use of conceptual skills to produce basic design projects incorporating page layout and production techniques. [F,S]

**CS 197 Spreadsheet Software Applications (3)**

Designed for students who have been introduced to microcomputer use and operation, have basic knowledge of Windows environment, and wish to learn to use electronic spreadsheet software package. [F,S]

**CS 198 Database Software Applications (3)**

Designed for students who have been introduced to microcomputer use and operation, have basic knowledge of Windows environment, and wish to learn to use commercial database software package. [F,S]

**CS 204 Microcomputer Architecture (3)**

Provides background for using the microcomputer as a business tool; microcomputer basics with focus on hardware components and configurations, security, and networking. Prereq: CS-104 [S]

**CS 205 Computer Networks (3)**

Basic data communications and networks; data communication concepts, standards, local area networks OSI model, and network hardware and software. Concurrent: CS-276. [S]

**CS 215 Local Area Network Management (3)**

Management of computer local area networks; server and workstation installation, network performance management, managing client services, print services, and security. Prereq: CS-205. [S]

**CS 225 Visual BASIC II (3)**

Advanced features: file processing, data access, and communicating with other Windows applications, including object linking and embedding. Prereq: CS 124 [S]

**CS 231 Numerical Methods (3)**

Foundation for basic numerical methods; higher order equations, systems of equations, interpolation and curve fitting, numerical integration, and differential equations; problem solution using the computer and elementary discussion of error control. Prereq: CS-185. Coreq: MATH-1920. [on demand]

**CS 240 Computer User Support (3)**

Overview of computer user support; includes troubleshooting, problem-solving, personal communications, needs assessment, product documentation, user training, and help-desk operation. Prereq: CS 205. [S]

**CS 241 Intermediate Web Site Design (3)**

Advanced concepts in Web site design using XHTML and Cascading Style Sheets to create forms and advanced page layouts. Provides an introduction to shopping carts and other advanced page features. Prereq: CS 150. [S]

**CS 242 Javascript for Designers (3)**

Introduction to Javascript for non-programming majors. Students use Javascript to incorporate Dynamic HTML (DHTML) into pages with Cascading Style Sheets. Prereq: CS 241 [S]

**CS 244 Systems Analysis and Design (3)**

Integration of manual and data processing techniques applied to business and science; complex application areas studied with view toward development and analysis of systems and procedural improvements; focus on case study approach. Prereq: CS 185 or CS 160. [S]

**CS 248 Survey of Computer Topics (1-4)**

Specialized topics and/or problems in information data processing studied at an introductory level; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

**CS 249 Topics in Computer Applications (3)**

Specialized topics and/or problems in computer data processing studied in detail; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

**CS 250 Introduction to Active Server Pages (3)**

An introduction to the Active Server Pages technology, client-side and server-side scripting using ASP.NET in a Visual Studio 2 environment. Prereq: CS 225, CS 198, CS 296. [S]

**CS 251 Scripting Languages (3)**

Intro to JavaScript and VBScript programming languages; covers both client-side and server-side programming. Prereq: CS-250. [on demand]

**CS 276 Operating Systems (3)**

Basic operating systems principles and operating systems internals. The hardware/software interface, user interface, file systems, resource management, process management, memory management, network operating systems concepts. Detailed coverage of current operating systems, such as, Windows and UNIX. Concurrent: CS 161 or 2 programming classes. [S]

**CS 285 C++ Programming II (3)**

Covers object-oriented design, design and implementation of C++ classes, inheritance, C++ pointers and dynamic memory, recursion,

linked lists, and data structures - stacks and queues. Prereq: CS 185; or instructor's consent. [F]

**CS 293 Computer Applications in Management (3)**

This course is designed for those who will use a suite of commercial software applications in an office setting. Covers advanced file management techniques as well as advanced concepts of word-processing, spreadsheet, database and presentation software. Students will also learn to integrate the various applications of an office suite. Prereq: CS 101 or equivalent, or consent of Instructor. [F,S]

**CS 296 Principles of Database Management Systems (3)**

Basic concepts of database management systems (DBMS); terminology, types of systems, large and small system implementation, report generators, and user interface. Prereq: CS 124. [F]

**CS 299 Special Projects (3)**

Integrates concepts and skills learned in previous programming courses; focus on solutions to typical problems encountered in business; case studies in systems and programming; repeatable for credit with different programming languages. Prereq: CS 285. [S]

**CT - Chemical Technology****CT 101 Foundational Studies for Chemical Process Operator (4)**

Intro to terms and basic concepts used in food and chemical process industries; helpful to prospective and existing employees in the industry and provides base for follow-up studies in chemical and food processing; class 3 hours, lab 3.5 hours. [on demand]

**CT 102 Fundamentals of Process Operations (4)**

Intro to chemical process operation basics; overview of basic process equipment characteristics involved in chemical manufacturing—heat exchangers, steam traps, pumps, valves, piping, and sensors; class 3 hours, lab 3.5 hours. [on demand]

**CT 107 Plant Statistics (1)**

Intro to statistical thinking and its industrial applications; includes statistical process control, Excel use, and plant-specific control charts and graphs. Prereq: CT-112. [on demand]

**CT 111 Introduction to Process Technology (3)**

Overview of process technology ranging from safety to process utilities; includes a plant visit. Prereq: DSPM-0800, DSPR-0800, DSPW-0800. [F]

**CT 112 Industrial Mathematics (3)**

Basic mathematical operations, systems of measure, problem solving, geometry, right angle trigonometry, and their industrial applications. Prereq: DSPM 0800,

DSPR-0800, DSPW-0800. [F]

**CT 113 Industrial Chemistry (4)**

Intro of inorganic and organic chemical theories and their industrial applications; includes case studies, safety, and communication skills; class 3 hours, lab 2 hours. Prereq: DSPM-0800, DSPR-0800, DSPW-0800. [F]

**CT 115 Process Chemistry (3)**

Intro to organic chemistry and industrial applications of organic and inorganic theories; focus on plant-specific process chemistry; includes case studies, safety, and communication skills. Prereq: CT 111, 113. [on demand]

**CT 121 Industrial Process Equipment (4)**

Intro to operation and utilization of industrial process equipment; includes preventative maintenance, safety, troubleshooting; and communication skills; class 3 hours, lab 3 hours. Prereq: CT-111. [S]

**CT 122 Introduction to Quality Control (3)**

Intro to quality concepts and applications used in process industries; includes a study of the statistical methods of quality control, quality tools, control charts, team skills and communication skills. Prereq: CT-111, 112. [S]

**CT 123 Introduction to Process Operations-(4)**

Intro to theory, equipment, and application of common industrial processes such as distillation and evaporation; includes case studies, safety, troubleshooting, and communication skills; class 3 hours, lab 3 hours. Prereq: CT-111, 113. [S]

**CT 124 Introduction to Process Control and Instrumentation (3)**

Intro to the principles of process control and the functions of instruments used to monitor and control chemical processes; includes the use of process control diagrams, case studies, troubleshooting and communication skills. Prereq: CT-111. [S]

**CT 150,220 Unit Operations I,II (4,4)**

Processes and equipment used to convert raw materials into chemical products; class 3 hours, lab 3 hours. 150—Characteristics and operations of materials handling and storage systems; checks and maintenance requirements; mixing operations, tanks, pumps, conveyors, and piping. 220—Focus on types of reactors, energy input/output, and reactor control methods. Must be taken in sequence. [on demand]

**CT 210 Basic Laboratory Techniques (4)**

Intro to basic laboratory techniques; filtration and extraction; use of laboratory equipment and glassware; focus on industrial applications, safety, and plant-specific techniques; class 3 hours, lab 2 hours. Prereq: CT 115. [on demand]

**CT 211 Instrumental Analysis (4)**

Spectroscopy applications and basic theory; standard lab experiments and chemical analysis methods using UV-Visible, fluorescence, atomic absorbance and



emission, total organic carbon, and fourier transform infrared spectrometers; class 2 hours, lab 6 hours. [on demand]

### CY - Cosmetology

#### CY 000 Cosmetology

Personal and shop safety, sanitation/sterilization; salon equipment/implements, scalp and hair care, hair styling, permanent/thermal waves, relaxers, color, straightening, manicures, facials; electricity and electrical safety practices; intro to anatomy/physiology and organic/inorganic chemistry; salesmanship; 30 clock hours/week. Note: 1500 clock hours required for State Board licensure. [E]

### DANC - Dance

Designated courses are repeatable for credit, but no more than 12 hours of Applied Instruction and/or Performing Ensemble, in any combination, may be applied toward a degree.

#### DANC 1101 Dance Performance I (3)

Introduction to the exploration of the expressive elements of rehearsal and performance; notated works, guest artist choreography, and public (college/community) performances. [F/S]

#### DANC 1151 Introduction to Dance (3)

Introduction to understanding the language of dance; focus on how dance has enriched the world's cultures with emphasis on developing an aesthetic responses through critical analysis of dance traditions. [F/S]

#### DANC 1201 Dance Composition I (3)

Introduction to literal and non-literal approaches to choreography; focus on basic and historical elements and principles used in creating and composing dances. [F/S]

#### DANC 1821 Modern Dance I (3)

Introduction to the art of modern dance; focus on basic techniques, concepts and principles used to study this dance form; class 3 hours. [F,S]

### DAST - Dental Assisting

*Admission to the program and CPR certification is a prerequisite for all DAST courses. All Fall Semester DAST courses are prerequisites to all Spring Semester courses and all Spring Semester courses are prerequisites to the Summer Semester courses. All courses taught in the same semester are corequisites. Exceptions are by permission of the Program Director.*

#### DAST 1120, 1121 Basic Sciences I, II (3, 2)

Basic sciences for dental assistants. **1120** – Anatomy and physiology, microbiology, oral anatomy, tooth morphology, histology and embryology. **1121** – Oral pathology, nutrition, pain control and pharmacology. [1120 - F, 1121 - S]

#### DAST 1130, 1131 Clinical Skills I, II (4, 3)

Skills development in the clinical setting. **1130** - emphasis on chairside assisting in general dentistry and on infection control; class 3 hours, lab 3 hours. **1131** - A continuation of Clinical Skills I with emphasis on advanced intraoral skills and assisting with specialties as they relate to general dentistry; class 2 hours, lab 3 hours. [1130 - F, 1131 - S]

#### DAST 1140 Dental Radiology (4)

A study of the theory and practice of dental radiology; emphasis on patient and operator safety, technical aspects of x-ray production, image quality, and preliminary interpretation; class 3 hours, lab 3 hours. [F]

#### DAST 1150 Dental Materials (4)

Dental laboratory skills to include the proper manipulation and storage of restorative materials, impression materials, gypsum, resins, abrasives, and waxes; emphasis on laboratory and material safety; class 3 hours, lab 3 hours. [F]

#### DAST 1160 Dental Office Management (3)

Preparation to serve as a dental receptionist or dental office manager; includes insurance claims, appointment control, records management, payment plans, collections, disbursements, and inventory control. [S]

#### DAST 1170, 1171 Clinical Practice (7, 6)

Supervised clinical experience with emphasis on professional, ethical and legal aspects of dentistry. Students must provide own transportation to and from off-campus clinical sites; valid CPR card required for participation in clinical practice. **1170** – assisting in general dentistry to master basic dental assisting skills; class 2 hours, clinical 15 hours. **1171** – a continuation of Clinical Practice I to master more advanced dental assisting and specialty skills; class 2 hours, clinical 12 hours. [1170 - S, 1171 - U]

### DD - Computer-Aided Design Technology

#### DD 100 Introduction to CAD (1)

Intro to a PC-based Computer-Aided Design (CAD) system; Satisfactory/No Credit grading. [on demand]

#### DD 101 Microcomputer Drafting (3)

Intense overview of AutoCAD's microcomputer-based drafting software; geometric construction and editing concepts; focus on AutoCAD language and syntax; class 2 hours, lab 2 hours. Prereq: Drafting experience or instructor's consent. [F,S]

#### DD 114, 124, 204 CAD Engineering Drawing I,II,III (3,3,3)

CAD engineering drawing using AutoCAD software; class 2 hours, lab 3 hours. **114**– Introductory level; includes scales, sketching of multi-view and pictorial drawings, AutoCAD geometry construction and editing techniques, dimensioning, and plotting. **124**–Intermediate level; includes electrical, piping, fasteners, welding, power transmission, property plats, elevations, and structural steel designing; design project required. **204**–Advanced level;

includes developments, intersections, limits, tolerances, GD&T, detail and assembly drawings, cams, scripts and slides, menu customization, intro to 3-D wireframe, surfaces, and solids modeling drawings. Must be taken in sequence. DD 124 Prereq: DD 114. Concurrent MATH 1710 or instructor's consent. DD 204 Prereq: DD 124 Concurrent MATH 1720; or instructor's consent.

#### DD 116 CAD for Electronics (3)

Intro to mechanical and electrical/electronic drafting practices and procedures; focus on pictorial and electronic drawings using CAD; class 2 hours, lab 2 hours. Prereq: EE-110, ET-115; or instructor's consent. Concurrent EE-121. [S]

#### DD 118 Introduction to Intergraph Microstation (3)

Intense intro to Intergraph Microstation drafting and design software; concepts of geometric construction and editing; focus on the Microstation language and syntax; class 2 hours, lab 2 hours. Prereq: Drafting experience or instructor's consent. Concurrent DD 124. [S]

#### DD 214 Mechanical Desktop (3)

Intro to Mechanical Desktop software; includes surface modeling, parametric design, assembly modeling, and part modeling; class 2 hours, lab 3 hours. Prereq: DD-124 or instructor's consent. [S]

#### DD 216 Architectural Desktop (3)

Intro to Architectural Desktop software; class 2 hours, lab 3 hours. Prereq: DD-114, MATH-1710. [on demand]

#### DD 218 Civil 3D (3)

Intro to Civil 3D software. Includes working with points, surfaces, projects, horizontal alignment, profiles, parcels, grading, corridors and pipe networks; class 2 hours, lab 3 hours. Concurrent: DD 124. [on demand]

#### DD 222 Introduction to Pro/ENGINEER (3)

Fundamentals of the Pro/ENGINEER software; concepts of solid modeling, including the fundamentals of part, assembly, and drawing creation; class 2 hours, lab 2 hours. Prereq: DD-114 or instructor's consent. [on demand]

#### DD 227 Inventor I (3)

Use of feature based, dimension driven, 3-D solid modeling design software; Model building, assemblies, and production drawings; class 2 hours, lab 2 hours. Prereq: DD 124 [F]

#### DD 228 Inventor II (3)

Advanced features, sheet metal parts, advanced sweeps and lofts, importing and exporting files, and advanced modeling. Class 2 hrs, Lab 2 hrs. Prereq: DD 227 with a grade of C or better. [S]

#### DD 243,253 SolidWorks I,II (3,3)

Use of parametric, solid modeling design software; class 2 hours, lab 2 hours. 243-Prototyping, assemblies, and production drawings. 253-Advanced features; sheetmetal

♦ and \*, see "Legend page 74."

parts, advance sweeps and lofts, importing and exporting files, and assembly modeling. Must be taken in sequence. [on demand]

**DD 284 Design Capstone Project (3)**

Capstone course for Design/Drafting majors in Engineering Technology. Applies skills learned in previous courses in the development of a team project. Prereq: DD 227, DD 243. Concurrent: DD 228, DD 253, or instructor's consent. [S]

**DD 298 Special Topics in CAD (1-4)**

Selected specialized topics and/or problems in Computer-Aided Design (CAD); repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

**DD 299 Special Topics in CAD with Lab (1-4)**

Selected specialized topics and/or problems in Computer-Aided Design (CAD); repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

**DH - Dental Hygiene**

*Admission to the Dental Hygiene Program is a prerequisite for all DH courses unless otherwise noted. Please consult the SUMMARY OF REQUIRED HOURS. All DH courses shown in the same term are corequisites and all DH courses shown in the preceding term(s) are DH prerequisites.*

**DH 132,135,238,239 Dental Hygiene I,II,III,IV (9,9,5,3)**

Course series integrates didactic knowledge with affective behavior and psychomotor skills. *132*—Tooth morphology; head, neck and oral anatomy; oral embryology, histology and pathology; radiology; periodontology; pain management; dental materials; oral health education; patient management, including special needs; clinical dental hygiene; medical and dental emergencies; legal and ethical issues; infection and hazard control management, including blood borne infectious diseases; focus on clinical safety, critical thinking and decision making. *135*—Focus on recognition of conditions requiring treatment modification (e.g., developmental abnormalities, drug therapies, medical conditions) evident during medical and dental history review, radiographic interpretation, and clinical examination; role of research in the profession. *238*—Focus on treatment modifications necessitated by clinical findings. *239*—Focus on lifelong learning strategies, e.g., literature review; outreach projects with community agencies. Prereq for 239: Program director's consent. [132, 238—F; 135, 239—S]

**DH 142,145,248,249 Dental Hygiene Applications I,II,III,IV (4,4,4,4)**

Application of dental hygiene theory; supervised provision of services on partner, lab manikin or client; lab hours: 11 in 142, 12 in 145, 14 in 248 & 249; Satisfactory/No Credit grading. *142*—Determination of services through accurate decision making stressed. *145*—Integration of preventive, educational and therapeutic concepts when treating clients. *248 & 249*—Preventive, educational and therapeutic

concepts for treating increasingly severe gingivitis and periodontal conditions. [142, 248—F; 145, 249—S]

**DH 255 Dental Hygiene Clinical Enhancement (2)**

Refines clinical skills for practicing dental hygienists or students; individual attention given to participants; focus on scaling and curettage techniques; lab 7 hours; Satisfactory/No Credit grading. Prereq: Instructor's consent. [on demand]

Diagnostic Medical Sonography, See "US-Diagnostic Medical Sonography"

**DM - Diesel Equipment Mechanics****DM 000 Diesel Mechanics**

Diesel engine mechanics; diesel assembly and disassembly, safety regulations, and shop equipment operation; cylinder block, camshaft, crankcase and oil pan; cylinder head/valves; timing and valve mechanism, air intake, starting and fuel systems; trouble shooting and tune-ups; 30 clock hours/week. [E]

Drama. See "Theatre"

**DSPM - Developmental Mathematics****\*DSPM 0700 Basic Mathematics (3)**

Integers, fractions, decimals, percents, ratio and proportions, basic statistics, measurement conversions, exponents, numerical and algebraic expressions; appropriate use of graphing calculator and applications. Prereq: ACT or COMPASS Placement. [E]

**\*DSPM 0800 Elementary Algebra (3)**

Real number system, linear equations and inequalities, graphing equations and inequalities, systems of linear equations; appropriate use of graphing calculator and applications. Prereq: DSPM 0700; or ACT or COMPASS Placement. [E]

**\*DSPM 0850 Intermediate Algebra (3)**

Polynomials, factoring, quadratic functions, rational expressions, radicals, rational and radical equations, integer exponents, Pythagorean Theorem; appropriate use of graphing calculator and applications. Prereq: DSPM-0800; or ACT or COMPASS Placement. [E]

**DSPR - Developmental Reading****\*DSPR 0690 Individualized Instruction in Reading Skills (2)**

Individualized course for students with significant weakness in general or specific reading skills and in need of individualized instruction and guided practice; may be taken before or after DSPR-0700 and/or DSPR-0800; lab 4 hours; repeatable. Prereq: Assessment test recommendation or Department Head's consent. [E]

**\*DSPR 0700 Basic/Developmental Reading (3)**

Lecture/lab course to improve ability to comprehend written materials, identify main and subordinate ideas, make inferences, separate fact from opinion, develop flexibility and efficiency in reading rate, and improve vocabulary and reasoning skill. Prereq: ACT or COMPASS Placement. [F,S]

**\*DSPR 0709 Basic Reading and College Success (6)**

College success strategies with focus on basic reading skills necessary to master college textbooks, critical thinking, career and goal setting, study skills and diversity in the college community. Prereq: ACT or COMPASS placement. [E]

**\*DSPR 0800 Developmental Reading: Reading Analysis and Reasoning (3)**

Designed to improve student's overall reading skills to college level; focus on reasoning skills, analysis of materials for bias and point of view, and increasing flexibility and efficiency in reading rate. Prereq: DSPR-0700; or ACT or COMPASS Placement. [E]

**\*DSPR 0870 Topics in Reading (1)**

For students who cannot demonstrate mastery of objectives in a particular area of competency in language arts even though he/she has competency in other language arts areas; students may work on spelling, vocabulary, rate and flexibility, or reasoning skills; lab 2 hours. Prereq: Assessment test or instructor's recommendation. [on demand]

**DSPS - Developmental Learning Strategies****\*DSPS 0800 Learning Strategies (3)**

Designed to develop effective study habits, attitudes and skills in the classroom setting; focus on application of study skills, critical thinking, and the processes of learning how to learn in college. [E]

**DSPW - Developmental Writing****\*DSPW 0700 Basic/Developmental Writing (3)**

Basic writing skills and grammar review; stresses applying basic mechanical skills to writing paragraphs and sentences; primary emphasis on writing coherent, well-developed, unified paragraphs; advancement to DSPW-0800 upon completion. Prereq: ACT or COMPASS Placement. [E]

**\*DSPW 0800 Developmental Writing (3)**

Continued study and application to achieve writing skills needed for college; student will write unified, coherent paragraphs and essays in acceptable, standard form; will also produce a research essay. Prereq: DSPW-0700; or ACT or COMPASS placement. [E]

**EA - Emergency Medical Services**

A prerequisite to all EA courses is admission into the program in which the course is required. Please consult the brochure for the specific program. All courses shown in the same term are corequisites and all courses shown in the preceding term(s) are prerequisites.

**EA 106,116 Emergency Medical Technician I,II (8,8)**

Two semester sequence provides minimum training required to staff a licensed ambulance and prepares students for licensing exams; taught in accordance with the 1994 National Dept. of Transportation EMT-B curriculum and Tennessee regulatory requirements. [106-F, 116-S]

**EA 226,227,228 Paramedic Theories I,II,III (14,14,7)**

Based on 1998 Department of Transportation EMT-Paramedic curriculum. 226-Covers preparatory subjects, airway management & ventilation, and patient assessment. 227-Medical emergencies and traumatic injuries. 228-Special patient populations, assessment-based management; ambulance operations. [226-F, 227-S, 228-Su]

**EA 240,241,242 Paramedic Clinical Practice I,II,III (2,3,4)**

240-Ambulance observation, EMS communication, aeromedical services, rescue, labor and delivery, burn unit, operating room, forensic center. 241-Emergency and Pediatric Emergency departments. 242-Precepted prehospital paramedic field internship. [240-F, 241-S, 242-Su]

**EC - Economics****EC 113 Consumer Economics (3)**

Provides knowledge to make rational decisions when purchasing clothing, food, housing, consumer durables and insurance, using credit, saving and investing, and preparing for retirement and property distribution. [on demand]

**◆EC 211,212 Principles of Economics I,II (3,3)**

211-Macro economics; study of national income and its determination, fiscal and monetary policy, money and banking, economic growth, and international economics. 212-Micro economics; study of the market system; covers the price system, labor and the distribution of income, government and business, and forms of business organization. [F,S]

**EC 235 Special Topics in Economics (1-3)**

Specific topics of current economic interest; repeatable for credit on different topics.

Prereq: Instructor's consent. [on demand]

**ECED - Early Childhood Education****ECED 1010 Introduction to Early Childhood Education (2)**

Orientation to the profession; family relationships, diversity, child development, age-appropriate practices, observation and assessment, learning environments, health and safety, and guidance. [F]

**ECED 2010 Safe, Healthy Learning Environments (3)**

Basic principles of children's health, nutrition, hygiene, growth, disease and accident prevention in a family or child care program and the community. [F]

**ECED 2015 Early Childhood Curriculum (3)**

Pragmatic intro to Early Childhood Education; preparation for student teaching; focus on physical, emotional, cognitive, creative and social aspects of young children; includes field component. Prereq: ECED 1010, 2010. [S]

**ECED 2020 Infant, Toddler, Child Development (3)**

Physical, cognitive, social and emotional development of young children; application to child care, guidance and development; includes field component. Prereq: ECED 1010, 2010. [F,S]

**ECED 2030 Infant & Toddler Care (3)**

Procedures for stimulating intellectual and physical development of infants and toddlers as well as basic caregiving skills; includes field component. [on-demand]

**ECED 2040 Family Dynamics & Community Involvement (3)**

Role of family and community in the physical, cognitive, social, and emotional growth of the child in a diverse society; includes field component. Prereq: ECED-2015 or departmental consent. [F]

**ECED 2050 Psychomotor Development (3)**

Theories and application of psychomotor development; focus on motor skills; includes field component. Prereq: ECED-2020. [on demand]

**ECED 2060 Development of Exceptional Children (3)**

Physical, intellectual, and sensory impairments; community resources for diagnosis and treatment services; includes field component. Prereq: ECED-2020, 2040; or departmental consent. [F]

**ECED 2070 Developmental Assessment (3)**

Developing competency in screening children for developmental problems; community support programs and referral procedures; includes field component. Prereq: ECED 2020; or departmental consent. [S]

**ECED 2080 Language and Literacy Development in Early Childhood (3)**

Research-based principles and practices for providing children, birth to age nine, a strong foundation in language and literacy; field experiences required. Prereq: ECED-2015, 2020; or departmental consent. [F]

**ECED 2085 Math and Science in Early Childhood (3)**

Standards, principles, and practices in teaching mathematics and science to children, birth to age nine; focus on developing and integrated math and science curriculum; field experiences required. Prereq: ECED-2015, 2020; or departmental consent. [F]

**ECED 2090 Creative Development (3)**

Theories, teaching techniques, and basic program components of early childhood art instruction; use of art media and creative play activities. [on demand]

**ECED 2100 The Mentoring Teacher (3)**

Philosophy, principles, and methods of mentoring; focus on role of mentors as facilitators of adult learning. [on demand]

**ECED 2120 Administration of Child Care Centers (3)**

Organization and administration practices; staff-management relations, state and local licensing standards, national accreditation, CDA standards, tax laws, legal liabilities; laboratory observation and interaction. Prereq: ECED-1010, 2015, 2020, 2030. [on-demand]

**ECED 2130,2140,2150 Clinical Practicum I,II,III (2,2,2)**

Practicum caring for children, birth to age nine; 60 hours per semester. 2130-Physical and human qualities needed to create safe, healthy environments for learning. 2140-Reflective practices to examine quality, and set goals; experience in accredited site. 2150-Demonstration of competencies that produce positive developmental outcomes. Must be taken in sequence. Coreq for 2130: ECED 2010 or departmental consent. Prereq for 2140: ECED-1010, 2015, 2040; or departmental consent. Prereq for 2150: departmental consent. [2130-F, 2140-F, 2150-S]

**ECED 2510 Educating the Culturally Different (3)**

A course providing insight into the special problems and needs of children whose ethnic, religious, or cultural heritage is different from the majority culture group. The effects of poverty and prejudices on classroom performance are examined, as well as classroom practices to help overcome these handicaps. [F]

**ED - Education****ED 201 Foundations of Education (3)**

Intro to the history, philosophies, and present practices of elementary and secondary education in America; includes field component. [F,S]

**ED 202 Teaching Reading and Critical Thinking (3)**

An overview of strategies for teaching reading and critical thinking skills in kindergarten through third grade. Emphasis on assessment instruments, connections between reading and writing development and allowing for cultural diversity. [on demand]

◆ and \*, see "Legend page 74."

**ED 235 Special Topics in Education (1-3)**

Specific topics of traditional and current interest, including social developments and issues; repeatable for credit on different topics. [on demand]

**EDPY - Educational Psychology****EDPY 207 Educational Psychology (3)**

Applies the principles of psychology to the classroom. Topics include principles of human development, learning, effective instructional strategies, motivation, evaluative techniques and challenges facing teachers in the increasingly diverse classrooms in today's schools. Fieldwork required. [F,S]

**EE - Electrical/Electronic Engineering Technology****EE 110,212 Electrical Circuits I,II (4,4)**

Study of DC and AC circuits, including series, parallel and series-parallel; class 3 hours, lab 3 hours. *110*—Current, voltage, resistance, and power for DC circuits; capacitance, magnetism, inductance and DC transients; sinusoidal alternating waveforms. *212*—Sinusoidal current, voltage, phasors and impedance; resistance and impedance networks and circuit theorems; resonance, transformers and 3-phase circuits; advanced practices with lab instruments. Must be taken in sequence. Concurrent for 110: MATH-1710. Prereq for 212: MATH-1720. [110—F,S; 212—F]

**EE 113 Introduction to Power Plant Instrumentation (4)**

The study of the theory of operation, design, construction, and application of power plant instrumentation systems. [S]

**EE 121,221 Electronics I,II (4,4)**

Characteristics, parameters and basic physics of semiconductors; class 3 hours, lab 3 hours. *121*—Includes diodes, bipolar and field effect transistors, optoelectronic devices, and small signal and power amplifiers; covers biasing methods and application of diodes in elementary rectifier/filter circuits. *221*—Focus on linear integrated circuit technology; covers decibels and frequency effects, voltage regulators, and amplifiers. Must be taken in sequence. Prereq for 121: EE-110. [121—S,Su; 221—S]

**EE 140 Digital Circuits (4)**

Intro to digital circuitry basics; systems, codes, Boolean algebra, logic circuit design, types and analysis, logic storage devices, counters, registers, arithmetic and MSI (medium-scale integration) logic circuits; lab experiments enforce logic circuits design and analysis; class 3 hours, lab 3 hours. Concurrent: DSPM-0850. [F,S]

**EE 200,201 Networking Technology I,II (4,4)**

Local area networks; class 3 hours, lab 3 hours. *200*—Wiring, cables, telephone networks, modems, cable modems, protocol

and 1-server LANs. *201*—Larger LANs, connections and operations; network architectures and standards, TCP/IP, Ethernet, 10 Base T, Novell, Macintosh servers, ISDN and multimedia technology. Must be taken in sequence or have instructor's consent. [200—F, 201—S]

**EE 203 Telecommunications (4)**

Introduction to telecommunications with emphasis on wiring, cables, telephone networks, modems, protocols and local area networks; class 3 hours, lab 3 hours. [S]

**EE 250 Microcomputer Systems (4)**

Thorough study of DOS, DOS EDIT, DOSSHELL, DOSKEY, RAMDRIVEs and Batch files; advanced Turbo Basic methods including data/objects graphical display, basic object motion, and interrupts use; parallel data input/output; serial communication (RS-232) to terminals and other computers. Prereq: EE-110, ET-115. [F]

**EE 251 Microcontrollers Applications (4)**

Microcontroller interfacing and applications; single chip microcontrollers and single board computers in stand-alone applications; assembly level programming, program downloading, debugging; interfaces to various I/O devices and appropriate control software development; timing waveforms generated by microcontroller using programmable interrupts to control servos, stepper motors, and DC motors; on-chip analog-to-digital convertor and multiplexer to acquire, store, and process analog signals; class 3 hours, lab 3 hours. Prereq: EE-110, and ET-115 or EE-250. [S]

**EE 260 Programmable Logic Controllers (4)**

PLC system and components description; program functions including sequential on-off operations, timers, counters and data comparisons; PLC instructions use to perform numerical, logic and move functions on single element and multi-element files, forcing input/output instructions; program control, sequencer, and block transfer instructions application; class 3 hours, lab 3 hours. Prereq: EE-110, 140. [F]

**EE 261 Automation Control Systems (4)**

Discrete and continuous automation control systems; principle motors used as actuators in these systems; motor control devices and circuits studied; proportional, integral, and derivative control of 3-control loop model factory analyzed with theoretical discussion and lab investigation; mechanical/thermal transducers analyzed; PLC used for automatic control of factory cell; class 3 hours, lab 3 hours. Prereq: EE-121, 212, 260. Concurrent: EE-221 or instructor's consent. [S]

**EE 271 Capstone Project (3)**

Capstone course for Automated Controls and Computer Systems majors in Electrical/Electronic Engineering Technology. Applies skills learned in previous courses in the development of team projects. Prereq: EE 221, 250 or 260, MATH 1720. Concurrent: EE 212, 251 or 261, or instructor's consent. [S]

**EE 284 Electrical Technology for Mechanical Engineering Technology (3)**

Basic electrical/electronics theory/practice for

mechanical engineering technology; intro to electric and electronic devices; AC/DC circuits reviewed; emphasis on electrical power; transformers, generators, motors studied for single and 3-phase operations; electrical machinery controls studied; lectures enforced by lab experiments, videos, and tours of local companies; class 2 hours, lab 3 hours. Prereq: ET-115, MATH-1720. [F]

**EE 298 Special Topics in Electronics (1-4)**

Special topics and/or problems in electronics; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

**EE 299 Special Topics in Electronics with Lab (1-5)**

Special topics and/or problems in electronics; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

**EG - Engineering Transfer****EG 104 Vector Statics (3)**

Forces and their effect on rigid bodies at rest; free body diagrams, equilibrium in 2 and 3 dimensions, moments of inertia, and truss analysis. Concurrent: MATH-1920. [S, day/every year; F, night/odd years]

**EG 185 Introduction to Engineering Design (3)**

Introduction to the design process in engineering and computer aided design including: historical perspective, problem definition, idea generation, project planning and management, simple decision-making, development of visualization skill, interpretation and construction of 3-D objects through the use of sketching and basic computer-aided design software. Design exercises culminating in a conceptual group design project, with application of basic engineering science. Written and oral reports included. Concurrent: MATH 1720. [on demand]

**EG 222 Probability and Statistics for Engineering (3)**

Descriptive, inferential, and relational statistics including discrete and continuous distributions, bivariate and multivariate data and distribution, elementary sampling, interval estimation, hypothesis testing, analysis of variance, and experimental design. Concurrent: MATH 1720. [F]

**EG 224 Introduction to Engineering Computations (3)**

Engineering computations using Excel, Visual Basic.Net, and macros created in Visual Basic.Net accessed through the Excel platform. Programming topics include flowcharts, algorithms, input/output, data types, decisions, loops, functions, sub procedures, files, and arrays. All programs are related to engineering applications and analysis including problem solving techniques, applicable engineering fundamentals, and mathematical solution procedures. Prereq: MATH 1720. [F,S]

**EG 225 Engineering Programming (3)**

Study of the structure, design, and implementation of computer programming for engineering applications; flow diagram representation of efficient algorithms and proper syntax of the C++ computer language; credit not allowed for both EG 225 and CS 185. Prereq: MATH 1720. [F, day/every year; Su, night/odd years]

**EG 246 Mechanics of Materials (3)**

Stress-strain relationships under plane and 3-D deformations; Hooke's Law, extension, bending, shear, torsion, and beam deflections; Castigliano's theorem, column design and buckling, combined stresses, stress concentrations, and failure theories. Prereq: EG 104. [F, day/every year; S, night/even years]

**EG 247 Mechanics of Materials Laboratory (1)**

Experiments demonstrating material mechanics theory and engineering materials characteristics; labs include measurement and accuracy, hardness, impact strength, elasticity modulus, torsion, beam bending, and column buckling; individualized design project involving analysis, design and test of a structure required; class 1 hour, lab 3 hours. Concurrent: EG-246. [F, day/every year; S, night/even years]

**EG 248 Dynamics (3)**

Rectilinear, curvilinear, and rotary motion; work and energy, impulse and momentum principles; emphasis on machine motions; 3-D problems. Prereq: EG-104. [S, day/every year; F, night/even years]

**EG 270 Electrical Circuits (3)**

Direct current and sinusoidal steady-state analysis; resistance, capacitance, inductance, first and second order step response; Kirchhoff's laws, circuit theorems, and operational amplifiers. Concurrent: MATH-1920. [S, day/every year; F, night/odd years]

**EG 271 Electrical Circuits Laboratory (1)**

Lab for EG 270; use of circuit simulation software and basic electrical instrumentation; lab 3 hours. Concurrent: EG 270, MATH 1920. [S, day/every year; F, night/odd years]

**EG 298 Special Topics in Engineering (1-4)**

Specialized topics and/or problems in engineering; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

**EG 299 Special Topics in Engineering with Lab (1-4)**

Specialized topics and/or problems in engineering; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

Electrician, See "IE-Industrial Electricity"

Electronics, Industrial, See "ER-Industrial Electronics"

**ENGL - English****ENGL 0610 English as a Second Language (3)**

Designed for the non-native speaker of English; includes practice in writing, listening, reading and speaking; not intended for transfer; not accepted toward any degree program at Chattanooga State. [on demand]

**ENGL 0620 English as a Second Language III (3)**

Designed for the non-native speaker of English who possesses a mid-to-intermediate level of competency in spoken and written English. The course includes practice in writing, listening, reading and speaking. Not applicable to credit hours required for a degree or certificate. Prereq: ENGL 0610 or equivalent. [on demand]

**ENGL 1000 Tutoring Writing (1)**

In-depth view of writing and tutoring process, and current writing center theory; focus on professionalism, interpersonal skills, and collaborative learning; repeatable for credit. Prereq: ENGL-1010 and departmental consent. [on demand]

**◆ENGL 1010,1020 Composition I,II (3,3)**

Research projects required. *1010*—Focus on exposition and argument; process and development using various rhetorical patterns. *1020*—Focus on reading and responding to short fiction, poetry, drama and/or non-fiction prose. Must be taken in sequence. Prereq for 1010: Placement per TBR specifications or DSPW-0800. [E]

**ENGL 1030 Literary Studies Abroad (3)**

Study of the literary and cultural legacy of selected travel destinations (which change yearly, depending upon travel destination) through online reading, discussion, research, and writing. Students will explore the fiction, poetry, nonfiction, and film associated with the destination, as well as the societal, cultural, philosophical, and historical forces that influenced their development. Prereq: ENGL 1010 [S]

**ENGL 1035 Literary Studies in America (3)**

Study of the literary and cultural legacy of selected regions in America through reading, discussion, research, online interaction, writing, and personal travel to the destination. Prereq: ENGL 1010, enrollment and registration in the designated educational tour. [S]

**◆ENGL 2110,2120 American Literature I,II (3,3)**

Framework and major movements, writers, and works of American literature; research project required. *2110*—To 1865; focus on tracing the development of a national literature and literature's role in recording American cultural heritage. *2120*—From 1865; focus on various attempts to portray the American response to the complexity of life in the 20th century. Prereq: ENGL-1020. [2110—F, 2120—S]

**◆ENGL 2140 African-American Literature (3)**

Literature by African-American writers from the Colonial Period to the Modern Era; readings include written versions of traditional oral forms. Prereq: ENGL-1020. [F]

**◆ENGL 2210,2220 English Literature I,II (3,3)**

Literary, cultural, and historical aspects of British literature; focus on works that illustrate important literary trends; research project required. *2210*—To 1798. *2220*—From 1798. Prereq: ENGL-1020. [2210—F, 2220—S]

**ENGL 2240 Shakespeare: An Introduction (3)**

Study of representative plays by William Shakespeare selected from among the comedies, tragedies, and histories; research project required. Prereq: ENGL-1020. [on demand]

**◆ENGL 2410,2420 Western World Literature I,II (3,3)**

Survey of western literature; research project required. *2410*—Literary, cultural, and historical contributions of classical, medieval, and Renaissance periods to the value systems and world view of contemporary society; focus on development of aesthetic awareness and appreciation of literary art. *2420*—Selected readings from the 17th–20th centuries; focus on cultural and aesthetic values presented by the writers, their relationship to earlier literature, and their influence on contemporary literature. Prereq: ENGL-1020. [2410—F,S; 2420—S]

**ENGL 2540 Literature by Women (3)**

Historical overview of women's literary accomplishments in English; from the Middle Ages to the contemporary period; genres surveyed include the novel, autobiography, short story, feminist expository prose, drama, and poetry. Prereq: ENGL-1020. [on demand]

**ENGL 2630 Literature for Children (3)**

Survey of children's literature with special attention to preschool and elementary; genres include folk tales, myth, fantasy, fiction, poetry, biography, and non-fiction. Prereq: ENGL-1010. [F,S]

**ENGL 2640 Children's Literature: Contemporary Issues (3)**

Explores changes in children's literature of the last 25 years; current literature that addresses real-life issues confronting today's child and considered both helpful and controversial; includes novels, picture books, poetry, and non-fiction for children from preschool age to junior high; how to deal with sensitive issues and censorship. Prereq: ENGL-1010. [on demand]

**ENGL 2650 Literature for the Adolescent (3)**

Literature for the young adult with emphasis on stages of development and their relationship to the reading experience. Prereq: ENGL-1010. [on demand]

**ENGL 2710 Technical Reports (3)**

Logical organization, formatting, and stylistic conventions applied to communication in business/industry; focus on collaborative planning and presentation of research-based data and reader/listener-oriented communication; word processing assignments. Prereq: ENGL-1010. [E]

**ENGL 2830 Creative Writing: Introduction (3)**

Instruction and practice in writing poetry and/

◆ and \*, see "Legend page 74."

or short fiction; students read and discuss their own works as well as representative works by contemporary writers. Prereq: ENGL-1010. [on demand]

**ENGL 2840 Creative Writing: Poetry (3)**  
Instruction and practice in writing poetry. Prereq: ENGL-1010. [on demand]

**ENGL 2850 Creative Writing: Fiction (3)**  
Instruction and practice in writing fiction. Prereq: ENGL-1010. [on demand]

**ENGL 2990 Special Studies in English (3)**  
Topics of contemporary interest in language and literature; repeatable for credit on different topics. Prereq: ENGL-1010. [F,S]

### EO - Heavy Equipment Operator

#### EO - Heavy Equipment Operator

This 8 week program will provide the students with the necessary knowledge, skills and abilities required in the safe and efficient operation of specific pieces of heavy construction equipment and in preventative maintenance. Training will be available in the Crawler Tractors, Excavators (Track-hoe) and Motorized Road Graders. The program is accredited and recognized by the respective industry as a regional training resource. Training will be competency based in accordance with the National Center of Construction Education & Research (NCCER) curriculum. Training will consist of a specified common core and required competencies for each piece of unique equipment. This program is 275 clock hours.

### ER - Industrial Electronics

#### ER 000 Industrial Electronics

The student will be trained in construction materials and methods, conduit bending, electrical safety, electrical test equipment, electrical blueprints, voice and data systems, codes and standards, and computer applications. The student will be trained in proper buses and networks, fiber optics, video systems, wireless communication, fire alarm systems, intrusion detection systems, and media management systems; 30 clock hours/week. [E]

### ESC - Environmental Science

#### ◆ESC 1110,1120 Environmental Science I,II (4,4)

Study of environmental problems at global, national, and local levels; class 3 hours, lab 3 hours. *1110*—Ecological principles, geophysical processes, and human population dynamics; scientific approach applied to understanding environmental concepts using hands-on laboratory and field experiences. *1120*—Soil, water, and mineral resources, food resources and pesticides, hazardous wastes and air pollution, energy, land, and species resources; laboratory emphasis on local field experiences. [E]

**ESC 2430 Introduction to Soil Resources (4)**  
Soil genesis and formation, composition and classification, physical and chemical properties and how they relate to soil capabilities and limitations, and soil planning and management; field lab excursions and exercises reinforce lecture topics; class 3 hours, lab 3 hours. [on demand]

**ESC 2650 Gardening with Native Plants (3)**  
Intro to using native vegetation in the landscape; appropriate for the home gardener or commercial designer; advantages of native plants, general plant ecology, plant identification, soils, landscape design, species selection, and plant propagation techniques. [F]

#### ESC 2990 Special Topics in Environmental Science (1-4)

Detailed study of specific topic in environmental science; repeatable for credit on different topics. Prereq: Instructor and department head's consent. [on demand]

### ET - Engineering Technology

#### ET 115 Computers in Engineering Technology (3)

Intro to computers for engineering technology students; Visual BASIC programming, word processing, and spreadsheets; use of computer as a tool for subsequent courses in engineering technology. Concurrent: MATH-1710. [F,S]

#### ET 298 Special Topics in Engineering Technology (1-4)

Specialized topics and/or problems in engineering technology; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

#### ET 299 Special Topics in Engineering Technology with Lab (1-4)

Specialized topics and/or problems in engineering technology; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

### EZ - Electrical/Electronic Engineering Technology (DuPont)

#### EZ 110 DC Circuits (4) (DuPont)

Direct current electronics basics; analysis of current flow and conductors physics; study of voltage, resistance, Ohm's Law, Kirchhoff's Laws, theory and use of meters, power, magnetism, inductance and capacitance; series, parallel, and series-parallel DC circuits analyzed using Ohm's and Kirchhoff's Laws; complex DC circuits analyzed using loop equations and Thevenin's and Norton's theorems; class 3 hours, lab 2 hours.

#### EZ 111 AC Circuits (3) (DuPont)

Alternating current electronic basics; sine waves and alternating current values analysis; waveform measurement with AC meters and oscilloscopes, inductance theory and

circuits, transformer theory and applications, capacitance theory and circuits, series and parallel resonance theory and circuits, bandwidth, and -C filters; class 2 hours, lab 2 hours.

#### EZ 115 Active Devices (3) (DuPont)

Semiconductor devices theory and application; description of semiconductor materials, doping methods, and conduction; conventional/special purpose diodes, bipolar junction transistor characteristics and circuits, unipolar junction field effect transistors, and FET and MOSFET circuits, thyristors, integrated circuits, and optoelectronic devices; class 2 hours, lab 2 hours.

#### EZ 120 Electrical Theory (3) (DuPont)

Basic concepts and skills needed for technically competent Control Equipment Craftsman in electrical plant maintenance areas; National Electrical Code, AC/DC basics and motors, 3-phase systems, transformers, over-current protection, fuses, circuit breakers, electrical test equipment, grounding, and wiring techniques; class 2 hours, lab 2 hours.

#### EZ 122 Applied Electricity (3) (DuPont)

Electrical components common to industrial power distribution and motor control systems; electrical symbols, drawings, diagrams, and ladder logic diagrams instruction, focus on 2- and 3-wire motor control circuits and motor control devices; class 2 hours, lab 2 hours.

#### EZ 124 Motor Control (3) (DuPont)

Motor control centers circuit construction, operation, and troubleshooting applied by GE-7700 Motor Control Venter and a Rowan controller system trainer use; GE-7700 and Rowan controller analysis and troubleshooting by system level drawings, schematic diagrams, and electrical test equipment use; GE-7700 represents a manual motor control center and Rowan trainer simulates a plant installed nylon yarn wind-up system that simultaneously employs several motors; class 2 hours, lab 2 hours.

#### EZ 131 Digital Electronics (3) (DuPont)

Theory and application of digital electronics techniques and devices; uses and physical/electronic characteristics of a wide range of integrated circuits; working knowledge of number systems, Boolean algebra, binary codes, logic circuits, memory devices, data conversion, and digital troubleshooting also gained; class 2 hours, lab 2 hours.

#### EZ 134 Basic Programmable Controls (3) (DuPont)

Entry level programmable logic controllers (PLC) theory, operation and maintenance; generic PLC basics; PLC system component identification, ladder logic diagrams, and programming basics; lab training situations on Allen Bradley SLC-100/150, PLC-5 and T-50 programming terminals operation; class 2 hours, lab 3 hours.

#### EZ 201 Instrumentation Theory (3) (DuPont)

Intro to process control systems equipment and basic physics used in their operation; includes equipment instrumentation

demonstrations and instruction on skills used in performing basic instrumentation practices and procedures for calibration certification; class 2 hours, lab 3 hours.

**EZ 210 Plant Safety (3) (DuPont)**

Prepares Control Equipment Craftsmen to recognize electrical safety hazards, plan and execute electrical jobs from a safety perspective, and follow general safety practices and protective measures as stated in EZ DuPont Engineering Standards, the Chattanooga Plant Works Engineering Safety Handbook, and the Chattanooga Plant Lock-Tag-Clear-Try-Release Procedures; class 2 hours, lab 2 hours.

**EZ 220 Advanced Instrumentation (3) (DuPont)**

Manual and automatic process controls; control loop installation, calibration, and tuning with emphasis on single loop controllers; calibration, installation and removal, disassembly, reassembly, and maintenance of valves; class 2 hours, lab 3 hours.

**EZ 230 Automated Control Systems (3) (DuPont)**

Practical application of process installation, calibration, operation and troubleshooting using batch process simulator; use of process instrument drawings, schematic diagrams and input/output (I/O) drawings in installing, analyzing and troubleshooting a process on a system level; class 2 hours, lab 3 hours.

**FI - Fire Science****FI 111 Introduction to Emergency Services (3)**

Emergency/non-emergency operations typically provided by municipal, volunteer and industrial emergency service organizations; historical perspectives, relevant statistics, current and future challenges, services and operations, and external agencies that regulate or impact the emergency response field. [F]

**FI 113 Fire Protection Systems (3)**

Design and operation of fire detection and alarm construction, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection and portable fire extinguishers. [F]

**FI 114 Building Construction for Fire Science (3)**

Intro to fire problems relating to building construction; analysis of building construction, materials, and constructional design methods; focus on needs and requirements of institutional, mercantile, and industrial structures before, during, and after construction periods. [S]

**FI 116,124 Fire Fighting Tactics and Strategy I,II (3,3)**

Fire control techniques and attack strategies. *116*—Focus on residential fires; fire apparatus and equipment, forcible entry, ladder use, hose and hose stream application, extinguishing agents, ventilation, overhaul and salvage. *124*—Focus on commercial, industrial, and nonresidential fires; personnel

and equipment distribution and use; hazard control. Must be taken in sequence. Prereq for 116: Instructor's consent. [F,S]

**FI 140 Legal Aspects of the Fire Service (3)**

Federal, state, and local laws that regulate emergency services; national standards influencing emergency services; standard of care, tort liability, and review of relevant court cases. Prereq: FI-111 or instructor's consent. [S]

**FI 146 Emergency Service Stress (1)**

Stress and its impact on emergency service personnel; unique emergency service field stresses, excessive stress identification, survival skills, and management; critical incident stress debriefing (CISD). [F]

**FI 148, 230 Firefighter I, II (3,3)**

*148*—Credit for course given for state or national certification to NFPA-1001 Firefighter-I. *230*—Credit given for completion of standards set for state or national advanced Certified Fire Fighter-II. [F,S]

**FI 215 Fire Behavior and Combustion (3)**

Theories and fundamentals of how and why fires start, spread, and how they are controlled. [F]

**FI 217 Fire Hydraulics (3)**

Basic math and hydraulic formulas for fluid flow, friction loss and forces; internal and external fire protection water distribution and supply; fluid flow in hoses; nozzle discharge and fire streams; and application of principles to fire department operations. [S]

**FI 221,222 Fire Administration I,II (3,3)**

Organization and management of fire department. *221*—Focus on fire service leadership from perspective of the company officer; relationship with government agencies. *222*—Budget administration, organization of divisions; relationship with outside agencies. Prereq for 222: FI 221 or 251. [F,S]

**FI 235 Fundamentals of Emergency Service Safety (3)**

Application of safety during emergency and non-emergency operations; basic understanding of causes of injuries and death and how to apply that understanding to emergency and non-emergency operations; emergency operations, emergency medical, equipment and vehicle, facility, hazardous materials, wildland, and general safety, protective clothing and safety equipment. [F]

**FI 240 Emergency Service Instructor (3)**

Credit given for national or state certification to NFPA-1041 Instructor Level-I. [F,S]

**FI 251 Fire Officer I (3)**

Credit given for national or state certification to NFPA-1021 Fire Officer Professional Qualifications. May be substituted for FI 221. Prereq: FI 230 or instructor's consent. [F,S]

**FI 260 Fire Prevention and Inspection (3)**

Provides fundamental information regarding the history and philosophy of fire prevention; organization, and operation of a fire prevention bureau; use of fire codes; identification and

correction of fire hazards, and the relationship of fire prevention with built-in fire protection systems, fire investigation, and fire and life safety education. [S]

**FI 262 Fire Causes and Investigation (3)**

Analysis of fire causes; relationship of fire characteristics and causes; recognition of equipment failure responsible for fires, incendiary fires; collection, preservation, and documentation of evidence substantiating fire causes. [S]

**FI 270 Emergency Service Strategic Planning & Innovation (3)**

Basic concepts strategic planning and innovation for emergency services; community emergency service planning issues, budget/cost containment, and evaluation review; alternative delivery systems, innovation management and emergency service future. Prereq: Instructor's consent. [S]

**FI 275 Emergency Response to Hazardous Materials (4)**

Basic principles and techniques regarding emergency response to hazardous materials incidents; recognition information, analysis and mitigation of hazardous materials incidents by emergency response personnel; regulatory considerations, detection and personal protective equipment, decontamination, and facility and transportation containers; class 3 hours, lab 3 hours. [on demand]

**FI 280 Emergency Services Practicum (3)**

Research paper on contemporary issues or problems within emergency services field; written report required; findings may be applied in work environment. Prereq: instructor's consent. [F,S]

**FI 299 Special Topics in Emergency Services (1-3)**

Topics of traditional and current interest in emergency service field; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

**FM - Financial Management****FM 201 Financial Management (3)**

Designed to improve decision skills related to financial resources of the firm; financial analysis techniques, time value of money, valuation, and risk; nature and scope of financial markets and investment opportunities. Prereq: BU 115 or BU 250 and MG 103. [E]

Foreign Language, see "FREN-French," "GERM-German," "SPAN-Spanish"

**FOST - Food Science****FOST 1110 Fundamentals of Food Technology (4)**

This is a survey course providing an overview of the Food Science/Food Technology field. The course material is intended to insure that candidates have core knowledge in food Technology with a basic knowledge of food structure, food safety, food quality and the regulatory environment. Topics covered will include: an overview of the food chain from raw materials to finished product, mathematics and statistics for formulation and quality control, introduction to quality management, food chemistry with emphasis on ingredient functionality, food microbiology with emphasis on food safety, food labeling and regulatory compliance, and sensory evaluation and food analysis. 3 hours lecture and 3 hours lab. [F]

**FP - Financial Planning****FP 101 Fundamentals of Financial Planning (3)**

Intro to financial planning principles; focus on communication with the client; basic areas of financial planning surveyed, i.e., tax planning, risk and insurance, investments, retirement benefit, and estate planning. [F]

**FP 219 Computerized Financial Planning (3)**

Applications course teaching simple household budgeting and money management software and more extensive programs which track investments; students use spreadsheet software to develop their own applications; experience with computer applications required. Prereq: BU-185. [on demand]

**FREN - French****FREN 1010,1020 Elementary French I,II (4,4)**

Elementary grammar, vocabulary, reading, idiomatic conversation, and French culture. Must be taken in sequence. [1010-F, 1020-S]

**FREN 2010,2020 Intermediate French I,II (3,3)**

Intermediate French conversation and reading. Must be taken in sequence. Prereq: FREN-1020 or 2 years of high school French. [on demand]

**SPECIAL INTEREST COURSES**

*The following courses are offered as a community service and are not intended to be used to satisfy the foreign language requirement or remove high school deficiencies for any degree program at Chattanooga State or any other college or university.*

**FREN 1000 Conversational French (2)**

Contemporary French language and culture; focus on spoken language, basic vocabulary and idiomatic expressions needed in real-life situations. [on demand]

**FREN 1990 French Field Work (3)**

Basics of teaching French; includes observation/participation; class 2 hours, lab 2 hours. Prereq: FREN-1010. [on demand]

**FREN 2990 Special Topics in French (1-3)**

Specific topics in French language and culture; repeatable for credit on different topics. Prereq: FREN-1010 and instructor's consent. [on demand]

**GEOG - Geography****GEOG 1010 Physical Geography (3)**

The Earth's physical environment; processes that determine Earth's climate, water, soil, landforms, vegetation, and distribution patterns of each. [S]

**◆GEOG 1025 World Geography (3)**

Study of selected world regions; focus on each region's characteristics, problems and global interrelationships. [E]

**GEOLOG - Geology****◆GEOLOG 1040 Physical Geology (4)**

Intro to geology; Earth's age and origin; Earth materials, processes, and resultant structures; class 3 hours, lab 3 hours. [F]

**◆GEOLOG 1050 Historical Geology (4)**

Earth's origin and geologic history; concept of geologic time and the fossil record; class 3 hours, lab 3 hours. [S]

**GERM - German****GERM 1010,1020 Elementary German I,II (4,4)**

Elementary grammar, vocabulary, reading, translation, conversation, and cultural studies. Must be taken in sequence. [1010-F, 1020-S]

**GERM 2010,2020 Intermediate German I,II (3,3)**

Intermediate German grammar, reading, oral drills and conversation. Must be taken in sequence. Prereq: GERM-1020 or 2 years of high school German. [on demand]

**SPECIAL INTEREST COURSES**

*The following courses are offered as a community service and are not intended to be used to satisfy the foreign language requirement or remove high school deficiencies for any degree program at Chattanooga State or any other college or university.*

**GERM 1000 Conversational German (2)**

Contemporary German language and culture; focus on spoken language; basic vocabulary and idiomatic expressions needed in real-life situations. [on demand]

**GERM 2990 Special Topics in German (1-3)**

Specific topics in German language and culture; repeatable for credit on different topics. [on demand]

Graphic Design, See "AA Graphic Design"

Greenhouse, See "Landscaping and Turf Management"

**HE - Health Information****HEALTH INFORMATION MANAGEMENT****HE 103 Medical Terminology (3)**

Prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation; focus on building working medical vocabulary based on all body systems; commonly used terms related to body disorders, medical and surgical procedures, abbreviations, charting symbols, and diagnostic terms; class 3 hours. [E]

**HE 115 Health Information Management Foundations (4)**

This course introduces the healthcare environment, healthcare settings, medical staff organization, records management and the role of health information management (HIM) in healthcare. Topics include the history of HIM, organization of various healthcare facilities; the impact managed care has had on healthcare providers, healthcare record format, deficiency analysis, records control, storage, document imaging, forms management and numbering, filing and indexing systems. Emphasis is placed on the ethical conduct of the HIM professionals, understanding the patient record, and using electronic charting software to create electronic health records; class 3 hour, lab 3 hours. Prereq: Acceptance into HIM Program or instructor's consent. [F]

**HE 118 Pharmacology (3)**

Principles and classifications of commonly used drugs by body system. Drug actions, sources, administration, indications, adverse reactions; forms and reference material. Prereq: Acceptance into HIM Program or instructor's consent. [F]

**HE 127 Medicolegal, Ethical and Professional Concepts (3)**

This course explores the professional standards of conduct, privacy and confidentiality of patient information; in depth review of HIPAA with a focus on the legislative process and the court system. Release of information, informed consent, patient rights, risk and ergonomic management, job procurement, and record retention. Prereq: HE 115 or instructor's consent. [S]

**HE 211 Pathophysiology (4)**

A comprehensive study of disease and disease processes. A focus on causes, symptoms and treatments. Prereq: BIOL 2020, HE 103, 115, 118, or instructor's consent. [F]

**HE 225 Health Data Content and the Computer Based Record (3)**

This course emphasizes JCAHO, NCQA, Medicare, and state licensure requirements including medical staff credentialing; the



course stresses documentation issues. Data sets utilized to measure healthcare such as UHDDS, UACDS, MDS, HEDIS, and NPDB are covered. Cancer and Trauma registries, primary versus secondary records, data dictionaries, forms design, and screen design are reviewed. The CPR (computer-based patient record) is introduced; class 3 hours. Prereq: HE-115 or instructor's consent. [S]

### HE 226,256 Health Information Management Clinical Practice I,II (3,3)

Supervised learning is experienced in the basic functions of an HIM (health information management) department in hospitals accredited by the JCAHO and in select non-hospital settings. Emphasis is placed on student learning of HIM procedures, computer applications including registration and master patient index, data collection, analysis and presentation, data integrity and productivity assessment, protection of patient confidentiality, professional conduct, and ethical behavior. Prereq for 226: HE-103, 115; or instructor's consent. Coreq for 256: HE 255. Prereq for 256: HE 127, 226, 297; or instructor's consent. [F]

### HE 244 Health Statistics (2)

Covers common health statistics; includes converting data into information. Prereq: CS-101, HE 115; or instructor's consent. [F]

### HE 245,255 Clinical Coding and Classification I,II (4,4)

Classification and coding systems for most health care settings; focus on accurate coding as major anti-fraud measure by substantiation of diagnoses and service through documentation and as a legitimate reimbursement optimizer.; class 3 hours, lab 3 hours. 245–ICD-9-CM conventions, quality control, principal diagnosis identification, coding reference, DRGs, severity, sequencing and methodology. 255–CPT-4 coding and documentation, relationship of coding to managed care, compliance, and chargemasters; APCs, groupers, encoders, and coding references. Although ICD-9-CM is utilized in case studies, emphasis is placed on accurate CPT-4 (including E&M and HCPCS) coding as an antifraud measure along with substantiation of services by documentation. The relationship of coding to managed care, compliance and chargemaster is explored. Thorough coding with documentation substantiation as a legitimate reimbursement optimizer is stressed. Prereq for 245: HE 115, BIOL 2010, 2020; or instructor's consent. Coreq for 245: HE 211. Prereq for 255: HE-211, 245; or instructor's consent. [245–F, 255–S]

### HE 247 Healthcare Quality, Utilization, and Risk Management (2)

This course addresses the use and collection of aggregate data in the evaluation of healthcare services. The exploration of quality improvement, committee functions, critical pathways, risk management, utilization review, and peer review organizations. Admission and level of care criteria are emphasized along with risk management indicators and data quality; class 1 hour, lab 3 hours. Prereq: HE-225 or instructor's consent. [S]

### HE 248 Reimbursement Methodologies (3)

This course explores prospective payment systems, DRG assignments, groupers, APCs, RBRVS, PPS, capitalitation, third party payers, practice management including personnel issues, scheduling and referrals, billing and insurance, patient accounting overview, anti-fraud measures, chargemaster, EOBs, check and balance procedures, comprehensive claims tracking and reporting, financial statements, management reporting and managed care contracts; class 2 hours, lab 3 hours. Prereq: HE-225, 245 or instructor's consent. [S]

### HE 297 Organization and Supervision for Healthcare Professionals (2)

Basic principles of management; the strategic management process; operational management on the microlevel, midlevel, and organization-wide level; space design and management; human resource management; and financial management, including business plans and budgets, healthcare accounting and finance, and capital expense and investment. Prereq: HE-115, 225; or instructor's consent. [F]

Health and Physical Education, See "PHED-Physical Education"

## HIST - History

### HIST 1010,1020 Western Civilization I,II (3,3)

Survey of political, economic, social, cultural, religious, and intellectual history of mankind that has influenced Western Civilization. 1010–To 1715. 1020–From 1715. [on demand]

### HIST 1110,1120 History of World Civilizations I,II (3,3)

Survey of political, economic, social, cultural, religious, and intellectual history of world civilizations. 1110–To 1500. 1120–From 1500. [E]

### HIST 2010,2020 United States History I,II (3,3)

Survey of United States history; focus on political, diplomatic, economic, social, cultural and intellectual phases of American life in its regional, national, and international aspects. 2010–Through 1865. 2020–After 1865. [E]

### HIST 2030 Tennessee History (3)

Survey of the state's history from its beginnings to the present; consideration of its social development, population, economy, political life, and geography. [on demand]

### HIST 2040 The Scopes Trial (3)

Historical, scientific, theological, educational, and artistic ramifications of the Scopes Trial. [on demand]

### HIST 2050 Appalachian History: From the 14th Century to the Present (3)

Examines the theme of continuity and change in the Southern and Central Appalachian region from colonial times to present. States included in this study are western Virginia, eastern Kentucky, western North Carolina,

eastern Tennessee, northern Georgia, northern Alabama, and southern West Virginia. [F,S]

### HIST 2130 Afro-American History (3)

Study of black people in America from their African origins to the present; highlights and unique nature of the Black Experience in America; the structure, problems, and potential of the Black Community; intro to thoughts and contributions of Black leaders. [on demand]

### HIST 2530 The Holocaust and Jewish Civilization (3)

Chronicles the origins, progression, and culmination of the Holocaust and grapples with questions and issues surrounding this human catastrophe; endeavors to understand the rich European Jewish heritage and civilization virtually destroyed and to analyze the continuing impact of modern racial nationalism in the world today. [on demand]

### HIST 2990 Special Topics in History (1-3)

Specific topics of traditional and current historical interest; includes relevant political and social developments and issues; repeatable for credit on different topics. [on demand]

## HMSC - Homeland Security

### HMSC 230 Terrorism and the Law (3)

This course is an in-depth analysis of federal and state law as they pertain to the study of terrorism. Topics include search and seizure issues, privacy laws, the Patriot Act, Constitutional issues with reference to terrorism investigation/prevention, and criminal procedure. [F]

### HMSC 240 Terrorism Prevention (3)

This course provides an overview of the various methods of monitoring for and detection of chemical, biological, and radiological hazards. Related topics include target identification, target protection techniques, and information assimilation and analysis. [F]

## HP - American Sign Language

### HP 120,121,220,221 American Sign Language I,II,III,IV (3,3,3,3)

Study of the manual alphabet and language of "signs." 120–Basic level skill development; sentence structure, question forms, verb usage, classifiers, negatives, locational relationships, plurals, and time measurements stressing ASL and Deaf Community. 121–Intense study of manual communication; vocabulary, language concepts, sign language idioms, and expressive/receptive skills; intro to ASL conversational regulators. 220–Focus on communication of day-to-day experiences and activities, spatial agreement, storytelling, and general conversational regulators. 221–Emphasis on language concepts and syntax, vocabulary review, conversational patterns,

numbers, fingerspelling, songs, poetry, and storytelling techniques. Must be taken in sequence. [120, 220–F; 121, 221–S]

### HP 132 Psychology of Deaf People and Their Culture (3)

Study of the bilingual education for Deaf children, socio-linguistics and Deaf culture, family structure, socialization in groups and in the Deaf Community, and economic status of Deaf persons, civil rights of the Deaf, telecommunication devices, cochlear implants and deafness as a disability. [S]

### HP 135 Special Topics in American Sign Language (1-3)

Special topics in American Sign Language; focuses on use of ASL in the workplace; repeatable for credit on different topics. [on demand]

### HP 222 Fingerspelling (2)

Comprehensive study of fingerspelling, using drills to enable reading of full-speed fingerspelling and fluent expression in fingerspelling. Coreq: HP-221 or instructor's consent. [S]

Horticulture, See "LM-Landscaping and Turf Management"

## HR - Human Services

### HR 101 Introduction to the Field of Social Welfare (4)

Intro and orientation to social welfare; focus on professional values/ethics and the diversity of groups served; historical development and present structure; minimum of 45 observation hours and supervised volunteer service in appropriate settings required. [F,S]

### HR 125 Community Social Services (3)

Survey of community social services to consider as resources in making effective referrals for human services in the Chattanooga Metropolitan area. [on demand]

### HR 130 Substance Abuse Theories (3)

Social, political, physiological, and behavioral implications of alcohol/drug abuse; theories of drug-alcohol addiction stages, dynamics and nature of psychoactive substances, and theories/methods of substance abuse prevention; focus on family dynamic models, co-dependency, and disease concept. [F,S]

### HR 135 Special Topics in Human Services (1-3)

Specific topics of interest in human services and social welfare; repeatable for credit on different topics. [on demand]

### HR 205 Interviewing and Interpersonal Skills (4)

Intro to social and psychological concepts and techniques of therapeutic communication, including individual and group process dynamics. Practice in interviewing skills, active listening, reflective techniques, and establishing therapeutic relationships in both individual and group settings through the use of humanistic psychology. Concurrent HR 101. [F,S]

### HR 210 Methods of Human Service Practice (3)

Multi-disciplinary approach to development of understanding of the roles, treatment modalities, and practice settings in which human services specialists may be involved. Prereq: HR-101. [F,S]

### HR 219 Family Systems (3)

Examination of interpersonal interaction patterns in functional and dysfunctional families and their problems in contemporary American society; focus on examining emotional and physical abuse, drug addiction, alternative life styles, and changing sex roles. [F,S]

### HR 220 Human Services Practicum (6)

Minimum of 200 hours supervised field instruction in social agencies dealing directly with human problems; student applies and demonstrates appropriate mastery of necessary knowledge/skills required for beginning practice; in-class activities include on-campus seminars. Prereq: HR-101. Concurrent HR 210. [F,S]

### HR 235 Methods of Substance Abuse Treatment (3)

Theory and practice of alcohol and/or drug addiction treatment approaches; focus on understanding of wellness and the whole person, stages of recovery, discharge assessment, and community resources. [on demand]

### HR 240 Group Dynamics (3)

Intro to interpersonal concepts and problems of communication in interpersonal transactions; focus on understanding group processes, developing ability to facilitate communication between others in group settings and specific group process competencies. [on demand]

### HR 245 Introduction to Counseling (3)

Comparative analysis of major theoretical approaches to counseling and psychotherapy practice; psychodynamic, behavioral, cognitive behavioral, gestalt, transactional analysis, rational-emotive therapy and systems theory. [F,S]

## HS - Health Science

*A prerequisite to all HS courses numbered above 111 is admission into the Radiation Therapy Technology program in which the course is required. Please consult the SUMMARY OF REQUIRED HOURS or the specific program brochure. All HS courses shown in the same term are corequisites and all HS courses shown in the preceding term are HS prerequisites.*

### HS 111 Introduction to Healthcare Professions (3)

An orientation to the nursing and allied health professions. Topics include the health care system in the United States, health professions involving patient care, and health related professions. Special emphasis is given to the health care programs of study available at Chattanooga State and steps the potential student can take to prepare for

program admission.[E]

### HS 123 Introduction to Radiation Oncology (3)

Overview of radiation therapy; medical terminology, ethics and the law, patient care, cancer management, radiation therapy rationale, usage, and physics, and basic machine usage. [F]

### HS 172 Anatomy and Imaging (2)

In-depth study of transverse, longitudinal, sagittal and coronal cross sections of the total body; use of computerized tomography, magnetic resonance, ultrasonography and nuclear medicine images in the localization and follow-up of tumors after radiation treatment. [F]

### HS 200 Clinical Education Methodology (3)

Aids instructors or future instructors in allied health and nursing programs to develop knowledge, skills and attitudes needed for effective teaching, supervision, and evaluation of students in clinical settings; focus on presenting real-world experience by providing students the opportunity to design, develop, implement and evaluate instruments and strategies transferable to clinical settings. [on demand]

### HS 214,224 Radiation Physics I,II (4,4)

Basic classical and modern physics concepts needed for physics involved in radiation therapy; includes math concepts needed for physics principles. [214–F, 224–S]

### HS 220,230,240 Clinic I,II (8,4,6)

Radiation therapy clinical methodology; develops skills and knowledge in radiation protection and quality assurance, simulation and treatment planning, treatment procedures using multiple megavoltage machines, and patient care and management; clinic hours: 520 in 220 & 230, 450 in 240. [220–F, 230–S, 240–Su]

### HS 223,233 Radiation Oncology I,II (3,3)

Concepts of disease, types of growths, causative factors and biologic behavior of neoplastic disease; intro to specific malignant disease entities by site of occurrence; disease processes, staging, and treatment planning philosophy; inter-relating of treatment planning with clinical radiation therapy. [223–S, 233–Su]

### HS 243 Radiation Biology and Hyperthermia (3)

Intro to medical aspects of radiobiology, including cellular, systemic, and total body responses; somatic and genetic effects of radiation; use of radiobiology in the clinical practice of Radiation Therapy; concept of hyperthermia. [Su]

### HS 299 Special Topics in Allied Health (1-3)

Selected topics of interest in allied health; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

**HUM - Humanities****◆HUM 1010,1020 Introduction to the Humanities I,II (3,3)**

Historical approach to pivotal ideas, systems of thought, and creations of the Western world (e.g., music, drama, painting, sculpture, architecture, and literature) as reflections of the culture that produced them. *1010*—From antiquity to 1600 A.D. *1020*—From 1600 to present. [1010—E; 1020—F,S]

**HUM 1040 The Human Experience through Song (3)**

Study of culture and the human experience through analysis of song lyrics; emphasis on messages in American lyrics including blues, country, folk, pop, rap, reggae, rock and spirituals. [on demand]

**HUM 1230 Philosophy of Science and Technology (3)**

History of major scientific and technological achievements in the modern age and their relevance to the world view of Western civilization. [on demand]

**◆HUM 2130 Mythology (3)**

Cross-cultural survey of the creation, hero, and fertility myths of diverse cultures including Middle Eastern, European, African, Oriental, and North and South American; study of Classical Greek Mythology. [F,S]

**HUM 2140 Folklore and Native Culture (3)**

Basic theory and working vocabulary of folklore related to the student's geographical origin and personal experience; focus on family, community, and regional cultures. Prereq: ENGL-1010. [on demand]

**HUM 2550 Leadership Development (3)**

Leadership philosophy, practices and skills; decision making, empowerment, trust, goal-setting and conflict resolution; readings in the humanities and critical analysis of media that explore leadership styles. (Same as PY-250; credit not allowed for both courses.) Prereq: ENGL-1010. [on demand]

**HUM 2990 Special Topics in Humanities (3)**

Specific topics of traditional and current relevance in Humanities disciplines; repeatable for credit on different topics. Prereq: ENGL-1010. [on demand]

HVAC, See "AC-Air Conditioning/Refrigeration"

**HZ - Hazardous Materials****HZ 200 Hazardous Materials Technician Certification (2)**

Critical competencies required by hazardous materials, environmental and safety technicians; 4 certificates of training upon completion: OSHA 8-hour annual update training for hazardous waste operations and emergency response; basic first aid and CPR; Department of Transportation hazardous materials employee general awareness and safety training certification; OSHA confined space operations certification; repeatable for

credit and certification; Satisfactory/No Credit grading; class 1 hour, lab 2 hours. Prereq: Instructor's consent. [on demand]

**ID - Industrial Maintenance Mechanics****ID 000 Industrial Maintenance Technology**

Theory and practical applications in industrial maintenance; blueprint reading, welding, machine shop, HVAC, and general building maintenance; 30 clock hours/week. [E]

**IE - Industrial Electricity****IE 000 Industrial Electricity**

Basic electricity, National Electric Code, AC/DC motors, generators, alternators, programmable logic controllers, hydraulics, symbols, pneumatics, line diagrams, manual contractors and manual motor starters; installation and repair of TVRO satellite systems; hands-on experience in residential wiring and conduit bending; 30 clock hours/week. [E]

**IS - Insurance****IS 107 Principles of Life and Health Insurance (3)**

Intro to the principles, practices, and techniques of life and health insurance. [on demand]

**IV- IV Therapy****IV 0000 Intravenous Therapy Course for Practical Nurse**

This course is designed to offer LPN's the basic knowledge necessary to safely assist the registered nurse in administering and monitoring selected peripheral IV medications under the supervision of the registered nurse. 40 clock hours. Prereq: current LPN license.

**IY - Interdisciplinary Studies****IY 100 Student Government Leadership (2)**

Promotes development of appropriate leadership skills; focus on identifying, nurturing and mentoring students as they grow to become effective leaders; parliamentary process and the basic principles of arbitration, compromise, conflict resolution, effective communication, motivation and team building. [F,S]

**JS - Job Skills Development****JS 100 Job Search Skills (1)**

Production of a job search portfolio: application, resume, cover letter, and attachments; ability to identify current skills and strengths to find employment related to student's area of study. Development of

professional interview skills and job search strategies; opportunities to network with local professionals; prepares students for Chattanooga State's co-op opportunities. Satisfactory/No Credit Grading [F,S]

**JS 101 Career and Life Planning (3)**

Assists students to develop awareness of personal choice in making career and life decisions; focus on developing realistic short and long term career goals through personality, abilities and skills assessments; job market trends explored in relation to need for continual training and retraining. Satisfactory/No Credit Grading. [F,S]

**LA - Paralegal Studies****LA 110 Fundamentals of Law (3)**

Intro to the legal field; includes survey of Torts, family law, legal ethics, Contracts, Civil Procedure, and Criminal Law; focus on the attorney, paralegal, and legal tribunal's role in administration of justice. [F,S]

**LA 130 Legal Research (3)**

Primary and secondary sources of law found in the legal library; focus on legal research methods, case briefing, and citation of legal authorities. [F]

**LA 135 Legal Writing/Case Analysis (3)**

Systematized approach to how legal results and doctrines are reached through case analysis; writing techniques, case analysis, and briefing skills; focus on format, documentation development, application of judicial opinions, and uniform citations. Prereq: ENGL-1010, LA-110, 130 and keyboarding at 30 wpm. [S]

**LA 210 Contracts (3)**

Contracts from a paralegal's perspective; elements to formation, defenses, breach, remedies, ethical considerations, and drafting. Prereq: LA-110. [S]

**LA 220 Torts (3)**

Intentional torts, negligence, strict liability, worker's compensation, malpractice, and products liability; rules of civil procedure and evidence. [S]

**LA 225 Constitutional Law (3)**

Search and seizure; internet and cell phone privacy, exclusionary rule, right to trial, sentencing, free speech, and ethical considerations; components of research and presentation. Prereq: LA-110 or instructor's consent. [Su]

**LA 230 Criminal Law/Procedure (3)**

Criminal law and rules of procedure; Tennessee law; specific crimes, their elements, ethical considerations, and drafting. [S]

**LA 235 Administrative Law (3)**

Authority of government agencies to create, interpret and apply administrative laws; judicial review of administrative rulings, freedom of information issues, access to government

◆ and \*, see "Legend page 74."

information, and governmental liability/immunity. Prereq: LA-110, 130. [on demand]

### LA 240 Trial Practice and Civil Procedure (3)

Techniques and documentation utilized in the civil trial; investigation, drafting, jurisdiction, discovery, procedure, multi-party litigation, interviewing/presentation component. Prereq: LA-110, 130 [F]

### LA 245 Legal Ethics for Paralegals (3)

Legal ethics and professional responsibility; rules and guidelines affecting paralegals, certification, licensing, unauthorized practice of law, confidentiality, conflicts, advertising, client fees and funds. Prereq: LA-110, 130. [on demand]

### LA 250 Wills, Trusts and Estate Planning (3)

Legal requirements of wills and trusts; estate planning; administration of estates; advance directives; ethical considerations. [S]

### LA 260 Domestic Relations (3)

Family law; divorce, legal separation, annulment, child custody, adoption, support; pleading and drafting documentation. [F]

### LA 270 Insurance Law (3)

Policy analysis, coverage, insurable interest, automobile, property and life insurance, and regulation. Prereq: LA-110 or instructor's consent. [on demand]

### LA 275 Bankruptcy (3)

Federal bankruptcy laws and guidelines; statutory provisions and judicial interpretations of Federal Bankruptcy Code, and use of forms. Prereq: LA-110. [S]

### LA 280 Property Law (3)

Property law; landlord/tenant law in real estate; transference of ownership interest; closings and zoning. Prereq: LA-110, 130. [F]

### LA 290 Law Practice Management (3)

Law office management techniques and practices; business aspects, record keeping, billing procedures. Includes interviewing/presentation component. [F]

### LA 298 Special Topics in Legal Assisting Technology (1-3)

Topics of current and special interest; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

### LA 299 Internship (3)

On-campus study combined with supervised work experience directly related to paralegal's role in legal community. Includes interviewing/presentation component. Prereq: CS-101, LA-135, and instructor's consent. [S]

Leadership, see "HUM-Humanities," "IY-Interdisciplinary Studies," "MG-Management," "PY-Psychology"

Legal Assisting, See "LA-Paralegal Studies"

Literature, see "ENGL-English"

## LM - Landscaping and Turf Management

### LM 000 Landscaping and Turf Management

Landscape management; plant and soil science; pest and insect identification and management; selection and safe application of pesticides and fertilizer; landscape design and residential turf management; cost calculation and bid preparation; greenhouse and nursery production and management; interiorscaping; computer assisted landscape drafting and design; 30 clock hours/week. [E]

## LP - Practical Nursing (LPN)

### LP 000 Practical Nursing

32.5 clock hours/week. Must be taken in sequence.

#### First Semester

Intro to the nursing profession; normal anatomy and physiology, nutrition, aging, basic math; nursing procedures to assist in maintaining normal function; clinical experiences in long term care facilities. [F,S]

#### Second Semester

Study of alterations in normal function; focus on nursing care of adults with medical and/or surgical problems; includes disease process, diet therapy, and pharmacology; clinical experiences in acute care setting. [S,Su]

#### Third Semester

Specialty areas of obstetric, gynecologic and pediatric nursing; intensive review for state licensing examination; concentrated clinical practice experience. [Su,F]LPN,

See "LP-Practical Nursing"

Marketing, See "MG-Management"

Marine Engine Technology, See "SE-Motorcycle & Marine Service Technology"

## MATH - Mathematics

### MATH 0990 Geometry (3)

Minimum preparation for students who did not have high school geometry for trigonometry and calculus; lines, angles, planes, triangles, circles, polygons, and their properties; includes applications, direct and indirect proofs; not intended for transfer; not accepted toward any degree program at Chattanooga State. Prereq: DSPM-0850. [E]

### MATH 1000 Tutoring Mathematics (1)

Online course offering in-depth view of the tutoring process; Chattanooga State textbook familiarization, and intro to and discussion of Math Center mission and procedures; focus on professionalism, study, tutoring techniques, listening, communication, and critical thinking skills; specific attention paid to math concepts giving students the most difficulty; tutor training program certified by College Reading and Learning Association (CRLA). Prereq: Department head's and instructor's consent. [F,S]

### ◆MATH 1010 Contemporary Mathematics (3)

Nature and techniques of mathematics; topics such as set theory, consumer mathematics, statistics, probability, methods of apportionment, and voting schemes. Prereq: 2 years of high school algebra and acceptable test scores; or DSPM-0850. [E]

### MATH 1410, 1420 Structure of Number Systems I,II (3)

◆1410—Origin of numerals and numeration systems, logic, sets, relations, functions, problem solving, whole numbers, integers, elementary number theory, and rational numbers. 1420—Euclidean geometry, metric system, probability and statistics. Prereq for 1410: 2 years of high school algebra and acceptable test scores; or DSPM-0850. Prereq for 1420: MATH 1410. [F,S]

### MATH 1510,1520 Statistics I,II (3,3)

1510—Sampling, data organization, variability and central tendency; probability distributions, hypothesis testing, and confidence intervals; credit not allowed for both MATH 1510 and 1530. 1520—Hypothesis testing, confidence intervals, independence of two variables, simple analysis of variance, analysis of regression, and intro to non-parametric statistics. Must be taken in sequence. Prereq for 1510: 2 years of high school algebra and acceptable test scores; or DSPM-0850. Prereq for 1520: MATH 1510 or approval of department head. [E]

### ◆MATH 1530 Introductory Statistics (3)

Sampling, data organization, variability and central tendency, probability, distributions and confidence intervals, hypothesis testing, inference and regression; credit not allowed for both MATH-1510 and 1530. Prereq: 2 years of high school algebra and acceptable test scores; or DSPM-0850. [E]

### ◆MATH 1710, 1720 Pre-Calculus I,II (3,4)

1710—Equations and inequalities, functions and graphs, linear and quadratic functions, equation systems, polynomial and rational functions, and exponential and logarithmic functions. 1720—Trigonometric functions, identities, equations and graphs, inverse trigonometric functions, triangle applications, vectors, polar coordinates, complex numbers, conic sections, sequences and series, and the Binomial Theorem. Prereq for 1710: 2 years of high school algebra and acceptable test scores; or DSPM-0850. Prereq for

1720: 2 high school math credits above the Algebra I level and acceptable test scores; or MATH-1710.[E]

◆**MATH 1830 Calculus for Management, Life, and Social Sciences (3)**

Intro to calculus; limits, differentiation of functions, optimization, marginal analysis, integration, the Fundamental Theorem of Calculus, applications of integration. Prereq: 2 high school math credits above the Algebra I level and acceptable test scores; or MATH-1710. [E]

◆**MATH 1910 Calculus with Analytic Geometry I (4)**

Limits, derivatives and integrals of algebraic, trigonometric, exponential and logarithmic functions, their graphs and applications. Prereq: 3 high school math credits above the Algebra I level and acceptable test scores; or MATH-1720. [E]

**MATH 1920,2110 Calculus with Analytic Geometry II,III (4,4)**

1920–Differentiation and integration involving inverse trigonometric functions, integration techniques, integral applications, infinite sequences and series. 2110–Vectors, parametric equations, polar coordinates, space coordinates, vector-valued functions, partial differentiation, multiple integrals, and vector analysis. Must be taken in sequence. Prereq: MATH 1910 [1920–E; 2110–F,S]

**MATH 2000 Mathematical Problem Solving (1)**

Explores a variety of mathematical problem solving techniques; focus on applying mathematical concepts and communicating effectively. Prereq: MATH-1720 and instructor's consent. [on demand]

**MATH 2010 Linear Algebra (3)**

Intro to linear algebra; linear systems, matrix algebra and matrices, determinants, vectors and vector spaces, inner product spaces, linear transformations, and eigenvectors and eigenvalues. Prereq: MATH 1910. [F,S]

**MATH 2120 Differential Equations (3)**

Intro to basic concepts, theory, methods, and applications of ordinary differential equations including systems of equations and transform methods. Prereq: MATH-1920. Coreq: MATH-2010. [F,S]

**MATH 2990 Special Topics in Mathematics (1-4)**

Detailed study of specific topics in math; repeatable for credit on different topics. Prereq: Department head's and instructor's consent. [on demand]

**MB - Masonry**

MB 000 Masonry. This program is designed to provide students with the necessary knowledge, skills and abilities in the safe and efficient performance of the residential masonry and concrete profession. Training

will be competency based in accordance with the national center for Construction Education and Research (NCCER) curriculum and local Masonry/Concrete code(s). Training will consist of a specified common core and required competencies according to curricula. Training will include hands-on instruction and will require students to demonstrate learning outcomes through performance orientated evaluations. 1290 clock hours.

**MC - Manicurist**

MC 000 The manicurist program is designed to train students in basic manipulative skills, safety, judgments, proper work habits and desirable attitudes necessary for entry level positions as a Nail Technician or a related career avenue. The nail technology course consists of 600 hours of instruction in both theoretical and practical skill development required for licensure by the Tennessee State Board of Cosmetology. Theory and practical precede laboratory activities and students must complete basic manicuring curriculum which demonstrates competence in both theory and practical skills before being allowed to participate in laboratory activities. 780 clock hours.

**MD - Mechanical Engineering Technology**

**MD 104 Blueprint Reading and Analysis (3)**

Intro to the fundamentals of blueprint interpretation and mathematical analysis; topics include orthographic projection, dimensioning, sectioning, line conventions, visualization of the object and basic shop math. [on demand]

**MD 134,242 Statics and Strength of Materials I,II (3,3)**

134–Statics: vectors, moments, equilibrium of structures, centroids and moment of inertia; strength of materials: basic stresses and deformations; beam diagrams, flexure and shear. 242–Further study of vector operations and forces in structures in 2 and 3 dimensions; stresses for welds, 2 material members, eccentric loads and those caused by temperature changes; interrelationship of beam diagrams; wood and steel beams designed; class 2 hours, lab 3 hours. Prereq for 134: ET-115, MATH-1720. Concurrent for 242: MATH 1910. [F,S]

**MD 184 Manufacturing Processes (3)**

Primary and secondary manufacturing processes; covers formation of material into shapes through the testing of the finished product; basic C.I.M. concepts, usage of lathes, mills, drills, saws and other machine shop tools; lab exercises, videos, and tours of manufacturing facilities; class 2 hours, lab 3 hours. [F,S]

**MD 207,208 Numerical Control I,II (3,3)**

Principles of numerical control systems; class 2 hours, lab 3 hours. 207–Focus on hands-on

equipment usage, program debugging, and error diagnosis; NC tooling, 2- and 3-axis machining and G-codes. 208–DNC links, CAM software, NC programming languages, 3-axis contouring, sculptured surfaces, interfacing CAD systems with NC systems. Must be taken in sequence. Prereq for 207: ET-115, MATH-1720, MD-184. Concurrent for 207: MD-294. [207–F, 208–S]

**MD 226 Fluid Power (3)**

Principles of pneumatics and hydraulics; air compressors and power boosters, hydraulic fluids and power devices, accumulators, and controls; class 2 hours, lab 3 hours. Prereq: ET-115, MATH-1720. [S]

**MD 246 Reactor Theory (4)**

The study of the types of radiation and their properties relative to reactor design. Concurrent: NU154. [S]

**MD 254 Elements of Material Science (3)**

Study of the physical structure of engineering materials and how their properties are dependent upon their internal structure; crystal structures, phase relationships, mechanical behavior of solids, and polymer and composite characteristics; class 2 hours, lab 3 hours. Prereq: MATH-1710. [S]

**MD 264,265 Thermodynamics I,II (3,3)**

Applied thermodynamics; study of heat and energy transfer and refrigeration; class 2 hours, lab 3 hours. 264–Labs include study of heating and cooling equipment in operation. 265–Internal combustion engines, gas and steam turbines, properties of steam. Must be taken in sequence. Prereq for 264: ET-115, MATH-1720. [264–F, 265–S]

**MD 274 Machine Design (3)**

Principles of dynamics; kinetics and kinematics of rectilinear motion and rotation of bodies, curvilinear motion, work, energy and power; gear design basics. Prereq: MD-134, PHYS-1030. Concurrent: MATH 1910. [S]

**MD 294 Automated Manufacturing (3)**

Various manufacturing concepts applied to manufacturing automation; manufacturing organization, flexible manufacturing systems, plant layout and design, quality control, computer integrated manufacturing, jig and fixture design, geometric tolerancing and dimensioning, plastics, and tool design. Prereq: DD-124, MATH-1530, MD-184. [F]

**MD 295 Manufacturing Management (3)**

Production, organization, and operation management; relationships between manufacturing lead-time, cycle time and inventory level; quality management, production planning and control, plant layout, motion and time studies. Prereq: MD 294. [S]

**MD 298 Special Topics in Mechanical Engineering Technology (1-4)**

Specialized topics and/or problems in mechanical engineering technology; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

**MD 299 Special Topics in Mechanical Engineering Technology with Lab (1-4)**

Specialized topics and/or problems in mechanical engineering technology; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

Mechanics, Automotive, see "AM-Automotive Technology"

Mechanics, Diesel, See "DM-Diesel Equipment Mechanics"

Mechanics, Marine, See "SE-Motorcycle & Marine Engine Technology"

Medical Records, See "HE-Health Information Management"

**MG - Management****MG 101 Professional Ethics in the Workplace: Business and Commerce (1)**

Prepares students to cope with difficult choices in the business-commerce arena by the study of moral principles governing conduct of persons at work. [F,S]

**MG 103 Business Today, An Introduction (3)**

Explores the principles and practices of today's businesses. Focuses on the foundations of business structure, business ethics, management, marketing, quality, human resources, accounting, and finance. Identifies and gives insights into contemporary challenges that will affect businesses. [E]

**MG 105 Introduction to Quality Management (3)**

Acquaints students with concepts and tools associated with continuous improvement of products and services offered by the firm; explores basic tenets of quality from several of the outstanding writers in the Quality Management field. [F]

**MG 110 Leadership Skills (1)**

Comprehensive approach to the subject of leadership; successful leadership styles and ways to manage conflict, formulating a plan from initial concept through execution, positive productivity techniques, and presentation and speaking skills improvement. [S]

**MG 114 Principles of Management (3)**

Concise, comprehensive review of the management processes of planning, organizing, leading and controlling; students develop decision making and communication skills through case studies, research reports and simulations. [E]

**MG 115 E-commerce Operations (3)**

Overview of operating an online business; focus on how the Internet is used in businesses and the fundamentals of Internet technology; replaces MG 196 and 197; duplicate credit not allowed. [on demand]

**MG 116 E-commerce Marketing (3)**

Study of how the Internet is used as a marketing tool both by e-businesses and traditional businesses. Prereq: MG-115. [on demand]

**MG 154 Marketing (3)**

Study of the field of marketing; covers marketing channels, functions, methods and institutions; interpersonal skills developed through collaborative projects; may include case studies and/or computer simulations. [E]

**MG 160 Project Management (3)**

Basic project management concepts; project organization, quotations and negotiations; planning, beginning operations, budgeting and funding; quality assurance and control, procurement, management style, team building and phasing-out methods; tracking a project with management computer software package; experience with computer applications required. [F]

**MG 165 Business Mathematics (3)**

Application of math to solve problems related to routine business operations and to personal finances; topics include insurance, taxes, consumer credit, retail applications, investments and introductory statistics. [E]

**MG 170 Labor Relations (3)**

Intro to labor relations; overview of labor relations beginning with the history and progressing through developments in the field, federal laws and recent trends; presents a labor relations definition and a working knowledge of basic negotiations concepts. [on demand]

**MG 176 Customer Service Skills (3)**

Intro to customer service; analysis of personal and group service skills, components of good customer service, focus on customer retention and matching customer needs with business features, dealing effectively with dissatisfied customers through listening and communication skills. [F]

**MG 185 Basic Investing (3)**

Presents alternative means of investing for the purpose of receiving benefits such as profits, interest payments or income tax reduction; elective for both business and non-business majors. [on demand]

**MG 195 E-commerce Legal Issues (1)**

Survey of legal issues shaping e-commerce including taxation, licensing, and contract principles. [on demand]

**MG 198 E-commerce Success Factors (1)**

Survey of the marketing, financial, and operational characteristics of successful e-commerce sites. [on demand]

**MG 201 Management Internship (1-6)**

Provides students with the opportunity to work for a business that is specifically related to their career objectives. Provides on-the-job experience while earning credit. Prereq: Department Head or Dean approval. [on demand]

**MG 202 International Business (3)**

Provides an overview of the international environment in which business operates today. Demonstrates the global relationships between business activities and how events in one part of the world can influence business decisions and activities in other parts of the world. Prereq: MG 103 or consent of instructor. [S]

**MG 204 Logistics (3)**

A theoretical and applied study of effective logistics management within a supply chain perspective. [on demand]

**MG 214 Supply Chain Management (3)**

An overview of effective and efficient management of the supply chain with a focus on the purchasing area; emphasizes supply chains in both operations and services industries. Methods, processes, and systems used in the operation and improvement of supply chain relationships and outcomes will be studied. Prereq: MG 103, 114. [F]

**MG 215 Retail Operations (3)**

Study of the field of retailing; store location and lay-out, merchandising, advertising, salesmanship, customer service standards, staffing, and security; focus on policy differences according to retail establishment type. Prereq: MG 154. [S]

**MG 217 Operations Management (3)**

An overview of operations management inclusive of operations strategy, process analysis, materials requirements planning, production scheduling, enterprise wide resource planning, quantitative methods, and lean manufacturing. Prereq: MG 103, MG 114. [S]

**MG 224, 225 Entrepreneurship I, II (3,3)**

Capstone course that applies skills learned throughout the previous courses in the Entrepreneurship Program. 224-Emphasis on the development of creative skills to allow identification of opportunities; starting, managing, and financing a small business. 225-Issues relevant to the entrepreneur's success and the development of a bank ready business plan. Prereq for 224: BU-114, MG-103, MG-165. Prereq for 225: MG-224. [224-F,225-S]

**MG 244 Advertising (3)**

Examines principles of modern advertising related to customer psychology; includes means and media of creative communication with customers; focus on group interaction via a selected advertising campaign. Prereq: MG-154. [F]

**MG 245 Internship in Broadcast Media Account Executive (3)**

Designed to help the student gain work experience in the position of account executive in a broadcast media organization. The opportunity will be provided at one of several approved local media organizations where the student will work nine (9) hours per week for one semester. Prereq: MG 244, 254. [F]

**MG 246 Broadcast Media Practices (3)**

An overview of the skills and techniques utilized by account executives and the unique challenges they encounter in selling radio and television advertising. Prereq: MG-224, 254. [S]

**MG 254 Principles of Selling (3)**

Basic personal salesmanship principles linking customer needs to selling activities; focus on salesman's duties and methods, common problems, competitor and product knowledge, and handling objections; includes oral presentations in which each student serves as both buyer and seller. [S]

**MG 264 Human Resources Management (3)**

Intro to principles and practices of effective resources management; focus on procurement, development, compensation, integration, and management of personnel through case studies. Prereq: MG 114 or instructor's consent. [F,S]

**MG 281 Strategic Management Practices (3)**

A capstone course which requires students to apply critical thinking, problem solving, and communication skills to a variety of business scenarios in order to develop relevant strategies. Utilizes case studies, presentations, team processes, research methods, and written analyses as tools for study and assessment. Prereq: MG 103, 114, 154, 264, BU 211. [S]

**MG 285 Organizational Behavior (3)**

Study of strategic variables and relationships of structure and process involving groups of people and how they may be motivated to work together more productively. [S]

**MG 286 Health Services Management Practicum (3)**

Preparation for employment in Health Services Management; provides practical work experience; 2 required areas of emphasis are Accounting and Management/Supervision making and controlling processes to increase individual productivity within the workplace. [S]

**MG 288,289 Applied Management I,II (3,3)**

Results oriented management development course to refine skills in leadership, team building, decision making and controlling processes to increase individual productivity in the workplace. Must be taken in sequence. [288-F, 289-S]

**MG 295 Students in Free Enterprise (1-3)**

Explores real life business situations through participation in community project. [F,S]

**MG 299 Special Topics in Management (1-19)**

Selected management and related topics of current and special interest; repeatable for credit on different topics. Prereq: Department head's consent. [on demand]

**MN - Maintenance Technology****MN 102,112 Electrical Fundamentals I,II (3,3)**

Electrical fundamentals for industrial/commercial electrical and electronic systems maintenance; class 2 hours, lab 3 hours. *102*—Basic AC/DC theory and concepts including circuits, batteries, transformers, and magnetism; generation, transmission, regulation and distribution of power systems with focus on in-plant customs, practices and application. *112*—Measuring and monitoring electrical/electronic systems variables; switching, modifying, and regulating electrical devices; electrical transmission (conductors); AC/DC circuits; intro to electronics. Must be taken in sequence. [on demand]

**MN 103,113 Mechanical Fundamentals I,II (3,3)**

Mechanical practices, applications, and concepts; class 2 hours, lab 3 hours. *103*—Drive components, mechanical forces, and machine motion; focus on operating, servicing and maintaining machines and equipment using a systems approach. *113*—Basics of integrated drive systems that propel and control motion; focus on management of processes and application of force/motion patterns in propulsion, positioning, and articulated movement of machines, materials and tooling systems. Must be taken in sequence. Concurrent for 103: MD-104. [on demand]

**MN 210 Building and Structural Maintenance (3)**

Intro to necessary skills for servicing and maintenance of buildings and facilities used to house and support production machinery, processes, and storage; lock and key systems, carpentry, finishing for floors, walls, and ceilings, painting, roof maintenance, plumbing, and landscape maintenance activities; class 2 hours, lab 3 hours. Prereq: OS-116. [on demand]

**MN 215 Maintenance Management and Organization (3)**

Intro to the supervisor's role in a contemporary maintenance department/organization; human relations and organizational duties, control of maintenance resources, improvement of maintenance performance, and need to promote maintenance productivity through life long learning; lab and project activities include research on current maintenance management practices; class 2 hours, lab 3 hours. Prereq: MN-102, 103, OS-116. [on demand]

**MN 218 Hydraulics, Pneumatics, and Fluid Systems (3)**

Intro to fluid handling, management and quality control activity basics; focus on the parameters that sustain selection, installation, operation, service and maintenance of fluid handling and management systems; activity based labs aid in perfecting skill and proficiency with regard to industrial/commercial systems; class 2 hours, lab 3 hours. Prereq: MN-113. [on demand]

**MO - Medical Assistant****MO 000 Medical Assistant**

30 clock hours/week. Must be taken in sequence.

**First Semester**

Administrative and clinical procedures; anatomy and physiology, medical terminology, basic medical typing, business communication, professional orientation and exam room procedures. [F]

**Second Semester**

Pharmacology and administration of medication, administrative practices (insurance, billing, filing, scheduling, and banking), lab procedures, medical transcription, first aid and CPR. [S]

**Third Semester**

Review of clinical and lab procedures; internship in physician's office. [Su]

**MOTR - Motor Sports Technology****MOTR 101 Introduction to Motor Sports (1)**

Introduction to the motor Sports industry; emphasis on history, types of sanctioning bodies and their rules and regulations, and job opportunities. Discusses the interdisciplinary roles of technology, management, marketing, graphics, safety, and public relations. [on demand]

**MP - Massage Therapy**

MP 000 This program is designed to train students in the techniques and skills of massage therapy in preparation for becoming a licensed massage therapist. In addition, students will develop skills and techniques in medical massage. 1290 clock hours.

**MRI - Magnetic Resonance Imaging**

*Prereq for all MRI courses: Graduate of CAHEA/JRCERT accredited Radiologic Technology Program and certified or eligible for certification by American Registry of Radiologic Technologists.*

**MRI 200 Magnetic Resonance Imaging (4)**

Intro to basic essentials of magnetic resonance imaging methods, system operation, cross-sectional anatomy and clinical imaging interpretation; focus on requirements to operate magnetic resonance equipment. [F]

**MRI 230 Magnetic Resonance Imaging Clinical (7)**

This is a one-semester course designed to prepare the Radiologic Technologist clinically for a professional career in MRI. Emphasis is placed on the foundations, concepts and procedures of Clinical Magnetic Resonance Imaging. This class is a recommended co-requisite with MRI 200 Magnetic Resonance Imaging or post-requisite for MRI 200.

Advanced standing is also available for qualified candidates.) Prereq: Active Certification (or eligible) as a Registered Technologist by the American Registry of Radiologic Technologist.

### MS - Military Science

#### MS 106 Basic Leadership (2)

Develops basic skills that underline effective problem solving. Examines factors that influence leader and group effectiveness. Emphasis communication skills to include active-listening and feedback techniques. Adventure training skills lab introduces land navigation, rifle marksmanship, mountaineering, and optional field-training exercises, class 1 hour, lab 3 hours. Prereq: Permission of the instructor [F, S]

#### MS 114 Foundations of Officership (2)

Discusses organization and role of the Army. Emphasizes basic life skills pertaining to fitness and communication. Analyzes Army values and expected ethical behavior. Adventure training skills lab introduces land navigation, rifle marksmanship, mountaineering, and optional field-training exercises, class 1 lab 3. Prereq: Permission of the instructor [F, S]

#### MS 206 Foundations of Tactical Leadership (3)

Focuses on self-development through understanding of self and group processes. Examines leadership through group projects and historical case studies. Adventure training skills lab introduces land navigation, rifle marksmanship, mountaineering, and optional field training, class 3 hours, and lab 3 hours. Prereq: Permission of the instructor [F, S]

#### MS 214 Innovative Team Leadership (3)

Develops knowledge of self, self-confidence, and individual leadership skills. Concentrates on problem-solving and critical thinking skills. Emphasizes communication skills such as feedback and conflict resolution. Adventure training skills lab introduces land navigation, rifle marksmanship, mountaineering and optional field training exercises, class 2 hours, and lab 3 hours. Prereq: Permission of instructor [F, S]

### MT - Machine Tool Technology

#### MT 000 Machine Tool Technology

Machine shop safety; basic hand tools and precision instruments; lathes, milling machines, and grinders; basic stamping die components principles and construction; focus on precision grinding; CNC technology; blueprint reading focusing on skills needed to interpret shop drawings; 30 clock hours/week. [E]

### MUS - Music

#### MUSIC—GENERAL COURSES

#### MUS 1000 Music Seminar (0)

Opportunities to perform and attend concerts and seminars on various musical topics; required each semester of attendance for every music major; repeatable. Coreq: Private instruction in music. Satisfactory/No Credit Grading. [F,S]

#### MUS 1001 Artist in Residence (1-3)

Visiting artists interact with students in lectures and workshops; 2 workshops for 1 credit; 3 workshops for 2 credits; 4 workshops for 3 credits; repeatable; maximum of 3 hours applicable toward a degree. [F,S]

#### ◆MUS 1030 Music Appreciation (3)

Development of music from Middle Ages to the present; designed to give better understanding and appreciation of traditional art music as well as music of our present culture. [E]

#### MUS 1040 History of Rock and Roll (3)

Study of the development of rock and roll by musical analysis, style comparison and coverage of the performers and their music's impact. [on demand]

#### MUS 1130 Fundamentals of Music (3)

Study of basic music elements: scales, intervals, triads, meter, note values, rhythm, notation, and simple keyboard harmony. [F,S]

#### MUS 1210,1220,2210,2220 Music Theory I,II,III,IV (3,3,3,3)

1210—Building scales, major and minor key signatures, triads, intervals, rhythmic notation, 4-part vocal writing, and primary and secondary triads. 1220—Harmonization of melodies, non-chord tones, writing for the piano, secondary dominants, and secondary diminished 7th chords. 2210—Modal changes, Neapolitan chords, pedal points, modulations; modal, non-functional, extended tertian and non-tertian harmony. 2220—Harmony and form; binary and ternary principles, imitative, variation, sonata-allegro, rondo and atypical formal organization. Must be taken in sequence. Prereq for 1210: MUS 1130. Coreq: MUS-1310 sequence; MUS-1401. [1210, 2210—F; 1220, 2220—S]

#### MUS 1310,1320,2310,2320 Aural Skills I,II,III,IV (1,1,1,1)

Development of sightreading skills through drills in aural and visual recognition, intervals, melodies, harmonies, and rhythmic impulsations; lab 3 hours. 2310 & 2320—Added focus on sight singing, ear training, and dictation. Must be taken in sequence. Coreq: MUS-1210 sequence. [1310, 2310—F; 1320, 2320—S]

#### MUS 2530 Electronic Music I (3)

Hands-on course with focus on MIDI and how it is used in conjunction with computers and sound devices; electronic keyboards, software programs, and basic recording techniques. [on demand]

#### MUS 2990 Special Topics in Music (1-3)

Study of specific topics relating to the historical and cultural significance of music; repeatable for credit on different topics. [on demand]

#### MUSIC—INSTRUCTION AND PERFORMANCE

*Music majors must take at least one course from Applied Instruction and one from Performing Ensemble each semester. Designated courses are repeatable for credit, but no more than 12 hours of Applied Instruction and/or Performing Ensemble, in any combination, may be applied toward a degree.*

#### APPLIED INSTRUCTION COURSES:

#### MUS 1400 Piano Instruction for Non-Majors (1)

Individual piano instruction for non-majors; repeatable; maximum of 4 hours applicable toward a degree; extra fee required. [F,S]

#### MUS 1401, 1402, 1403, 1404 Piano Class I, II, III, IV (2,2,2,2)

Group instruction in basic keyboard techniques. 1401—Basic note-reading, elementary harmony, simple exercises and pieces 1402—Major scales and arpeggios, simple harmonization, sight-reading and transposition, simple pieces. 1403—Minor scales and arpeggios, harmonization with augmented and diminished chords, four-part reading, pieces from standard keyboard literature. 1404—Harmonization using traditional and pop chord notation, advanced sight-reading, improvisation, pieces from standard keyboard literature. Must be taken in sequence or have instructor's consent. [on demand]

#### MUS 1410 Piano Instruction (1-2)

Private instruction in piano; daily practice required; 1 half-hour lesson each week per credit hour; repeatable; maximum of 6 hours applicable toward a degree; extra fee required. [F,S]

#### MUS 1500 Voice Instruction for Non-Majors (1)

Individual voice instruction for non-music majors; repeatable; maximum of 2 hours applicable toward a degree; extra fee required. [F,S]

#### MUS 1501 Voice Class (2)

Group instruction in basic techniques of breath control, tone production, diction, phrasing and interpretation using simple song repertoire; daily practice required. [F,S]

#### MUS 1510 Voice Instruction (1-2)

Private instruction in voice; daily practice required; 1 half-hour lesson each week per credit hour; repeatable; maximum of 6 hours applicable toward a degree; extra fee required. [F,S]

#### MUS 1610 Guitar Instruction (1-2)

Private instruction in guitar; daily practice required; 1 half-hour lesson each week per credit hour; repeatable; maximum of 6 hours applicable toward a degree; extra fee required. [F,S]



**MUS 1620 Guitar Class (2)**

Group instruction in guitar; must provide own instrument; repeatable; maximum of 6 hours applicable toward a degree. [on demand]

**MUS 1650 Percussion Instruction (1-2)**

Private instruction in percussion instruments; daily practice required; 1 half-hour lesson each week per credit hour; focus on only 1 percussion instrument; repeatable; maximum of 6 hours applicable toward a degree; extra fee required. [on demand]

**MUS 1660 String Instruction (1-2)**

Private instruction in string instruments; daily practice required; 1 half-hour lesson each week per credit hour; focus on only 1 string instrument; repeatable; maximum of 6 hours applicable toward a degree. Extra fee required. [on demand]

**MUS 1670 Bass Guitar Instruction (1-2)**

Private instruction in bass guitar; daily practice required; 1 half-hour lesson each week per credit hour; repeatable; maximum of 6 hours applicable toward a degree; extra fee required. [on demand]

**MUS 2430 Conducting (2)**

Intro to conducting techniques; repeatable; maximum of 6 hours applicable toward a degree. Prereq: MUS-1210, 1310. [on demand]

**PERFORMING ENSEMBLE COURSES:****MUS 1720 Jazz Band (1-2)**

Performance of big band, jazz-rock and dixieland styles; members required to play at scheduled performances; repeatable; maximum of 6 hours applicable toward a degree; lab 3 hours. Prereq: Instructor's consent, knowledge/skill in an instrument. [F,S]

**MUS 1810 Concert Choir (1-2)**

Performance of choral literature; open to all students; performance at scheduled concerts required; repeatable; maximum of 6 hours applicable toward a degree. [F,S]

**MUS 1840 Chorale (1-2)**

Auditioned choral group; performs wide variety of choral music; admission by audition only; repeatable; maximum of 6 hours applicable toward a degree. [F,S]

**MUS 1850 Jazz Vocal Ensemble (1-2)**

Auditioned vocal ensemble; performs standard and contemporary jazz music; repeatable; maximum of 6 hours applicable toward a degree. [F,S]

**MY - Mammography**

*A 3-course set in specialized imaging of the breast; complete set fulfills federal regulations for formal specialized training in mammography prior to independent mammography performance. All 3 courses must be taken together. Prereq: Graduate of CAHEA/JRCERT accredited Radiologic*

*Technology Program and certified or eligible for certification by American Registry of Radiologic Technologists.*

**MY 210 Mammography Patient Management (3) (Online)**

Patient care (psychological, sociological and physical), breast anatomy and physiology, pathology, compression and positions, and special procedures. [F]

**MY 220 Mammography Instrumentation/ Physics (3) (Online)**

Characteristics of dedicated film screen mammography units and digital unit, image receptors and required quality control tests. [F]

**MY 230 Mammography Clinic (4)**

Supervised performance of a minimum of 100 mammography exams and film-reporting sessions with radiologists interpreting mammograms; observation and assistance in quality assurance tests and localization procedures; clinic 140 hours in an FDA approved mammography facility in student's geographic area. [F]

**MZ - Mechanical Engineering Technology (DuPont)****MZ 110 Mechanical Principles (4) (DuPont)**

Intro to concepts of mechanical principles of motion, thermodynamics, fluid mechanics, and mathematical solution techniques; class 3 hours, lab 2 hours.

**MZ 111 Mechanical Tool Applications (3) (DuPont)**

Intro to the safe use and care of tools, precision measuring instruments, mechanical drawing, and everyday shop operations; class 2 hours, lab 2 hours.

**MZ 112 Mechanical Piping Systems (3) (DuPont)**

Intro to equipment and practices of pipe fitting procedures; pipe and pipe fitting properties identified by material, dimensions, schedule number, joining method, and function; basic piping system layout concepts taught using orthographic and isometric sketches; measurement, fabrication, assembly, and installation techniques; techniques and practices related to testing and breaking into a piping system explained with focus on safety; class 2 hours, lab 2 hours.

**MZ 120 Mechanical Maintenance Principles (3) (DuPont)**

Overview of the principles required to maintain and repair mechanical systems found in typical production facilities; bolt grade marking, hardware fasteners and identification, torque values, rigging techniques to move loads and equipment, lubricant characteristics and principles, bearings, seals, packing, pump applications and selection, and alignment techniques using dual dial indicators; class 2 hours, lab 2 hours.

**MZ 122 Fluid Mechanics (3) (DuPont)**

Intro to the principles of pneumatics and components found in a typical pneumatic circuit; force and energy transmission, compressors, pressure and directional control, diagrams, maintenance programs, and troubleshooting in a pneumatic circuit; covers safety, use of each component, and troubleshooting procedures; class 2 hours, lab 2 hours.

**MZ 124 Principles of Thermodynamics (3) (DuPont)**

Saturated, superheated, and wet steam; latent heat of steam, pressure/temperature relationship of saturated and superheated steam, condensing steam, and major components of steam generating equipment; how steam and condensate are formed, importance and need of steam traps; steam piping; installation, testing, troubleshooting, and repair of typical steam trap assemblies; class 2 hours, lab 2 hours.

**MZ 130 Principles of Machine Operation and Maintenance (3) (DuPont)**

Advanced maintenance principles for production equipment; chem, ansi, canned, nonmetallic, and sealless pumps; pump bearings and motors, mechanical seals, fans and blowers, power transmission related to chain drives, V belts, industrial flat belts, sheaves, shaft couplings, bearing mounting and dismounting, bearing failure analysis, gear types and usage, maintaining spur, helical, herringbone bevel work gears, and gear reducers; class 2 hours, lab 2 hours. Prereq: Instructor's consent.

**MZ 131 Introduction to Welding Principles and Techniques (1-4) (DuPont)**

Welding safety, processes, and techniques; personal protective equipment, equipment set-up; oxy-acetylene process used to demonstrate proper equipment set-up, lighting, adjusting, and extinguishing the flame, bevel cutting pipe in position, and equipment disassembly; SHAW process used to make fillet welds on carbon steel plate in position; class 1 hour, lab 3 hours. Prereq: Instructor's consent.

**MZ 200,201 Machine Shop Principles I,II (3,3) (DuPont)**

Machine tool principles and operation; class 2 hours, lab 2 hours. **200**—Physical properties of metals, their manipulation in mining and refinement; alloying and heat treatment processes; natural and manufactured abrasives and bonding processes that determine their molecular structures; various types of grinding machines studied and used. **201**—Operation and safe use of lathes, milling machines (including NC and CNC types), drill presses, etc.; focus on engine type bench lathe.

**MZ 210 Planned Maintenance/PPM (3) (DuPont)**

Intro to the basic information needed to establish or improve Predictive/Preventive Maintenance and equipment reliability programs; covers the latest predictive/preventive technology and how its implementation helps plants compete within the world market place; class 2 hours, lab 3 hours.

♦ and \*, see "Legend page 74."

**MZ 260 Mechanical Drawings and Standards (3) (DuPont)**

Intro to P&ID's as well as the Dupont Industrial Engineering Standards; specific symbology, application and interconnection of prints and drawings studied until the student is fully competent to analyze given process control system from its prints; class 2 hours, lab 2 hours.

**ND - Dietary Manager****ND 110 Practical Diet Therapy (3)**

Normal nutrition and therapy principles related to health and disease; role of food and its nutrients regarding diet modifications; practical diet planning, identifying dietary needs patients, development of nutritional care plans and clinical services quality assurance. Prereq: BIOL-1430. Coreq: ND-111. [S]

**ND 111 Practical Diet Therapy Practicum (1)**

Series of area non-commercial food service agency visits and/or study of diet therapy in student's work facility; diet therapy principles applied in work settings; extension of topics in ND-110; clinic 4 hours. Prereq: BIOL-1430. Coreq: ND-110. [S]

**ND 120 Food Service Sanitation (2)**

Food service and equipment sanitation/safety principles; Hazard Analysis Critical Control Point (HACCP) food safety systems, foodborne illness emerging pathogens, Hazard Communication Standard (HCS) required by Occupational Safety and Health Administration (OSHA); Natural Restaurant Association's SERVSAFE Certification Examination given at course end. Prereq: BIOL-1430. Coreq: ND-121. [F,S]

**ND 121 Food Service Sanitation Practicum (1)**

Series of area non-commercial food service agency visits and/or study of food service sanitation and safety principles in student's work facility; principles of food service sanitation applied, extension of topics studied in ND-120; lab 3 hours. Prereq: BIOL-1430. Coreq: ND-120. [F,S]

**ND 125 HACCP Training & Certification (1)**

Recipes, flowcharts and written Hazard Analysis Critical Control Point (HACCP) system; develop and implement an HACCP food safety system for food service operation. Coreq: ND-120, 121; or proof of current SERVSAFE certification. [F]

**ND 130 Food Service Management (2)**

Food procurement, production and service principles; methods for organization/department planning, menu planning with computer applications, food production/productivity, work simplification, inventory control, equipment procurement, and continuous quality improvement methods. Prereq: BIOL-1430. Coreq: ND-131. [Su]

**ND 131 Food Service Management Practicum (1)**

Series of area non-commercial food service agency visits and/or study of diet therapy

in student's work facility; principles of food service management applied, extension of topics studied in ND-130; clinic 4 hours. Prereq: BIOL-1430. Coreq: ND-130. [Su]

**ND 140 Food Service Administration (3)**

Principles of food service administration/personnel management; focus on human relations, institutional development and operations management; problem solving, systems analysis, dietary policies and procedures, interpersonal skills, departmental budgeting, marketing and computer applications. Prereq: BIOL-1430. Coreq: ND-141. [F]

**ND 141 Food Service Administration Practicum (1)**

Series of area non-commercial food service agency visits and/or study of diet therapy in student's work facility; principles of food service administration applied; extension of topics studied in ND-140; clinic 4 hours. Prereq: BIOL-1430. Coreq: ND-140. [F]

**NM - Nuclear Medicine Technology**

*Admission to the Nuclear Medicine Technology Program is a prerequisite for all NM courses. Please consult the SUMMARY OF REQUIRED HOURS. All courses shown in the same term are corequisites and all courses shown in the preceding term(s) are prerequisites.*

**NM 200 Introduction to Nuclear Medicine (2)**

Intro to basic terminology in nuclear medicine technology; special emphasis on guidelines for radiation protection, regulatory requirements, ethics, patient care and participation in the Nuclear Medicine Technology Program and its clinical affiliates. [F]

**NM 201 Instrumentation and Statistics (3)**

Principles of instrumentation and nuclear statistics as used in the nuclear medicine laboratory with emphasis on use, maintenance, and quality control of personal monitoring devices, gas and scintillation detectors; intro to statistical analysis and computer applications associated with radiation detection and imaging. [F]

**NM 205,215,225 Clinical Procedures I,II,III (2,4,6)**

Biological, physiological and anatomical aspects of nuclear medicine clinical procedures. 205–Skeletal, cardiovascular and respiratory organ systems; relationship between physiology, pathophysiology, radiochemistry, radiobiology, instrumentation and patient care techniques. 215–Gastrointestinal, genitourinary and endocrine systems; radionuclide therapy and department management. 225–Central nervous system, tumor and inflammatory processes; intro to in-vivo non-imaging procedures, in-vitro procedures; preparation for national registries. [205–F, 215–S, 225–Su]

**NM 207,217,227 Practicum in Nuclear Medicine I,II,III (9,2,6)**

Clinical experience allowing students to assimilate methods, theory, and techniques into clinical practice; must demonstrate

acceptable level of progression in clinical competency culminating in mastery of all required clinical competencies defined by the Joint Review Committee on Education Programs in Nuclear Medicine as *Essential*; Satisfactory/No Credit grading. [207–F, 217–S, 227–Su]

**NM 208 Radiopharmacology (2)**

Basic principles of radiopharmacy as practiced in the nuclear medicine laboratory; special emphasis on radionuclide and radiopharmaceutical preparations, radiation safety, quality control procedures and operation of equipment. [F]

**NM 212 Physics and Radiation Biology of Nuclear Medicine (4)**

Principles of physics and radiation biology as related to nuclear medicine. [S]

**NS - Nursing (RN)**

*Admission to the Nursing Program is a prerequisite for all NS courses unless otherwise noted. Please consult the SUMMARY OF REQUIRED HOURS; all BIOL and PY courses are pre/corequisite to the NS courses as shown. All Nursing courses must be completed in sequence.*

**NS 024 Nursing Transitions (4)**

Prepares LPN, reentering and transfer students to enter second year nursing courses. Assists LPN'S with transition from the role of LPN to associate degree RN; content derived from first year nursing courses provides a background on which remaining educational program will be based; successful completion required for entry into NS 238 or NS 210. Prerequisites: BIOL 2010, BIOL 2020, BIOL 1430, PY 101, PY 217. Note: This is a course for which institutional credit is given. It is not accepted towards any degree program at Chattanooga State. Class 3 hours, clinical 1 hour.

**NS 027 Paramedic Transition (7)**

Prepares the licensed paramedic to enter second year nursing courses. Building on emergency and acute care knowledge, assists the paramedic with the transition to the role of the associate degree RN; content derived from the first year nursing courses provides a background of theory and skills on which the remaining educational program will be based; successful completion required for entry into NS 238 (day program) or NS 210 (night program). Note: This is a course for which institutional credit is given. It is not accepted towards any degree program at Chattanooga State. (class 4 hours; clinical 9 hours). Nursing lab fee, achievement test fee and liability insurance required. Prereq: Acceptance into the program, BIOL 2010, BIOL 2020, BIOL 1430, BIOL 2230, PY 101, PY 217. [Su]

**NS 110, Night Nursing I (7)**

Begins the development of psychomotor, cognitive and affective competencies needed to assume the roles of the associate degree nurse; intro to the nursing process focusing on assessment of diverse individuals across the life span; with emphasis on communication and teaching, students plan

and implement interventions to promote and maintain wellness and provide care to individuals experiencing variation in function; clinical experiences provided in a variety of community based settings. Prerequisites: BIOL 1430, BIOL 2010, BIOL 2020, BIOL 2230; with concurrency PY 217. Class 4 hours and clinical 9 hours.

#### NS 120 Night Nursing II (7)

Expands the development of psychomotor, cognitive and affective competencies needed to assume the roles of the associate degree nurse, with continued emphasis on assessment, students plan, implement and evaluate interventions to promote, maintain and restore health of diverse individuals across the life span who are experiencing alteration in health; emphasis is on teaching/learning, intro to acute care, perioperative care and altered cell function and alterations in comfort/rest, fluid/gas transport, nutrition/metabolism and psychosocial/cultural; students apply nursing process in caring for pediatric and adult clients in acute care, ambulatory care and community based settings. Prerequisite: NS 110; with concurrency PY 101. Class 4 hours, clinical 9 hours.

#### NS 210 Night Nursing III (7)

Enhances development of psychomotor, cognitive and affective competencies needed to assume roles of the associate degree nurse; with continued emphasis on the nursing process, students plan, implement and evaluate interventions to promote, maintain and restore health of diverse individuals across the life span who experience alteration in fluid/gas transport, activity/mobility, and nutrition/metabolism, students apply the nursing process in caring for pediatric and adult clients in acute care and community based settings. Prerequisite: NS 024 or NS 120. Class 5 hours, clinical 6 hours.

#### NS 220 Night Nursing IV (7)

Enhances development of psychomotor, cognitive and affective competencies needed to assume roles of the associate degree nurse; with continued emphasis on the nursing process, students plan, implement and evaluate interventions to promote, maintain and restore health of diverse individuals across the life span who experience alteration in fluid/gas transport, psychosocial/cultural, elimination, nutrition/metabolism and growth and development functions; students apply the nursing process in caring for adult clients in acute care and community based settings with concentrated experience in women's health and care of the client with altered psychosocial function. Prerequisite: NS 210. Class 5 hours, clinical 6 hours.

#### NS 230 - Night Nursing V (8)

Operationalizes the performance of psychomotor, cognitive and affective competencies needed to assume the roles of the associate degree nurse, continued focus on assessing, planning, implementing and evaluating interventions to promote, maintain and restore health of diverse individuals across the life span who experience alteration in growth and fluid/gas transport, nutrition/metabolism, sensory/perceptual, elimination, and protective functions; students apply nursing process in caring for clients in acute care and community based settings with a concentrated experience in care of clients in the critical care settings; course culminates with a clinical experience in the management of groups

of clients in the acute care setting. Prerequisite: NS 220. Class 4 hours, clinical 12 hours.

#### NS 119 Nursing I (9)

Begins the development of psychomotor, cognitive and affective competencies needed to assume the roles of the associate degree nurse; intro to the nursing process focusing on assessment of diverse individuals across the life span; with emphasis on communication and teaching, students plan and implement interventions to promote and maintain wellness and provide care to individuals experiencing variation in function; clinical experiences provided in a variety of community based settings. Prerequisite with concurrency BIOL 2010, BIOL 1430, PY 217. Class 5 hours, clinical 12 hours.

#### NS 128 Nursing II (9)

Expands the development of psychomotor, cognitive and affective competencies needed to assume the roles of the associate degree nurse, with continued emphasis on assessment, students plan, implement and evaluate interventions to promote, maintain and restore health of diverse individuals across the life span who are experiencing alteration in health, emphasis is on teaching/learning, intro to the acute care, perioperative care and altered cell function and alterations in comfort/rest, fluid and gas transport, nutrition/metabolism, activity/mobility, psychosocial/cultural, and growth and development functions; students apply nursing process in caring for pediatric and adult clients in acute care, ambulatory care and community based settings. Prerequisite: NS 119; with concurrency BIOL 2020, PY 101. Class 6 hours, clinical 9 hours.

#### NS 238 Nursing III (9)

Enhances development of psychomotor, cognitive and affective competencies needed to assume the roles of the associate degree nurse; with continued emphasis on assessment, students plan, implement and evaluate interventions to promote, maintain and restore health of diverse individuals across the life span who experience alteration in fluid and gas transport, nutrition/metabolism, psychosocial/cultural, elimination, and growth and development functions; students apply nursing process in caring for pediatric and adult clients in acute care and community based settings with concentrated experience in care of the client with altered psychosocial function. Prerequisite: NS 024 or NS 128; with concurrency BIOL 2230. Class 6 hours, clinical 9 hours.

#### NS 249 Nursing IV (9)

Operationalizes the performance of psychomotor, cognitive and affective competencies needed to assume the roles of the associate degree nurse, continued focus on assessing, planning, implementing and evaluating interventions to promote, maintain and restore health of diverse individuals across the life span who experience alteration in growth and development, sensory/perceptual, elimination, protective and psychosocial/cultural functions; students apply nursing process in caring for clients in acute care and community based settings with a concentrated experience in women's health; course culminates with a clinical experience in the management of groups of clients in the acute or extended care setting. Prerequisite: NS 238. Class 5 hours, clinical 12 hours..

#### NS 299 Special Topics in Nursing (1-3)

Study of selected topics of interest in nursing; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

Nutrition, See "BIOL-Biology" and "ND-Dietary Manager"

### NU - Health Physics

#### NU 101 Health Physics and Industrial Seminar (1)

Introduction to disciplines of health physics and industrial hygiene; lectures and video presentations provide overview of basic features of respective fields. [F]

#### NU 104 Radiation Protection and Radiological Health Administration (4)

A study of radiation dosimetry, biological effects of ionizing radiation, radiation protection standards for occupationally exposed, general public and special groups, design of laboratories, and survey meters. Concurrent: PHYS 1030 [F]

#### NU 154 Nuclear Physics (4)

Atomic and electrical nature of matter and the elementary theory of the nucleus, fundamental particles, natural and artificial radioactivity and nuclear reactions. Concurrent: MATH 1910 [F]

#### NU 204 Introduction to Health Physics & Industrial Hygiene (4)

Covers the concept of radiation-induced ionization, methods of measurement, and the basic elements of radiation safety and industrial hygiene. Specific topics include atomic and nuclear structure, types of ionizing radiation, radioactive decay processes, introductory gamma ray physics, shielding, distance/intensity relationships, instrumentation and dosimetry, health effects, the uranium cycle, waste management, fission and fusion processes, and an introduction to general industrial hygiene issues, practices and history. Concurrent: CHEM 1010. [F]

#### NU 264 Health Physics (4)

A study of radiation dosimetry, biological effects of ionizing radiation, radiation protection for occupationally exposed and special groups, and instrumentation used in radiation detection analysis and measurements. Concurrent: NU 104, 204. [S]

### NW - Network Management

#### NW 205 Network Client Operating Systems (3)

Provides knowledge and skills needed to install and configure a network client operating system and to perform day-to-day administration tasks. [on demand]

#### NW 207 Managing & Maintaining a Server Environment (3)

Provides knowledge and skills needed to install and configure a network server and to perform day-to-day administration tasks in

a network environment; class 3 hours, lab 2 hours. Prereq: NW-205. [F]

### NW 208 Management of Network Infrastructure (3)

Provides knowledge and skills needed to implement, manage and maintain a network server infrastructure. Prereq: NW 207. [S]

### NW 210 Web Services (3)

Provide knowledge and skills needed to install, configure and support the Internet Information Server (IIS) and Apache Web Server in Microsoft and Linux environments. Concurrent: NW 205 [F]

### NW 211 Network Security Fundamentals (3)

Basic computer network security concepts and techniques. Prereq: NW 207 [F]

### NW 215 Firewalls & Network Security (3)

This course provides a comprehensive overview of building and maintaining firewalls in a business environment. Specific topics covered include: planning/design, security, configuration, packet filtering, proxy servers, authentication, encryption, and VPNs. In addition, the textbook used in the course maps to the CheckPoint CCSA Certification. Class 3 hours. Concurrent: NW 205 [F]

### NW 219 Operating Systems Security (3)

This course provides an in depth look at operating system security concepts and techniques. Theoretical concepts that make the operating system security unique are examined. Also, this course adopts a practical hands-on approach in examining operating system security techniques. Class 3 hours. Prereq: NW 211. [S]

### NW 223 Computer Security & Penetration Testing (3)

With real-world examples, this course addresses how and why people attack computers and networks, so that students can be armed with the knowledge and techniques to successfully combat hackers. Because the world of information security changes so quickly and is often the subject of much hype, this course also aims to provide a clear differentiation between hacking myths and hacking facts. Prereq: NW 207 or consent of instructor. [F]

### NW 227 Computer Forensics (3)

This course introduces students to the techniques and tools of computer forensics investigations. Students will receive step-by-step explanations on how to use the most popular forensic tools. Topics include coverage of the latest technology including PTAs, cell phones, and thumb drives. Prereq: NW 211 [on demand]

### NW 231 Wireless Security (3)

The purpose of this course is to provide a hands-on guide to defending wireless networks against attacks. It prepares students for the Certified Wireless Security Professional (CWSP) certifications from Planet3. Many hands-on exercises are included, which allow students to practice skills as they are learned. Prereq: CS 205, NW 205 Coreq: NW 211 [on demand]

### NW 235 Incident Response and Disaster Recovery (3)

This course provides an overview of contingency operations--including its components and a thorough treatment of the administration of the planning process for incident response, disaster recovery, and business continuity planning. Prereq: NW 211 [on demand]

## OF - Office Management

### OF 103 Records Management (3)

A study of modern filing systems and equipment with practice in applying ARMA indexing rules. Additionally various issues related to record management will be studied: compliance and legal exposure, privacy, security, disaster recovery, access to information, space limitation and cost control. [S]

### OF 104,105 Business Communications I,II (3,3)

*104*—Study of English skills; focus on proofreading and using reference sources efficiently. *105*—Prepare result-producing communications: letters, memos, e-mail, and short reports; focus on oral communication skills through reports and team activities. Prereq: Must be taken in sequence. Prereq for 105: OF-113 or instructor's consent (25 wpm). [104—F, 105—S]

### OF 107 Keyboarding for Information Systems (1)

Basic keyboarding; develops touch mastery for input; speed and accuracy; for non-Office majors only; not allowed as an elective for Office majors. [E]

### OF 113,114 Keyboarding/Document Processing I,II (3,3)

Keyboarding and formatting of business documents (letters, memos, reports, tables) with speed and accuracy. Prereq for OF-114, OF 113 or instructor's consent. [F,S]

### OF 115 Speedbuilding (1)

Students will concentrate on building keyboarding speeds; Satisfactory/No Credit Grading. Prereq: OF 114 or equivalent or instructor's consent. [on demand]

### OF 125,126 Word Processing I,II (3,3)

Applications in word processing. *125*—Basic editing techniques through document merge. *126*—Advanced functions and formatting; focus on speed, decision making, and accuracy. Must be taken in sequence. Prereq for 125: Keyboarding at 25 wpm. [F,S]

### OF 127 Desktop Publishing (3)

Mechanics of desktop publishing, creation of a variety of publications. Prereq: OF 113. [F,S]

### OF 130 Law Office Procedures (3)

A study of the office procedures directly related to the operation of a law office. Includes a study of procedures to prepare court documentation such as filings, briefs, contracts, real estate settlements and other legal documents. [S]

### OF 195 General Office Procedures (3)

Assists students in meeting the challenges presented in today's offices with emphasis on critical thinking skills. Major topics: telephone mastery, travel arrangements; time, human resources, and organizational management. [F]

### OF 205 Administrative Office Management (3)

Developing teamwork, motivation, conflict resolution, and problem solving skills relating to an office environment utilizing a suite of software applications. Prereq: OF 114, 126; Coreq: CS 197, Sophomore standing or consent of instructor. [F]

### OF 206 Office Administration Internship (3)

A capstone experience to prepare for employment in the professional, industrial, and legal job markets; simulated office experience and on-the-job training in chosen emphasis; class 3 hours, lab 6 hours. Prereq: OF 205. [S]

## OR - Surgical Technology

### OR 000 Surgical Technology

32.5 clock hours/week. Must be taken in sequence.  
First Semester  
Intro to basic operative procedures and techniques, principles of asepsis; human anatomy and physiology, microbiology, medical terminology; clinical experience in campus practice lab. [F]  
Second Semester  
Continued study of surgical operative procedures and techniques; clinical experience in surgical areas of affiliated hospitals. [S]  
Third Semester  
Intensive clinical practice experience in a variety of surgical settings; review for national certification examination. [Su]

Ornamental Horticulture, See "LM-Landscaping and Turf Management"

## OS - Occupational Safety

### OS 116 Industrial Maintenance Safety (3)

Review of basic requirements and application of industrial safety and general housekeeping practices related to manufacturing and service environments; intro to potential maintenance activity hazards, employer/employee responsibility for job safety, and Occupational Safety and Health Act. [on demand]

Paralegal, See "LA-Paralegal Studies"

Paramedic Training, See "EA-Emergency Medical Services"

**PC - Pharmacy Technician****PC 101 Introduction to Pharmacy Practice (3)**

Intro to pharmacy practice and the health care system; focus on pharmacy technicians' role and relationship with pharmacists; written and oral communication skills to deal with other health care professionals and patients; automation, computer use, and technology used in pharmacy practice; managed care medicine and health care organizations; generic and brand names of top 200 drugs; class 2 hours, lab 3 hours. [F]

**PC 104 Chemistry for Pharmacy Technicians (4)**

Intro to the study of chemistry; atomic and molecular structure, bonding, stoichiometry and equation writing, compound classification and naming, gas laws, liquid and solid states, solutions, acids and bases, kinetics and equilibria, oxidation and reduction; emphasis on organic compounds and applications to pharmacy; credit may not be applied toward a chemistry major; class 3 hours, lab 3 hours. Prereq: DSPM-0800, DSPR-0800, DSPW-0800. [F]

**PC 105 Pharmacy Law and Ethics (3)**

Intro to pharmacy law history and application of laws governing duties delegated to pharmacy technicians; state and federal laws pertaining to pharmacy practice and drug distribution discussed. [F]

**PC 110 Pharmaceutical Calculations (4)**

Basic math computations with Roman numerals; addition, subtraction, multiplication, and division of whole numbers and fractions; pharmacy measurement systems (metric, apothecary, and avoirdupois); interpretation of numeric symbols and Latin abbreviations; medical terms, symbols, and abbreviations used in pharmacy practice. [S]

**PC 115 Introduction to Human Biology (4)**

Structure and function of the human body; focus on cells, tissues, and circulatory, respiratory, digestive, nervous, cardiovascular, endocrine, and reproductive systems; class 3 hours, lab 3 hours. (Note: credit will not be allowed for both PC 115 and BIOL 1060.) [F]

**PC 201 Pharmacology and Therapeutics (4)**

Provides practical knowledge of general therapeutic classes of drugs and their interactions with the human body; focus on drug classifications, dosages and routes of administration and some major side effects of medications. Prereq: PC-101, 115. [S]

**PC 205 Pharmacy Practice (5)**

Review of prescriptions for accuracy; gathering patient information; entering information into data processing; preparing labels; counting, measuring, or admixing of drug products; pricing and third party billing, and maintaining records; ordering, stocking, returning drug products, medication distribution and control, and compounding with a heavy focus on sterile products and IV admixture; class 3 hours, lab 5 hours. Coreq: PC-110. [S]

**PC 220 Pharmacy Practice Clinical Rotations (5)**

Clinical experience in local institutional and community pharmacies to observe and practice basic pharmacy practice skills learned in class and through lab participation; students under supervision of a registered pharmacist; seminar 2 hours, clinical experience 24 hours. Prereq: PC-110, 201, 205. [Su]

**PE - Physical Education - General Courses****PE 154 First Aid and Safety Education (3)**

Basic accident prevention principles applied to the home, school, and community; administering immediate and temporary care in the event of injury or sudden illness, focus on cardio-pulmonary resuscitation; may lead to CPR certification. [E]

**PE 201 Group Fitness Instruction (3)**

Concepts and techniques for designing and practice in teaching all components of a safe and effective group exercise class. [F/S]

**PE 209 Individual and Team Sports (3)**

Teaching techniques of individual and team sports. [S]

**PE 210 Introduction to Physical Education (3)**

Role of physical activity in American education; historical, political, economic, and social forces affecting physical education and society. [F]

**PE 211 Personal and Community Health (3)**

Significant information useful in making intelligent decisions about personal health; focus on personal, family, social living, and community health. [S]

**PE 220 Care and Prevention of Athletic Injuries (3)**

Prevention, analysis, prompt diagnosis, treatment and rehabilitation of common athletic injuries; focus on practical aspects of athletic training within a theoretical framework; lab experiences significant part of course. [F]

**◆PE 230 The Science of Fitness and Wellness (3)**

Developing personal responsibility for optimal well being; encompassing health concerns and risk factors, lifestyle behaviors and preventive health measures. This course may not be substituted for a physical education activity class. [F,S].

**PE 235 Special Topics in Wellness and Health Promotion (1-3)**

Specific topics of interest in wellness and health promotion fields; repeatable for credit on different topics.

**PET - Positron Emission Tomography****PET 200 Positron Emission Tomography (3)**

This course is designed to provide students with a cognitive foundation in positron emission tomography (PET). The relationships between physiology, pathophysiology, radiochemistry, radiobiology,

instrumentation, and patient care techniques in order to perform PET Imaging procedures in neurology, cardiology, and oncology are discussed. Radiation protection and physics, with focus on the positron, is discussed in detail. Prereq: Instructor's consent. [F, S, SU]

**PHED - Physical Education - Activity Courses**

Physical Education Activity courses meet 2 hours per week for each semester hour of credit. *To encourage students to develop and maintain an active, healthy lifestyle, designated Physical Education Activity Courses are repeatable for credit, but no more than 6 hours (in any combination) may be applied toward a degree. Each course has a maximum limit as well (see course description).*

**Adaptive Physical Education**

*Students with Adaptive Physical Education needs may enroll in any of a number of regular Physical Education activity classes. These classes routinely begin with evaluation of each student's physical profile and establish a personalized training or conditioning program based on the individual's needs. A wide range of adaptations may be implemented, limited by considerations of the student's personal safety and abilities and reasonable and appropriate use of the College's equipment and facilities.*

**PHED 1010 Aerobics (1)**

Repeatable; maximum of 4 hours applicable toward a degree. [E]

**PHED 1020 Step Aerobics (2)**

Repeatable; maximum of 4 hours applicable toward a degree. [on demand]

**PHED 1030 Aerobic Kickboxing (1)**

Repeatable; maximum of 2 hours applicable toward a degree. [S]

**PHED 1040 Indoor Cycling (1)**

Basic instruction and practice of indoor cycling on a stationary bike; repeatable, maximum of 2 hours applicable toward a degree. [F,S]

**PHED 1080 Introduction to Pilates (1)**

A class emphasizing mat exercise that increases muscular strength, tone and flexibility. Repeatable; maximum of 2 hours applicable toward a degree. [F,S]

**PHED 1090 Introduction to Yoga (1)**

Repeatable; maximum of 2 hours applicable toward a degree. [F,S]

**PHED 1095 Power Yoga (1)**

Practice in an intense form of yoga; repeatable; maximum of 2 hours applicable toward a degree. [F,S]

**PHED 1100 Weight Loss Management (1)**

Class will cover the major components of weight loss management through nutrition and physical well being. Repeatable; maximum of 4 hours applicable toward a degree. [F,S]

**PHED 1110 Concepts of Wellness (1)**

Concepts, understandings, and values of activity as applied to optimal living through wellness; lab in motor activity. [E]

**PHED 1120 Strength and Conditioning (1)**

Intro to weight training and conditioning; repeatable; maximum of 4 hours applicable toward a degree. [E]

**PHED 1130 Fitness for Living (2)**

Encompasses strength training, body contouring and toning, aerobic conditioning, and flexibility. Each student's current status will be assessed and progress monitored. Repeatable; maximum of 4 hours applicable toward a degree. [F,S]

**PHED 1140 Walking for Fitness (2)**

Repeatable; maximum of 4 hours applicable toward a degree. [E]

**PHED 1150 Body Sculpting (1)**

Basic instruction and practice in the fundamentals of weight training using light hand weights; repeatable; maximum of 2 hours applicable toward a degree. [F,S]

**PHED 1450 Beginning Self-Defense (1)**

repeatable; maximum of 2 hours applicable toward a degree. [F]

**PHED 1460 Self-Defense for Women (1)**

repeatable; maximum of 2 hours applicable toward a degree. [S]

**PHED 1560 Skin and Scuba Diving (1)**

Scuba equipment rental not included in course cost; swimming proficiency needed; repeatable; maximum of 2 hours applicable toward a degree. [F,S]

**PHED 1570 Backpacking and Hiking (1)**

Repeatable; maximum of 2 hours applicable toward a degree; equipment, campsite rental fees, food, and transportation not included in course cost. [F,S]

**PHED 1740 Popular Social Dance (1)**

Covers the fundamental steps, styling and variations of different social dances selected from the Fox Trot, Waltz, Swing, Polka, Cha-Cha, Tango, Rumba, Samba, Schottische and Country Western. Repeatable; maximum of 4 hours applicable toward a degree. [F]

**PHED 1820 Beginning Table Tennis (1)**

Repeatable; maximum 2 hours applicable toward a degree.[F,S]

**PHED 1830 Racquetball (1)**

Repeatable; maximum of 2 hours applicable toward a degree.[F,S]

**PHED 1840 Volleyball (1)**

Repeatable; maximum 2 hours applicable toward a degree. [S]

**PHED 1850 Basketball (1)**

Repeatable; maximum 2 hours applicable toward a degree. [F]

**PHED 1860 Golf (1)**

Repeatable; maximum 2 hours applicable toward a degree. [F]

**PHED 1870 Beginning Tennis (1) [E]****PHED 1880 Intermediate Tennis (1)**

[on demand]

**PHED 1895 Bowling (1)**

Repeatable; maximum of 2 hours applicable toward a degree. [F,S]

**PHED 1990 Special Topics: Physical Education Activity (1-2)**

Repeatable for credit on different topics; maximum of 6 hours applicable toward a degree. [on demand]

**PHIL - Philosophy****◆PHIL 1030 Introduction to Philosophy (3)**

An introduction to life's fundamental questions. Addresses issues pertaining to rationality, value, knowledge, and reality. Prereq: ENGL-1010. [E]

**PHIL 1130 Critical Thinking (3)**

An introduction to practical reasoning and how to think critically. [S]

**PHIL 2130 Formal Logic (3)**

An introduction to formal deductive logic: syllogistic, modal, propositional, and predicate arguments. [F]

**◆PHIL 2230 Ethics (3)**

A study of the challenges faced by traditional morality, the major ethical theories, and moral dimensions of specific issues. Prereq: ENGL-1010. [F,S]

**PHIL 2430 Philosophy of Religion (3)**

Philosophical examination of religion; issues include the existence and nature of God, relationship between faith and reason, and challenges to religious belief. Prereq: ENGL-1010. [on demand]

**PHIL 2990 Special Topics in Philosophy (3)**

Special topics of traditional and current relevance in Philosophy; repeatable for credit on different topics. Prereq: ENGL-1010. [on demand]

**PHYS - Physics****PHYS 1000 Basic Technical Physics (3)**

Preparation for college physics for students with no previous physics and/or weak math background; algebraic equations, trigonometry and vectors; intro to physical mechanics; not intended for transfer; not accepted toward any degree program at Chattanooga State.

Recommended coreq: MATH-1710 [F]

**◆PHYS 1030 Concepts of Physics (4)**

One semester intro physics course for non-science and non-engineering majors; focus on the nature of physics and applying basic physics concepts in everyday life experience and work; math limited to basic algebra required to understand and apply physics concepts; mechanical motion, energy, temperature and heat, fluids, electricity, magnetism, wave motion and optics; class 3 hours, lab 3 hours. [E]

**◆PHYS 1310 Integrated Physics (3)**

An integrated approach to the physics concepts associated with force and motion, energy, heat and temperature, sound, light, electricity and magnetism using guided student inquiry. Connections of these physics concepts to other fields of science like chemistry, biology, geology, and earth science will be made; lab 3 hours, class 2 hours. [E]

**◆PHYS 2010,2020 Non-Calculus-Based Physics I,II (4,4)**

Algebra-based physics for engineering technology and preprofessional majors; class 3 hours, lab 3 hours. *2010*—Mechanics, heat and thermodynamics. *2020*—Electricity and magnetism, ray and wave optics. Must be taken in sequence. Prereq for 2010: PHYS-1000 or equivalent. Coreq for 2010: MATH-1720 [2010—E; 2020—S,Su]

**◆PHYS 2110,2120 Calculus-Based Physics I,II (4,4)**

Calculus-based physics; for engineering and science majors; class 3 hours, lab 3 hours. *2110*—Mechanics: statics, kinematics, work, energy, power, momentum, conservation laws, heat, rotation and harmonic motion, and thermodynamics. *2120*—Electrostatics, fields and potentials, electromotive force, AC/DC circuits, electromagnetism, capacitance and inductance, and electromagnetic waves. Must be taken in sequence. Prereq for 2110: MATH 1910, PHYS-2010; or departmental consent. Coreq for 2110: MATH-1920. [2110—F, 2120—S]

**PM - Plumbing****PM 000 Plumbing**

This program will provide the necessary knowledge, skills and abilities in the safe and efficient performance of the residential plumbing profession. Training will be competency based in accordance with the National Center for Construction Education & Research (NCCER) curriculum and local plumbing code(s). Training will consist of a specified common core and required competencies according to curricula. Training will include hands-on instruction and will require students to demonstrate learning outcomes through performance oriented evaluations. 1290 clock hours.

**PO - Political Science****◆PO 110 Introduction to American Government (3)**

Basics of democratic government;

constitutional principles, functions, operations, and processes of governmental change; attention given to the role of political institutions and parties, public opinion, interest groups and the media. [F,S,Su]

◆**PO 112 Introduction to World Politics (3)**

World politics with emphasis on international competition, cooperation, war, and peace. Theories explain political and economic events, military conflicts, and how domestic politics are linked to foreign policy. The behavior of states and non-state actors are linked to the evolution of the contemporary world order. [F,S]

**PO 217 Introduction to Urban Politics (3)**

Historical and policy investigation of urban politics in American government and the evolutionary place of cities in American politics and society. Prereq: ENGL 1010, PO 110. [on demand]

**PO 218 The American Presidency (3)**

This course examines the growth and development of the Presidency and its place in the American political system. Topics covered include policy, image, campaigning, domestic and foreign policies, and the economy. Prereq: ENGL 1010, PO 110. [on demand]

**PSCI - Physical Science**

◆**PSCI 1030 The Physical Environment (4)**

Explores physical science in its historical and sociological significance, the process of science, and the present content of scientific fact and theory; includes physics, chemistry, geology and astronomy; class 3 hours, lab 3 hours. [F,S]

◆**PSCI 1310 Integrated Earth and Space Science (3)**

This course is an integrated approach to basic principles from the fields of geology, oceanography, meteorology, and astronomy. Topics include: map interpretation, minerals and rocks, processes acting at the Earth's surface and within the Earth, plate tectonics, geologic time and dating, water movements, ocean floor, weather and climate, composition and motions of the Earth, solar system, phases of the moon, origin and life cycles of stars, and galaxies; class 2 hours, lab 3 hours. Prereq: PHYS 1310 and CHEM 1310 [E]

**PSCI 2990 Special Topics in Science (1-4)**

Study of a specific topic in science; repeatable for credit on different topics. Prereq: Department head and instructor's consent. [on demand]

**PT - Physical Therapist Assistant**

*Admission to the Physical Therapist Assistant Program is a prerequisite for all PT courses. Please consult the SUMMARY OF REQUIRED HOURS; all PT courses shown in the same term are corequisites, all PT courses shown in the preceding term(s) are PT prerequisites, and all BIOL and PHYS courses are pre/corequisites to PT courses as shown.*

**PT 104 Introduction to Physical Therapy (2)**

History, function, purpose of physical therapy; PTA's role in ethics, medical-legal issues, medical terminology, administration and communication skills with all clients/patients/ and other care providers. [F]

**PT 111,210,221 Clinical Practice I,II,III (2,4,10)**

Clinical experience in local health care facilities; students observe and apply skills and interventions learned in class and lab under direct supervision of PTs or PTAs; clinic hours: 6 in 111, 12 in 210, 30 in 221; Satisfactory/No Credit grading; liability insurance required. [111-S, 210-F, 221-S]

**PT 112 Pathological Conditions (3)**

Survey of diseases and injuries treated by physical therapy; associated medical or surgical treatment of these conditions; physical therapy treatment for specific conditions. [S]

**PT 115,125 Physical Therapy Procedures I,II (5,4)**

Physical therapy principles; class 3 hours, lab hours: 6 in 115, 3 in 125; liability insurance required. 115-Basic principles, interventions and modality techniques. 125-Focus on spinal traction, electrical stimulation, biofeedback, pain control, protocol exercise routines, iontophoresis, CPM, manual muscle testing. [115-F, 125-S]

**PT 123 Functional Anatomy (4)**

Integrates muscle innervation, position, and function of the musculoskeletal system for specific joints and their muscular components; palpation skills, joint range of motion, goniometry, and manual muscle testing; biomechanical concepts related to simple movement analysis and kinesiology; class 3 hours, lab 3 hours. [F]

**PT 201 Physical Therapy Seminar (2)**

Critique sessions concerning physical therapy interventions and clinic participation; student presentations on PT interventions for specific pathologies, specific process for licensure. [S]

**PT 205 Therapeutic Exercise (5)**

Principles and uses of therapeutic exercises and exercise equipment options; special assessment procedures, exercise techniques, neurodevelopmental exercises, and techniques utilized in specific conditions; intro to orthotics, prosthetics, splinting and gait analysis; class 3 hours, lab 6 hours. [F]

Public Speaking, See "SP-Speech"

**PY - Psychology**

◆**PY 101 General Psychology (3)**

Intro survey course; study of mental processes and human behavior to better understand ourselves and anticipate and predict the behavior of others; history and methods of psychology, principles of human development (infancy through adulthood), motivation, emotion, stress, learning and remembering, and abnormal psychology. [E]

**PY 103 Stress Management (1)**

Relationship of stress to physical and mental

well-being; focus on developing a lifestyle that promotes wellness through exercise, proper nutrition, and understanding the basic physiology of stress. [on demand]

**PY 109 Healthy Marriages Aren't Accidents (1)**

Basic "maintenance skills" for creating a marriage with long-range, positive potential; attention given to "pitfalls" that become obstacles to successful marriages; general communications skills, interactive listening, conflict resolution, and CONSTRAT (conscious strategizing). [on demand]

**PY 151 Psychology of Personal Adjustment (3)**

The purpose of this course is to increase self-knowledge, personal freedom, personal accountability, and the ability to affect positive personal change. Growth is examined theoretically and applied to real life situations. Topics include: 1) personality and self, 2) stress, disorders, and happiness, 3) thinking and feeling, 4) values and beliefs, 5) financial planning, 6) personal accountability, and 7) personal relationships. [E]

**PY 201 Introduction to Behavioral Statistics (4)**

Fundamental statistics for the behavioral sciences; descriptive and inferential statistics, research design, and interpretation of psychological data; computer analysis emphasized; class 3 hours, lab 2 hours. Prereq: 2 years of high school algebra and acceptable test scores; or DSPM-0850. [on demand]

**PY 213 Introduction to Abnormal Psychology (3)**

This course provides an introduction to the description and classification of psychological disorders. Theoretical approaches and perspectives to psychopathologies are investigated. Emphasis is on examining the histories, causes, symptoms, diagnoses, and treatments of various disorders. Methods of instruction include lectures, group discussions, student presentations, films, activities, debates, and case studies. Prereq: ENGL-1010, PY-101. [F,S]

**PY 215 Child Growth and Development (3)**

Physical, emotional, social and intellectual child development from conception through adolescence; concepts of development and function derived from theoretical approaches, research and clinical observation emphasized; child rearing applications included. Prereq: PY-101. [F,S]

**PY 217 Human Growth and Development (3)**

Overview of human developmental changes from conception to death focusing on multidisciplinary perspectives (biological, cognitive, behavioral, social); analysis and application of these perspectives in various environmental contexts. Prereq: PY-101. [E]

**PY 235 Special Topics in Psychology (1-3)**

Specific topics of traditional and current social and psychological interest; repeatable for credit on different topics. [on demand]

**PY 250 Leadership Development (3)**

Leadership philosophy, practices, and skills;

◆ and \*, see "Legend page 74."

decision making, empowerment, trust, goal-setting and conflict resolution; readings in the humanities and critical analysis of media that explore leadership styles. (Same as HUM-2550; credit not allowed for both courses.) Prereq: ENGL 1010. [F,S]

### PZ - Powerhouse Operations

#### **PZ 110,111,210,211 Powerhouse Operations I,II,III,IV (4,4,4,4) (DuPont)**

Theory of steam generation; class 3 hours, lab 2 hours. 110-Boilers, auxiliaries and superheaters; instruments and controls; fuels. 111-Turbines, auxiliaries, coal handling, emission control systems, river water pumping stations, water treatment and cooling tower use, application and maintenance. 210-Use of well water for steam generation, manufacturing processes; electrical generation and distribution, compressed air production, and equipment maintenance. 211-Compression refrigeration systems, heat transference, refrigerant types, compressors, low-temperature systems, air conditioning applications, delivery and handling; intro to waster water treatment and sludge disposal. Prereq for 210: PZ 110, 111. Prereq for 211: PZ 110, 111. [on demand]

### QA - Quality Technology

#### **QA 142 Quality Engineering (4)**

Basic concepts and body of knowledge involved in Certified Quality Engineer Examination; basic concepts and principles of probability, discrete and continuous probability functions, sampling distributions, statistical inference, regression, and correlation analysis; statistical quality control, acceptance sampling using attributes and variables, experimental design, quality planning, quality management, product liability, metrology, inspection, testing, quality cost analysis, quality auditing, reliability, maintainability, product safety, quality information systems, motivation, and human factors. Recommended prereq: MATH-1510 or 1530. [on demand]

#### **QA 146 Quality Auditing (1-2)**

Basic concepts and body of knowledge required for Certified Quality Auditor (CQA) Examination; review of steps required for planning and conducting an audit: initiation, preparation, performing, reporting, and follow-up; sample questions from previous CQA examinations. [on demand]

#### **QA 240 Statistical Process Control (3)**

Concepts and body of knowledge required in basic statistical process control and improvement; study and applications of basic probability concepts and principles, discrete and continuous probability functions, sampling distributions, limited statistical inference, linear regression, and correlation analysis; also covers flow charts, check sheets, stem and leaf plots, histograms, cause and effect diagrams, and run and pareto chart; measurement process evaluation methods. Recommended prereq: MATH-1510 or 1530. [on demand]

#### **QA 298 Special Topics in Quality (1-4)**

Specialized topics and/or problems in quality; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

#### **QA 299 Special Topics in Quality with Lab (1-4)**

Specialized topics and/or problems in quality; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

Radiation Therapy Technology. See "HS-Health Science"

### RC - Respiratory Care

*Admission to the Respiratory Care Program is a prerequisite to all RC courses. Please consult the SUMMARY OF REQUIRED HOURS. All RC courses shown in the same term are corequisites and all RC courses shown in the preceding term(s) are RC prerequisites.*

#### **RC 111,112,113 Principles of Respiratory Care Procedures I,II,III (3,4,4)**

*III*—An introduction to the development of the respiratory care profession, including the basic legal and ethical components of the practice. Topics also include review of math, computer skills and terminology related to the field along with the study of medical gas therapy. *II2*—In depth studies in respiratory care procedures to include humidity and aerosol therapy, airway management, pulmonary hygiene and hyper inflation therapy. A 3-hour lab supplements course material. *II3*—In depth study of noninvasive ventilation, patient monitoring and assessment, safety issues and charting. A 3-hour lab supplements the course material. Prereq for 111: Current standing in respiratory care program. Prereq for 112: RC 111,142. Prereq for 113: RC 112,142,241. [111-F, 112-S, 113-Su]

#### **RC 142 Cardiopulmonary Anatomy and Physiology (3)**

Consists of a study of the structure and function of the respiratory, cardiac and renal systems. Prereq: Current standing in the respiratory care program. [F]

#### **RC 143 Cardiopulmonary Pharmacology (2)**

Introduction to the drugs used in the care of patients with respiratory conditions. Includes dose calculations, methods of administration, and recognition of adverse effects. Prereq: RC 111,142 [S]

#### **RC 210 Mechanical Ventilation (4)**

In-depth study of mechanical ventilation through didactic and guided lab experiences; critical care medicine principles as applied to rationale, institution and discontinuance of mechanical ventilation; basic ventilator operation and modification; class 3 hours, lab 3 hours. Prereq: RC113,242. [F]

#### **RC 212 Cardiopulmonary Diagnostic Testing (3)**

Cardiopulmonary diagnostic testing and monitoring, major cardiovascular monitoring and supportive therapy concepts; EKG and pulmonary testing and interpretation, transcutaneous O<sub>2</sub> monitoring, oximetry, end tidal CO<sub>2</sub> monitoring; class 2 hours, lab 3 hours. Prereq: RC 210,221,243. [S]

#### **RC 213 Advanced Respiratory Therapy Topics (3)**

Advanced topics including fluid and electrolyte balance, pulmonary rehabilitation, hemodynamics, and new techniques in respiratory care; practice exams to prepare for NBRC entry level and advanced practitioner exams. Prereq: RC 210,222,243. [Su]

#### **RC 214 Advanced Practice (3)**

A comprehensive look into the advanced level practices expected of a therapist to include advanced life support, intra hospital transportation, assisting the physician, patient monitoring, education and rehabilitation, along with evaluating results from testing. [Su]

#### **RC 221,222,223 Clinical Practicum I,II,III (5,5,4)**

Respiratory care procedures in hospital settings; clinical rotations may be scheduled during evening or night hours; clinical fee and liability insurance required; 24 lab hours; Satisfactory/No Credit grading. 221—Oxygen therapy, medical gas cylinder use, humidity and aerosol therapy, IPPB, incentive spirometry, bronchial hygiene, chest physiotherapy, isolation techniques, cleaning and sterilization, CPR, physical assessment and arterial puncture. 222—Emphasis on patient evaluation and clinical judgment; pediatric therapy, blood gas instrumentation and quality control procedures, EKG testing and interpretation, endotracheal intubation, pulmonary function testing, chest radiographs interpretation and home care. 223—Emphasis on critical care procedures; initiation, monitoring and discontinuation of mechanical ventilation; neonatal-pediatric intensive care; hemodynamic monitoring and lab test interpretation. Prereq for 221: RC 113,242. Prereq for 222: RC 210,243. Prereq for 223: RC 212,213,222. [221-F, 222-S, 223-Su]

#### **RC 241 Arterial Blood Gas Analysis (2)**

General concepts of disease, human pathology, arterial blood gases, and acid-base concepts. Prereq: RC 111,142. [F]

#### **RC 242 Cardiopulmonary Pathophysiology (3)**

Etiology, pathology, pathophysiology, symptoms, diagnosis, course, treatment, and prognosis of selected diseases that affect the cardiopulmonary system. Prereq: RC 112,143,241. [S]

#### **RC 243 Neonatal and Pediatric Respiratory Care (3)**

Intro to common pediatric and neonatal cardiopulmonary disorders; intro to therapeutic modalities used in the treatment of infants and children, including critical care procedures. Prereq: RC 113,242. [S]

### REAL - Realtime Reporting

#### **REAL 122,123,124 Judicial Reporting I,II,III,IV (4,4,4)**

*I22*—170 wpm required for course completion. *I23*—Continuation of REAL 122; focus on speedbuilding, dictation of various legal proceedings and accuracy; 200 wpm machine shorthand speed required for course completion. *I24*—Continuation of REAL 123;



focus on speedbuilding and all court reporting areas using machine shorthand; must pass one 5-minute test at 96% accuracy and two 5-minute tests at 95% accuracy at each of the following speeds: 225 wpm two-voice testimony; 200 wpm jury charge; and 180 wpm literary. Prereq for 122: Scopist Diploma or equivalent. Prereq for 123: REAL 122 Prereq for 124: REAL 123[121–Su; 122–F; 123–S; 124–Su]

### REAL 132,133,134 Captioning/CART I,II,III,IV (4,4,4)

Development of captioning/CART skills, including speedbuilding. *132*–Development of captioning/CART skills, including speedbuilding. Emphasis on numbers, time, speaker ID, brackets, and musical notes. *133*–Development of captioning/CART skills including speedbuilding. Emphasis on dictionary development, environmental sound descriptors, phonetic translation, prefixes and suffixes. *134*–Development of captioning/CART skills. Minimum speed of 180 wpm writing a 30-minute program with a TER goal of 98% or higher. Write a simulated CBC/CCP skills test at 180 wpm literary for five minutes with a goal of 96%. Emphasis on writing web site/Internet addresses, stroke placement, and slang. Prereq for 132: Scopist Diploma or equivalent. Prereq for 133 DSPW 0800, DSPR 0800, REAL 132. Prereq for 134 DSPW 0800, DSPR 0800, REAL 133 [131, 134–Su; 132–F; 133–S]

### REAL 201 Judicial Procedures (3)

Methods and procedures for transcript production of legal proceedings; freelance field procedures; taking and transcribing depositions, arbitrations, sworn statements, and official procedures. [S]

### REAL 202 Captioning/CART Procedures (3)

Online translation, basic care of hardware data input device, setup of computer hardware, application of CAT functions, broadcast production preparation, FCC regulations, and Internet research; hands-on practicum in simulated broadcast studio. [S]

## RELS - Religious Studies

### ◆RELS 2030 Religions of the World (3)

Main tenets of the world's great religions, including Christianity, Judaism, Confucianism, Shintoism, Hinduism, Buddhism, and Islam; focus on their influence on thought and action. Prereq: ENGL-1010. [E]

### RELS 2230 Religion in America (3)

Survey of religion's historical development in the American experience; major movements, divisions, theological issues, and personalities woven into the mosaic of religion in America from the Puritan heritage to modern secularism and cultural pluralism. Prereq: ENGL-1010. [on demand]

### RELS 2610,2620 Biblical Studies I,II (3,3)

Philosophical, religious, socio-political, and literary aspects of the Bible and its impact on Western Culture. *2610*–Old Testament. *2620*–New Testament. Prereq: ENGL-1010. [F,S]

### RELS 2990 Special Topics in Religious Studies (3)

Special topics of traditional and current relevance in Religious Studies; repeatable for credit on different topics. Prereq: ENGL-1010. [on demand]

## RI - Renaissance Institute

### RI 100 Personal and College Success (3)

Analysis of personal and academic strengths; career and life planning; building new skills and values; learning college and community culture and resources. A grade of 'C' or better is required. [E]

### RI 120 Chattanooga's African-American Experience—Contemporary Issues (2)

Study of the African-American experience in Chattanooga; focus on issues of identity, diversity, conflict, and community. [on demand]

### RI 135 Special Topics—Renaissance Institute (1-3)

Study of contemporary, social, political, and/or cultural issues; repeatable for credit on different topics. [on demand]

## RR - Realtime Reporting: Scopist

### RR 000 Realtime Reporting: Scopist

A 1,290 hour program that trains the students to transcribe and edit realtime reporter's transcripts. Scoping is an ideal career for someone who needs or prefers to work from home.

## RS - Real Estate

### RS 101 Basic Principles of Real Estate (4)

Basics of real estate; prepares applicants for the State of Tennessee Real Estate License Exam (course not applicable for licensure in Georgia or other states); topics include ethics, contracts, trust deeds, closing statements, leases, mortgages, and real estate math. [on demand]

### RS 103 Real Estate Course for New Affiliates (2)

A course designed to establish performance capabilities, knowledge, and skills for performing in real estate: for real estate affiliates (salespersons) already engaged in real estate as a career. Prereq: RS 101 or consent of instructor. [on demand]

### RS 104 Real Estate Brokerage (3)

A study of the rapidly changing operation of real estate brokerage firms. Emphasis is placed on how companies operate, how managers function and how people become effective leaders. The course covers brokerage services, recruiting requirements, personnel selection, hiring procedures, policies and procedures, marketing and advertising, professional development, and the risks of doing business. Prereq: RS 101. [on demand]

## RT - Radiologic Technology

*A prerequisite to all RT courses is admission into the program in which the course is required. Please consult the SUMMARY OF REQUIRED HOURS for the specific program. All RT courses shown in the same term are corequisites and all RT courses shown in the preceding term(s) are RT prerequisites. BIOL, CHEM, and MATH courses required in the Radiologic Technology A.A.S. degree program are pre/corequisite to RT courses as shown, and all Freshman year courses are prerequisite to second year RT courses. Course descriptions may be abbreviations of the syllabi course descriptions.*

### RT 1130 Introduction to Radiologic Technology (3)

Organization, function, supervision and financial arrangements of radiology departments; rules and regulations of the program and the clinical affiliates, brief history of medicine and radiology, do's and don'ts regarding radiation and electrical protection and general safety, and ethical and legal responsibilities entailed by becoming a member of a paramedical profession. [F]

### RT 1220,1330,2420,2520,2630 Clinic I,II,III,IV (2,3,2,2,3)

Simulation, practice and competent performance of radiologic exams in the following categories: 1)-upper extremities, 2)-lower extremities, 3)-bony thorax, chest and abdomen, 4)-contrast studies, 5)-spines, 6)-cranium; progressive development of knowledge and skills in correct positioning to demonstrate specific anatomy, radiographic film evaluation process, reasons for radiographic exams, and proper methods of patient care; assignments in advanced imaging procedures and radiation therapy; lab/clinic hours: 20 in 1220, 2420 & 2520, 40 in 1330, 2630. *1220*–Intro to radiographic imaging and equipment care, basic positioning and exposure selection, and body mechanics of handling patients; must demonstrate competent performance of 3 radiologic exams from 3 different categories (except cranium). *1330*–Must demonstrate competent performance of three radiographic exams. Preparation for final category competency evaluation. *2420, 2520 & 2630*–Final category instruction and evaluation of 4 exams from 2 categories; assignments in nuclear medicine, radiation therapy, computed tomography, special procedures, and paradiagnostic areas. [1220, 2520–S; 1330, 2630–Su, 2420–F]

### RT 1143,1243 Radiographic Exposure/Physics I,II (4,4)

A two-course sequence in the fundamentals of radiologic science and x-ray physics. *1143*–Nature and production of x-rays, x-ray film and intensifying screens, invisible and manifest image, film processing equipment and quality control, prime factors of radiography and x-ray interaction with matter. *1243*–Factors that govern and influence radiographic image production using radiographic film; proper operation and care of radiographic equipment; tomography; and radiation protection and health physics. Class 4 hours, lab 3 hours. [1143–F, 1243–S]

**RT 1145,1244,2430 Radiographic Positioning—Film Critique and Medical Terminology I,II,III (4,4,3)**

Radiographic positioning and image critique; medical terminology, exam instruction simulation and practice prior to working with patients. *1145*—Intro to positioning and terminology; upper and lower extremities, bony thorax, chest, and abdomen, cervical, thoracic and lumbar - lumbo-sacral vertebrae; intro to common contrast procedures; class 4 hours, lab 5 hours. *1244*—Anatomy, topography, morphology and routine projections of contrast studies and the cranium and face; class 4 hours, lab 4 hours. *2430*—Radiography of the soft-tissue structures of the neck, thorax, and abdomen; contrast media characteristics relative to their proper use in the body, side effects, and administration and opacification methods; normal radiographs of each body system reviewed with focus on preprocedure prep, patient care and management, contraindications and complications, and proper positioning and exposure; class 3 hours. [1145-F, 1244-S, 2430-F]

**RT 2433 Special Procedures Radiography—Nursing (4)**

Special procedures discussed in reference to: anatomy, procedures, indications and contraindications, contrast media, equipment, and patient positioning; basic medical techniques and patient care, medical and surgical asepsis, vital signs, medical emergencies, drug administration, venipuncture, anatomy and radiography of the central nervous system, and the visceral and peripheral circulatory system, general tomography, and foreign body localization. Class 3 hours, lab 3 hours. [F]

**RT 2440 Introduction to Digital Imaging and Radiation Therapy (4)**

Intro to subspecialties of diagnostic radiology and basic radiation therapy principles; focus on the following digital imaging modalities: digital fluoroscopy and radiography, bone densitometry, computed tomography, nuclear medicine, positron emission tomography, diagnostic ultrasound, magnetic resonance; radiation therapy and digital imaging modalities discussed in reference to comparison to conventional radiology physical principles, equipment and methodology, historical development, selected clinical applications, and biological effects. This course presents a survey of the subspecialties. Detailed coverage requires additional course work and clinical experiences. [F]

**RT 2442,2542 Radiology Seminar I,II (4,4)**

Advanced radiographic science; integrated coverage of radiation protection, equipment operation and maintenance, image production and evaluation, radiographic positioning and procedures, patient care and management, and quality assurance; focus on development of skills and knowledge needed to exercise independent judgement and discretion in the technical performance of medical imaging procedures. Focus on non-routine procedures in each exam category and modification of standard projections to better demonstrate pathology and accommodate patient's condition; evaluation of the performance of radiologic systems to effect the best diagnostic results with the least cost and radiation exposure to the patient. *2442*— Includes film

processing analysis and quality assurance using sensitometry. *2542*—Includes x-ray equipment analysis and quality control and the development of exposure guides (fixed kV, optimal kV, variable kV, automatic exposure control). Class 4 hours, lab 2 hours. [2442-F, 2542-S]

**RT 2540 Radiologic Pathology (4)**

Survey of disease as related to Radiologic Technology and is prepared for the advanced student radiographer. Material based on systems and related organs of the body, emphasizing studies that make use of radiology; each system discussed according to the categories of disease demonstrated by radiography or by another imaging modality. Focus on specific pathologic conditions encountered in the major organ systems that require adjustments in exposure factors, patient care and management and positioning. [S]

**RT 2543 Radiobiology and Radiation Protection (4)**

A study of the effects of ionizing radiation in biological systems; radiation units; radiation protection standards for patients, occupationally exposed, general public and special groups; design of x-ray diagnostic imaging laboratories; and radiation monitoring devices; class 3 hours, lab 3 hours. [S]

**SE - Motorcycle & Marine Service Technology****SE 000 Motorcycle & Marine Service Technology**

Motorcycle & Marine Service Technology Program is the study of shop safety, tools and equipment, routine maintenance, diagnostics and troubleshooting of 2&4 stroke internal combustion engines; electrical systems, fuel systems, mechanical, lubrication, cooling, power transfer, and exhaust systems. The students will diagnose symptoms, disassemble, inspect, and reassemble components for repair relative to the motorcycle and marine services industries; 30 clock hours/week. [E]

Secretarial Science, See "MG-Management/Office Management Concentration"

**SO - Sociology****◆SO 110 Introduction to Sociology (3)**

Intro to field of sociology; focus on basic concepts, principles, and processes used to study the structure and function of society. [E]

**SO 202 Social Problems (3)**

Study of social problems in the U.S.; provides sociological perspective for making sense of future developments in our society. Prereq: ENGL 1010, SO 110. [S]

**SO 214 Criminology (3)**

This course employs a broad-based interdisciplinary approach to theories of crime and criminal justice. More specifically, the course examines explanations about crime, the criminal, and societal responses. Prereq: ENGL 1010. [S]

**SO 215 Marriage and Family (3)**

Emphasizes values and family dynamics of contemporary American life; helps students make knowledgeable choices in their interpersonal lives by providing sound facts and using a problem-solving approach. Prereq: ENGL-1010. [S]

**◆SO 216 Cultural Anthropology (3)**

Comparative study of culture, social organization, economics, government, education, religion, language, and arts in various primitive and present societies. [E]

**SO 217 Sociology of Aging (3)**

Basic course in social gerontology; focus on the aging process and the problems of the aged. [on demand]

**SO 218 American Ethnic Relations (3)**

Sociological analysis of racial and ethnic relations in the United States. Historical and sociology overview of race and ethnicity focusing primarily on four ethnic groups: Native Americans, African Americans, Latinos, and Asian Americans. Brief analysis of white ethnic Americans of Irish, Italian, and Jewish ethnicities. Emphasis on group interrelations and their relations with the dominant culture. Global issues of race and ethnicity provide parameters for understanding issues within the United States. Prereq: ENGL 1010. [S]

**SO 219 Violence and Society (3)**

Historical investigation into violence in American society and the evolutionary response of criminal justice agencies. Prereq: ENGL-1010. [F]

**SO 235 Special Topics in Sociology (1-3)**

Specific topics of traditional and current sociological interest; repeatable for credit on different topics. Prereq: ENGL-1010. [on demand]

Sonography, See "US-Diagnostic Medical Sonography"

**SP - Speech****◆SP 110 Fundamentals of Public Speaking (3)**

Introductory public speaking course stressing organization and presentation of the extemporaneous speech in a variety of formats. Prereq: ENGL 1010. [E]

**SP-120 Interpersonal Communication Skills (3)**

Covers basic interpersonal communication skills including listening, nonverbal awareness, interviewing and conflict management; focuses on strategies for college, personal and professional success. [on demand]

**SP 235 Special Topics in Speech (1-3)**

Specific topics in speech communication and forensics; repeatable for credit on different topics. Prereq: ENGL-1010 with grade of C or better. [on demand]

**SPAN - Spanish**

**SPAN 1010,1020 Elementary Spanish I,II (4,4)**  
Elementary grammar, vocabulary, reading, idiomatic conversation, and Spanish culture. Must be taken in sequence. [F,S]

**SPAN 2010,2020 Intermediate Spanish I,II (3,3)**  
Intermediate grammar, reading and conversation. Must be taken in sequence.  
*2010*—Focus on oral skills and Spanish culture.  
*2020*—Focus on reading and translation.  
Prereq: SPAN-1020 or 2 years of high school Spanish. [2010—F, 2020—S]

**SPECIAL INTEREST COURSES**

*The following courses are offered as a community service and are not intended to be used to satisfy the foreign language requirement or remove high school deficiencies for any degree program at Chattanooga State or any other college or university.*

**SPAN 1000,2000 Conversational Spanish I,II (1-2,1-2)**  
Everyday Spanish language and culture; focus on spoken language. 1000—Basic vocabulary and idiomatic expressions in real-life situations. 2000—Sophisticated vocabulary and complex grammar structures: discussion and debate of politics, environment and current events. [1000—F,S; 2000—S]

**SPAN 1002 Medical Spanish I (2)**  
Basic vocabulary to communicate at the elementary level in everyday situations in the medical field. [F,S]

**SPAN 1003 Medical Spanish II (2)**  
Basic vocabulary to communicate at the elementary level in everyday situations in the medical field. Prereq: SPAN 1002[S]

**SPAN 1990 Spanish Field Work (1-3)**  
Spanish language use in a professional work environment. Observation, development and practice. Students will develop greater conversational skills and language expertise by using their language on the job. Focus on greater fluency, colloquial usage and professional jargon. Prereq: SPAN-1020 or SPAN 1002. [on demand]

**SPAN 2811,2812,2813,2814 Spanish for Healthcare Professionals I,II,III,IV (1,1,1,1)**  
Spanish language development for medical professionals' interaction with patients and staff including basic conversation, medical questions, medical terms, and cultural elements. *2811*—Introduction to language, conversation, culture; *2812*—Focus on more complex dialogues, introduce medical terms; *2813*—Expand dialogue skills, study culture, build medical term knowledge; *2814*—Focus on medical interviews, explaining diagnoses, building cultural bridges. Must be taken in sequence. [on demand]

**SPAN 2821 Spanish for Human Resources Professionals I (1)**  
Spanish language development for human resources professionals' interaction with employees and applicants including basic

conversation, interview questions, human resources related terms, and cultural elements. [on demand]

**SPAN 2831 Spanish for Business Professionals I (1)**  
Spanish language development for business professionals' interaction with employees and applicants including basic conversation, sales presentations, business related terms, and cultural elements. [on demand]

**SPAN 2841 Spanish for Education Professionals (1)**  
Spanish language development for educational professionals' interaction with employees, parents and students including basic conversation, education related terms, and cultural elements. [on demand]

**SPAN 2990 Special Topics in Spanish (1-3)**  
Specific topics pertaining to Spanish language and culture; repeatable for credit on different topics. Prereq: Instructor's consent. [on demand]

Sustainability. See "ESC-Environmental Science"

**ST - Security +**

**ST 000 Security +**  
This certificate program is designed to add foundation-level skills in the security area for students that have completed the Computer Operations Technology program. Students will study general security concepts, communication security, infrastructure security, and the basics of Cryptography to protect data integrity. 450 clock hours. Prereq: VCOT Diploma or permission.

**TFAP - Technology Foundations in Basic Anatomy & Physiology**

**\*TFAP 0000 Technology Foundations in Basic Anatomy & Physiology**  
Human anatomy and physiology related to body systems; relationship between structural and functional roles of system components; basic histology and terminology. The class is an 8-week, 160 clock hour course. [Su]

**TFMA - Technical Foundations in Mathematics**

**TFMA 0000 Technology Foundations in Mathematics**  
Course of study includes whole numbers, fractions, decimals, percents, ratio and proportion; 5-clock hours/week.

**THEA - Theatre****THEATRE—GENERAL COURSES**

**THEA 1001 Artist in Residence (1-3)**  
Visiting artists interact with students in lectures and workshops; 2 workshops for 1 credit; 3 workshops for 2 credits; 4 workshops for 3 credits; repeatable; maximum of 3 hours applicable toward a degree. [F,S]

◆**THEA 1030 Introduction to the Theatre (3)**  
Representative survey of drama and stagecraft from its beginning to the present; analysis of significant plays from outstanding periods of theatre history; enhances understanding and appreciation of the theatre. [E]

**THEA 1990 Performance and Production (3)**  
Basic principles of performance and play production for non-majors; includes developing and presenting a public performance. [on demand]

**THEA 2430,2440 Musical Theatre Performance I,II (2,2)**  
2430—Performance techniques used in modern musical theatre productions/auditions; voice, acting, and movement for the stage developed through scene studies from musical theatre repertory. 2440—Advanced rehearsal and performance techniques and performance of a Musical Theatre Play. Prereq for 2440: THEA 2430 or instructor's consent. [on demand]

**THEA 2810 Actor's Workshop (3)**  
Ongoing study in the foundational skills of acting and improvisation for students interested in a career in the theatre arts, television and film. Repeatable for credit; maximum of 3 hours applicable toward a degree. [F,S]

**THEA 2990 Special Topics in Drama (3)**  
Study of topics relating to the historical and cultural significance of theatre; repeatable for credit on different topics. [on demand]

**PROFESSIONAL ACTOR TRAINING COURSES**  
*Admission to participate in the Professional Actor Training is a prerequisite to all Professional Actor Training courses. All Fall Semester courses are prerequisites to all Spring Semester courses, and all courses taught in the same term are corequisites. Designated courses are repeatable for credit, but no more than 12 hours of Applied Instruction and/or Performing Ensemble, in any combination, may be applied toward a degree.*

**APPLIED INSTRUCTION COURSES:**

**THEA 1110,1120,2110,2120 Acting I,II,III,IV (4,4,4,4)**  
1110—Introduces foundational skills of acting to students interested in a career in theatre arts. 1120—Explores the use of senses, response, and imagination to develop and enhance actor's performance skills. 2110—

Develops and integrates voice, body, and face to enhance actor's performance skills in classical and contemporary dramas. 2120—Applies collective knowledge and skills gained in the professional theatre program in context of a full-scale performance. Must be taken in sequence. [1110, 2110-F; 1120, 2120-S]

#### **THEA 1230,1235,2230,2235 Movement I,II,III,IV (3,3,3,3)**

1230—Principles and techniques of improvisational dance and movement; exploration of movement as an integral part of the actor's performance skills. 1235—Advances the skills of THEA 1230. 2230—Advances the skills of THEA 1235 so that students are more fully prepared for dramatic performance situations. 2235—Advances the skills of THEA 2230 so that students are more fully prepared for contemporary and musical theatre performance situations. Must be taken in sequence. [1230, 2230-F; 1235, 2235-S]

#### **THEA 1310,1320,2310,2320 Production I,II,III,IV (3,3,3,3)**

1310—Fundamental knowledge of vocabulary, principles and techniques employed in major theatrical production; basic principles and techniques of stagecraft, lighting, costuming and sound; hands on application in actual theatrical productions. 1320—Review of the vocabulary, tools and techniques of theatre craft; introduction of process, principles, and techniques of scenic, lighting, and costume design; practical projects in each design area. 2310—Introduction to publicity, tickets, programs, ushering, and house management in the theatre; includes overview of process and internship in production of a play or performance. 2320—Introduction to the business of acting; includes photos and resumes, auditioning techniques, scenes and monologues for auditions, and how to market oneself as an actor. Must be taken in sequence. [1310, 2310-F; 1320, 2320-S]

#### **THEA 1410,1420,2410,2420 Voice and Speech I,II,III,IV (3,3,3,3)**

1410—Introduces concepts and practices to develop a voice suitable for theatrical performance. 1420—Provides opportunity to train the voice for a wide range of situations in theatrical performance. 2410—Extends student's ability to employ his/her voice to express emotion, develop character, and enhance performances. 2420—Prepares student to apply voice and speech skills to a professional performance. Must be taken in sequence. [1410, 2410-F; 1420, 2420-S]

#### **THEA 1520,1525,2520,2525 Improvisation I,II,III,IV (3,3,3,3)**

1520—Introduces foundational skills of improvisational acting to students interested in a career in the theatre arts. 1525—Advances skills of students to prepare them for performance situations. 2520—Advances skills of students; engages them in performance situations. 2525—Advances skills of students; engages them in professional performances. Must be taken in sequence. [1520, 2520-F; 1525, 2525-S]

#### **THEA 2130 Acting Seminar (2)**

Explores personal philosophy and reflection

in making artistic choices in theatre. Prereq: THEA 2110, THEA 2230, THEA 2310, THEA 2410, THEA 2520; Coreq: THEA 2120, THEA 2235, THEA 2320, THEA 2420, THEA 2525. [F,S]

#### **THEA 2330 Production Seminar (2)**

Exploration of the Stage Manager as the coordinator of all the technical aspects of theatre. Prereq: THEA 2110, THEA 2230, THEA 2310, THEA 2410, THEA 2520; Coreq: THEA 2120, THEA 2235, THEA 2320, THEA 2420, THEA 2525. [F,S]

#### **TM - Computed Tomography**

The following 3-course set provides formal specialized training in CT whole-body imaging prior to independent performance. All 3 courses must be taken together. Prereq: Graduate of CAHEA/JRCERT accredited Radiologic Technology Program and certified or eligible for certification by American Registry of Radiologic Technologists.

#### **TM 210 Computed Tomography Patient Care and Management (4)**

This is one of a three-course set in whole body Computed Tomography (CT) imaging. The complete set provides formal specialized training in CT whole body imaging prior to independent performance. Topics included in this course are patient care and management, whole body cross-sectional anatomy, pathology, imaging procedures with protocols, and special procedures in CT. [F] Coreq: TM-220, TM-230

#### **TM 220 Computed Tomography Physics (4)**

This course is one of a three course set in whole body Computed Tomography (CT) imaging. The complete set provides formal specialized training in CT whole body imaging prior to independent performance. Topics included in this course are history of computed tomography, fundamentals of computers, scanning methods, digital imaging, quality control, and radiation protection. [F] Coreq: TM-210, TM-230

#### **TM 230 Computed Tomography Clinic (4)**

This course is one of a three-course set in whole body Computed Tomography (CT) imaging. The complete set provides formal specialized training in CT whole body imaging prior to independent performance. The clinical component is conducted at an approved clinical education center and requires supervised performance of computed tomography of the head, neck, spine, chest, abdomen, pelvis and musculoskeletal system. Requires several experience requirements. Arrangements for clinical education are made by the students to obtain clinical experience with a Chattanooga State approved CT facility in their geographic area. [S] Coreq: TM-210, TM 220.

Truck Driving, See "CD-Commercial Truck Driving"

#### **US - Diagnostic Medical Sonography**

*NEW: Admission to the Diagnostic Medical Sonography or Cardiovascular Sonography Program (or part-time Breast Sonography course sequence) is a prerequisite for all US courses. Please consult SUMMARY OF REQUIRED HOURS. All courses shown in the same term are corequisites and all courses in the preceding term(s) are prerequisites.*

#### **US 200 Introduction to Diagnostic Medical Sonography (2)**

Basic ultrasound instrumentation and clinical terms; cross-sectional/sagittal anatomy review; rules, regulations, clinical affiliates, diagnostic ultrasound history and student-instructor responsibilities in clinical settings; liability insurance fee required. [F]

#### **US 201,211,221 Ultrasound Physics I,II,III (2,2,2)**

Physics of diagnostic medical sonography; correlation with instrumentation procedures; class 2 hours, lab 1 hour. 201—Sound wave characteristics, matter-ultrasound interaction; basic algebraic review. 211—Real-time ultrasound transducer characteristics, the ultrasound beam, and the imaging process; application of theoretical concepts in lab. 221—Focus on instrumentation and clinical environment; artifactual image analysis and corrective factors, quality control measurements and observations, and ultrasound's biologic effects; advanced scanning techniques, including Doppler and color flow principles. [201—F, 211—S, 221—Su]

#### **US 202,212,222 Obstetrics and Gynecology I,II,III (4,2,3)**

A 3-course sequence in female pelvic & obstetrical ultrasound. 202—Physiological processes affecting imaging; pathological processes and sonographic appearance. 212—Fetal anatomy; gestational age estimation; fetal anomaly detection and intrauterine growth retardation; transabdominal and transvaginal techniques for assessing early intrauterine and ectopic pregnancies. 222—Advanced fetal and pelvic sonography techniques; multiple gestations, antenatal syndromes, placental, umbilical cord and membrane evaluation; fetal and maternal disorders; intro to infertility studies; uncommon pathological processes in nongravid pelvis. [202—F, 212—S, 222—Su]

#### **US 203,213,223 Abdominal and Small Parts I,II,III (4,2,3)**

203—Abdominal organs, their relation and normal sonographic presentation; physiologic process; metabolic functions; importance of lab data. 213—Pathologic patterns of abdominal organs; relation to sonographic appearance, physiologic changes, and lab findings; anatomic variations; Doppler and color-flow technique in vascular anatomy evaluation. 223—Neonatal cephalography and demonstration of anatomy and pathology of superficial structures (small parts). [203—F, 213—S, 223—Su]

**US 204 Cardiovascular Anatomy & Physiology (3)**

To demonstrate the role of sonography in the evaluation of the cardiovascular system. The student will map the arterial and venous systems from the heart through the abdomen and throughout the periphery. Emphasis will be placed on abdominal vasculature, and cardiac anatomy and physiology, with an introduction to echocardiography protocol. The student will also become familiar with basic ECG interpretation, learning the relationship between ECG timing and cardiac events, as seen in the echocardiogram. 4 hours lecture, 4 hour lab.[F]

**US 205,215,225 Clinic I,II,III (7,2,2)**

Increasing development of sonographic knowledge and skills in the clinical setting; performance of sonographic exams under clinical supervision; weekly case studies and imaging critiques; clinic hours: 540 in 205, 520 in 215, 420 in 225. 205—Intro to the sonographic imaging process and the clinical setting; exam protocol; operation of ultrasound instrumentation. 215—Normal anatomy; pathology and abnormal physiological processes. 225—Focus on completion of all clinical objectives. [205—F, 215—S, 225—Su]

**US 206 Cardiovascular Hemodynamics (3)**

Assessment of vascular hemodynamics for the cardiovascular sonography student through a topic-based analysis of various abdominal vascular structures, as well as an introduction to lower venous examinations and indirect pulse recognition of potential arterial disease of the lower extremities. 4 hours lecture, 4 hours lab. [F]

**US 207 Breast Sonography (4)**

Specialty course for development of a breast imaging specialist, providing a comprehensive review of sonography's targeted role in the diagnosis and treatment of breast disease, while comparing mammography and other imaging techniques, to apply to an appropriate understanding of scanning principles for optimal diagnostic results. Achievement of course competencies will assist in preparation of the breast sonography certification examination. Course participant must either be ARDMS or ARRT(M) certified. [S]

**US 208,218,228 Vascular Clinic I,II,III (3,2,2)**

Progressive development of vascular sonographic skills. Case group studies and imaging critiques will be performed, and the student's performance will be evaluated through clinical competencies in each related category through sonographer and instructor evaluations. 208—An introduction to the vascular sonographic imaging process. The student will become familiar with the clinical setting, the operation ultrasound instrumentation, exam indications, and the required protocol for vascular sonography exams. 218—A continuation of Vascular Clinic I; The student will have the opportunity to develop increased knowledge and skills in performing vascular examinations and demonstrating normal anatomy, physiology and pathology. Pathologic processes shall be further described to build on the student's present understanding of abnormal

physiological processes. The student will be allowed to continue the practice and performance of vascular exams under clinical supervision. Weekly case studies and imaging critiques will continue with the clinical instructor. The student's performance shall be further assessed through continued sonographers and instructor evaluations and higher-level clinical competencies. 228—A continuation of Vascular Clinic II; the student will have the opportunity to further increase vascular imaging/testing knowledge and skills. The student will continue performance of vascular exams under clinical supervision. Weekly case studies and imaging critiques will continue with the clinical instructor. Special emphasis will be given to final category evaluations and completion of all clinical objectives in specified vascular categories. Sonographer and instructor evaluations will be used for final assessment of student performance.

**US 209,219,229 Echocardiography Clinic I,II,III (3,2,2)**

Progressive development of echocardiography imaging skills. Case group studies and imaging critiques will be performed, and the student's performance will be evaluated through clinical competencies in each related category through sonographer and instructor evaluations.

209—An introduction to the adult cardiographic imaging process. The student will become familiar with the clinical setting, the operation ultrasound instrumentation, exam indications, and the required protocol for adult echocardiography sonographic exams. Case group studies and imaging critiques will be performed, and the student's performance will be evaluated through clinical competencies in each related category through sonographer and instructor evaluations. 219—The student will have the opportunity to develop increased knowledge and skills in performing echocardiographic examinations and demonstrating normal anatomy and pathology. Pathologic processes shall be further described to build on the student's present understanding of abnormal physiological processes. The student will be allowed to continue the practice and performance of echocardiographic exams under clinical supervision. Weekly case studies and imaging critiques will continue with the clinical instructor. The student's performance shall be further assessed through continued sonographers and instructor evaluations and higher-level clinical competencies. 229—A continuation of Echocardiography Clinic II; the student will have the opportunity to further increase echocardiography knowledge and skills. The student will continue performance of adult echocardiography exams under clinical supervision. Weekly case studies and imaging critiques will continue with the clinical instructor. Special emphasis will be given to final category evaluations and completion of all clinical objectives in specified adult echocardiography categories. Sonographer and instructor evaluations will be used for final assessment of student performance.

**US 210 Ultrasound Administration (1)**

Research, quality control, and accreditation practices and procedures of a general

sonography department; research paper, oral presentation, and group accreditation project. [S]

**US 214,224 Vascular Testing I,II (3,3) 214**

A topic-based analysis of clinical exams of the upper and lower extremity vascular studies, along with pertinent physiologic and hemodynamic diagnostic factors. Also includes student and instructor case study presentations and evaluations by topic, and instructs on pre- and post-operative patient assessments; class 3 hours, lab 1 hour. [S] 224—A topic-based analysis of sonographic clinical exams of the cerebrovascular system and other miscellaneous studies, along with pertinent physiologic and hemodynamic diagnostic factors. Also includes student and instructor case study presentations and evaluations by topic, and instructs on pre- and post-operative patient assessments.[Su]

**US 216,226 Adult Echocardiography Testing I,II (3,3)**

216—To further demonstrate the role of sonography in the evaluation of the cardiovascular system. The student will demonstrate knowledge of cardiac development in the embryonic period, and the expected changes in cardiac structures at birth. The student will become familiar with congenital cardiac abnormalities which may be followed into or manifest into adulthood. The student will recognize various cardiac disease processes and their effects on the heart sonographically, and will demonstrate proficiency in performing 2-D, M-Mode and Doppler examinations of the heart, also sonographically evaluating cardiac structures in a diseased state.; class 3 hours, lab 1 hour. [S] 226—To further demonstrate the role of sonography in the evaluation of the cardiovascular system. The student will demonstrate knowledge of additional cardiac testing procedures used in the clinical setting. The student will become familiar with stress echo, echocardiography contrast agents, and the clinical indications of each. The student will recognize various cardiac disease processes and their effects on the heart, and will also demonstrate knowledge of other cardiac imaging modalities and their roles in evaluating cardiac structures (e.g., cardiac nuclear medicine testing and cardiac catheterization). Class 3 hours, lab 1 hour. [Su]

**US 220 Ultrasound Seminar (2)**

Integrated coverage of ultrasound topics related to image production/evaluation, ultrasound procedures, and patient care and management; focus on needed skills, attitudes and knowledge for judgment and discretion in ultrasound imaging. [Su]

**US 245,255,265 Breast Sonography Clinic I,II,III (4,4,4)**

245—An introduction to basic scanning and patient care skills and physical principles for the sonographer, as related to breast sonography for the clinical breast specialist. Appropriate protocols will be introduced, along with operation of ultrasound instrumentation. Course participant must either be ARDMS or ARRT(M) certified. 255—Builds upon

scanning, patient care skills and physical principles introduced in US 245. Competency in breast protocols and instrumentation will be demonstrated; differential diagnoses and utilization of specialized procedures will be introduced. Course participant must either be ARDMS or ARRT (M) certified. 265– Progression from skills developed in the US 255 course, with final assessment of scanning, patient care skills and physical principles for the breast sonographer imaging specialist. The formulation of differential diagnoses and the utilization of specialized procedures will be introduced. Course participant must either be ARDMS or ARRT(M) certified. In all courses, case studies, competency objectives, and image critiques will serve as assessment mechanisms during the mentoring process. Malpractice insurance is required for all clinics. [On Demand]

### VC - Motor Sports Vehicle Technology

#### **VC 000 Motor Sports Vehicle Technology**

To provide training to those with an interest in constructing vehicles in racing industries by focusing their skills and knowledge development in four areas: Machining, Welding, Basic Engine Performance, and Advanced Engine Performance.

### VETT - Veterinary Technology

#### **VETT 1010 Introduction to Veterinary Technology (3)**

Introduction to the animal health care profession. Topics will include career choices, animal welfare, breed identification, basic concepts of husbandry, nutrition and occupational safety. Overview of clinic/hospital management techniques and skills, concepts of human animal bonds, pet loss, euthanasia communication strategies and an introduction to the agencies, ethics, and laws pertaining to the animal health care industry. [F]

#### **VETT 1015 Pharmacology & Pharmaceutical Calculations (4)**

Introduction to major drug classifications and federal regulatory guidelines. Proper techniques in use, administration, and control of pharmaceutical agents. Recognize actions and interactions in various animal breeds and species. Develop skills in pharmaceutical computations, measurements, mixtures and conversion factors. Class 3 hours, lab 3 hours. [Su]

#### **VETT 1020 Animal Anatomy & Physiology (4)**

This class focuses on the detailed anatomy and related basic physiology of selected animal species. Topics include the interrelationships between major body systems as well as the study of special sense organs. Labs will include skeletons, live animals and cadavers. Class 3 hours, lab 3 hours. Prereq: VETT 1010. [S]

#### **VETT 2000 Clinical Pathology (4)**

Prepare the student for specimen management including techniques of proper preparation, handling and analysis; relationships to fields of dermatology, mycology, virology, microbiology, histology, parasitology, pathology and toxicology; to

use and maintenance of lab equipment and ability to perform a variety of commonly used laboratory evaluations. Class 3 hours, lab 3 hours. Prereq: CHEM 1110, VETT 1010. [F]

#### **VETT 2010, 2020, 2030 Clinical Practicum I,II,III (4,4,4)**

Students are required to participate in a hands-on work experience at an assigned off-campus facility; private practice, business, industry, or government. The student will be involved in all aspects of the day-to-day operation of the facility. Prereq for 2010: BIOL 1110, VETT 1020, 2000. Prereq for 2020: VETT 2010. Prereq for 2030: VETT 2020 [Su,F,S]

#### **VETT 2015 Animal Nursing (4)**

Introduction and application of patient assessment techniques, including history taking, basic physical examination, therapeutic bathing, grooming, nail trims, and restraint. Additional topics include basic patient care including wound management and bandaging, fluid therapy, special nutritional requirements and therapeutics. Class 3 hours, lab 3 hours. Prereq: VETT 1010. [S]

#### **VETT 2016 Topics in Veterinary Technology (3) /**

Study of select current topics pertaining to the field of veterinary technology. Exotic, laboratory and wildlife animal issues, care and handling will be addressed as well as refinement of skills, techniques and review of other pertinent materials. Field trips will be used to facilitate course materials when possible. Prereq: VETT 1020. [S]

#### **VETT 2040 Anesthesia & Surgical Nursing (4)**

Coverage of the safe and effective management of patients undergoing anesthesia and surgical procedures. Topics include calculations and administration of drugs, monitoring and management of patient status, operation and maintenance of anesthetic equipment. Surgical nursing emphasis placed on pre-op assessment and prep of the patient, post-op assessment and care of the patient as well as surgical set up and assistance. Class 3 hours, lab 3 hours. Prereq: VETT 1015. [S]

#### **VETT 2050 Imaging (4)**

Overview of the theory and safe application of radiological techniques in order to produce diagnostic films. Topics addressed will include patient handling, restraint and positioning, correct use and maintenance of radiographic films and equipment and introduction to special contrast techniques. Class 3 hours, lab 3 hours. Prereq: VETT 2015. [F]

### WD - Welding

#### **WD 000 Welding Technology**

Theory and practice in welding; oxyacetylene flame cutting, welding and brazing; MIG welding procedures; gas metal arc welding on aluminum; TIG welding on mild steel plate and aluminum; gas tungsten arc pipe welding; flux cored arc welding, covering self shielding and

shielded flux cored electrode wire; welding instruction and practice in all positions on thin and thick gauge aluminum and 11-gauge plate; math and blueprint reading for welding; 30 clock hours/week. [E]

### Women's Studies

#### **WMST 2010 Introduction to Women's Studies (3)**

The course is an interdisciplinary approach to the study of women's social identity and placement throughout history and the world. Theoretical perspectives and research from sociology, psychology, biology, and anthropology are used to understand how gender shapes our lives on individual, cultural, and societal levels. Areas of study emphasize the role of gender in social institutions including family, workplace, education, religion, media, and politics. Prereq: ENGL 1010. [E]

#### **Wellness, See "PHED-Physical Education"**

X-Ray Technology, See "RT-Radiologic Technology"

### YT - Cosmetology Instructor Training

#### **YT 000 Cosmetology Instructor Training**

This course is a presentation of concepts of instruction in cosmetology. Topics include history of teaching, educator characteristics, curriculum development-evaluation, and teaching assessment in techniques. This course is a combination of lecture and lab (300 contact hours). [on demand]

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*\*The offense of misrepresentation of academic credentials constitutes a Class A misdemeanor.*

## Administrative and Professional Staff

**James L. Catanzaro**, (1990) President; Professor, Philosophy, Western Civilization, Humanities. Ph.D., Claremont Graduate University, California.

**James L. Barrott**, (1985) Vice President, Technology; Dean, Industrial Technology. Ed.D., University of Tennessee at Knoxville, 2000.

**Thomas F. Crum**, (1991) Director, Human Resources. M.S., University of Illinois, 1970.

**Fannie D. Hewlett**, (1979) Provost and Vice President, Academic Affairs; Professor, Psychology—Social and Behavioral Sciences. Ed.D., University of Tennessee, 1990.

**Eva W. Lewis**, (2006) Associate Vice President, Institutional Effectiveness—Institutional Effectiveness. M.B.A., Vanderbilt University-Owen Graduate School of Management, 1988.

**Jeffrey F. Olingy**, (2006) Vice President, Economic and Community Development. B.A., Rutgers University, 1971.

**Holly S. Reeve**, (2006) Associate Vice President, Leadership and Fund Development. M.B.A., University of North Florida, 1988.

**Tammy L. Swenson**, (1987) Vice President, Business and Finance. M.B.A., University of Tennessee at Chattanooga, 1991; C.P.A.; Certified Government Financial Manager.

**Deborah A. Adams**, (1981-86, 1988) Associate Vice President, Continuing Education and Community Development. M.S., Central Michigan University, 2004.

**Annette Ballew Alsobrooks**, (2000) Designer, Marketing. B.S., University of Tennessee at Chattanooga, 1995.

**Bruce T. Alston**, (1993) Director, Media Services. B.F.A., New York Institute of Technology, 1990.

**Donna Appleget**, (1993) Systems Analysis I—Computer Services. B.S., University of Tennessee at Chattanooga, 1986.

**Martha K. Bates**, (1991) Technician, Biology—Math and Sciences. B.S., Mississippi College, 1967.

**Kyleen Y. Beechum**, (2004) Accountant 2, Business Office. B.S., Tennessee State University, 2001.

**Timothy R. Belcher**, (1990) Network Analyst—Computer Services. B.S., Bryan College, 2006.

**Amanda P. Bennett**, (2006) Advisor, Educational Planning and Advising. M.Ed., University of Georgia, 2005.

**Julie C. Bennett**, (1984) Director, Kimball Site—Extended Services. B.S., Covenant College, 1991.

**Raymond M. Bertani**, (1984) Coordinator, Center for Distributed Education. B.A., University of Tennessee at Chattanooga, 1984.

**Rajammah Bhandari**, (2006) Technician, Biology—Math and Sciences. B.S., University of Tennessee at Chattanooga, 2001.

**Vickie M. Boles**, (1999) Specialist, Web Services—Computer Services. M.S., Capella University, 2005.

**Larry L. Bray**, (1992) Counselor, Career Planning and Counseling. M.Ed., Wright State University, 1981.

**Hannah V. Brewer** (2007) Coordinator, Adult Education Off-Campus Site -- Adult Education. M.A., Tennessee Technological University, 2004.

**Joyce A. Brinkmeyer**, (2000) Manager, Workforce Assessment and Development—Business and Community Development Center. M.A., University of South Dakota, 2007.

**Patricia K. Brown**, (1979) Director, Marketing and Communications—Marketing. B.S., Covenant College, 1998.

**Corey Buchanan**, (2003) Programmer Analyst 2—Computer Services. B.S., University of Cincinnati, 2000.

**Nora C. Burke**, (1993) Supervisor, PC Support—Computer Services. B.S., University of Tennessee at Chattanooga, 1987.

**Richard E. Burke**, (2002) Director, Continuing Education. B.S., University of Tennessee at Chattanooga, 1987.

**Leanders Burns**, (2007) Counselor, Financial Aid. A.A., Tallahassee Community College, 2003.

**Jane Bustabad**, (2004) Technician, Chemistry—Math and Sciences. M.A.C.T., Auburn University, 1974.

**Douglas E. Byrd**, (1988) Counselor, Career Planning and Counseling. M.A., University of Alabama, 1988; M.S., Jacksonville State University, 1981.

**Amy L. Campbell**, (1998) Technician, Physics—Math and Sciences. B.S., Centre College, 1977.

**Bruce A. Carlisle**, (1997) Systems Analyst 1, Computer Services. B.S., University of Tennessee at Chattanooga, 1997.

**Heidi G. Cawood**, (1994) Designer, Marketing. B.S., Middle Tennessee State University, 1993.

**Charles E. Chamberlin**, (1998) Manager, Network Services—Computer Services. B.S., University of Chattanooga, 1967.

**Christine A. Chardos**, (1997) Adviser, Educational Planning and Advising. B.S., University of Tennessee at Chattanooga, 1993.

**N. Elaine Cioni**, (2006) Coordinator, Benefits and Information Research—Human Resources. M.S., University of Tennessee at Chattanooga, 1985.

**Sandra Cooke**, (2006) Counselor, Financial Aid. B.S., Covenant College, 2003.

**Lulu L. Copeland**, (1996) Manager, Computer and Technical Training—Business and Community Development Center. B.S.E., University of Tennessee at Chattanooga, 1982.

**John W. Crawley**, (2003) Manager, Employment and Job Analysis—Human Resources. B.A., Trevecca Nazarene University, 1994.

**William A. Crum** (2007) Specialist, Web and Multi-Media Development—Center for Business Success. B.S., University of Tennessee at Chattanooga, 1995.

**Mark A. Cunningham**, (1983) Database Administrator—Computer Services. A.S., Chattanooga State Technical Community College, 1982.

**Julie David**, (2006) Counselor, Outreach—Recruiting. A.A., Chattanooga State Technical Community College, 1998.

**J. Dianne Dennison**, (1988) Designer, Marketing. A.S., William Carter College, 1968.

**Timothy S. Dills**, (1999) Assistant Director, Educational TV—Center for Distributed Education. B.A., Freed-Hardeman University, 1988.

**Julius D. Dodds**, (2008) Director, Eastgate Site --Extended Services. M.Ed., University of Tennessee at Chattanooga, 1996.

**Jules T. Doux, Jr.** (2001), Counselor, Small Business Development Center. B.S., Middle Tennessee State University, 1988.

**Jeanette D. Duggan**, (2007) Specialist, Business Development—Center for Business Success. B.S., University of Tennessee, 1985.

**Andrew J. Duncan**, (2007) Computer Programmer Analyst—Library Services. B.S. University of Tennessee at Chattanooga, 2003.

**Suzanne P. Elston**, (2005) Director, Adult Education. M.A., University of North Texas, 1988.

**Paul J. Ennis**, (2000) Technician, Chemistry—Math and Sciences. B.S., University of California, 1979.

**Juanita B. Finnell**, (1992) Adviser, Educational Planning and Advising. M.S., University of Tennessee at Chattanooga, 1992.

**Gary L. Fisher**, (1993) Producer, Media Services. B.A., University of Tennessee at Chattanooga, 1989.

**A. Grey Fletcher**, (2007) Director, Internal Audit. M.S., University of Tennessee, 1985; C.P.A.

**Darlene A. Florence**, (2005) Systems Programmer I --Admissions and Records. M.B.A., University of Tennessee at Chattanooga, 1991.



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- Barbara A. French**, (1985) Coordinator, Business and Community Development Center.
- Elizabeth L. Fronk**, (2000) Assistant Librarian 1, Library Services. M.L.S., University of Michigan, 1993.
- Patricia A. Gardner**, (1988) Manager, Personal Interest, Continuing Education—Business and Community Development Center. B.A., University of Tennessee at Chattanooga, 1970.
- Mosunmola A. George-Taylor**, (2005) Dean/Associate Professor, Mathematics and Sciences, Ph.D., Clark Atlanta University, 1994.
- Jerome A. Gober**, (2002) Director, Affirmative Action/EEO—Human Resources. B.S., University of Tennessee at Chattanooga, 1988.
- Wanda Gocher-Johnson**, (2003) Specialist, Learning Disabilities—Disabilities Support. M.Ed., University of Tennessee at Chattanooga, 2001.
- Marsha L. Goolesby-Barker**, (1999) Advisor, Educational Planning and Advising. M.S., University of Tennessee at Chattanooga, 1993.
- E. Clark Graham**, (1998) Coordinator, Student Services (Evening)—TN Technology Center. M.A., Tennessee Technological University, 1980.
- Kymberly M. Hall-Chavez**, (2008) Director, Training and Employee Development. M.B.A., University of Mary Hardin-Baylor, 1994.
- Lisa G. Hancock**, (1993) Bursar--Business Office. A.A.S., Chattanooga State Technical Community College.
- Vicki J. Headrick** (1982) Assistant Director, Child Development Center. A.S., Chattanooga State Technical Community College, 1982.
- Jerry L. Hendrix**, (1997) Director, Dayton Site—Extended Services. B.S., University of Tennessee at Chattanooga, 1975.
- John Henry**, (2001) Artist-in-Residence—Humanities and Fine Arts, D.A., University of Kentucky, 1965.
- Elaine T. Hill**, (1976) Administrative Assistant to the Provost and Vice President of Academic Affairs--Academic Affairs.
- Jeanne Hinchee**, (2007) Director, Financial Aid. B.S., Austin Peay State University, 1982.
- Robert E. Hobgood**, (1996) Manager, Auditorium—Media Services. B.A., University of Tennessee at Chattanooga, 1985.
- Tammy L. Hostetter**, (2007) Counselor, AHEAD Program. B.S. Southern Adventist University, 2007.
- Tisa M. Houck**, (1983) Librarian 1—Library Services. M.S., University of Tennessee, 2000.
- Deborah S. Howe**, (1989) Programmer/Analyst 2, Computer Services. B.S., University of Tennessee at Chattanooga, 1999.
- Joan W. Howell**, (2006) Director, Educational Planning and Advising—Advising. M.S., University of Tennessee, 1989.
- Don Hunt**, (1990) Coordinator, Commercial Truck Driving—TN Technology Center. Certified Commercial Truck Driving Instructor, 1976.
- Steve C. Huskins**, (1993) Assistant Vice President, Plant Operations and Facilities Planning. B.S., University of Tennessee, 1978.
- J. Gregory Jackson**, (2006) Director, Academic Systems and Instructional Support—Computer Services. M.B.A., University of Tennessee-Martin, 2004.
- Vicki M. Jackson**, (1976) Coordinator, Testing Center—Basic Skills. B.S., Covenant College, 1992.
- Sara E. Jackson**, (2007) Counselor, Financial Aid. B.A., University of the South, 1995.
- Steve Jaecks**, (2001) Director, Athletics and Wellness. M.S., University of Tennessee at Chattanooga, 1982.
- Susan G. Joseph**, (1990) Associate Vice President—Business and Finance. B.S., University of Tennessee, 1982.
- Edward R. Kelly**, (1987) Director, Plant Operations. M.S., University of Tennessee, 1961.
- Anna M. Kent**, (2007) Advisor, Nursing/Allied Health--Educational Planning and Advising. M.Ed., University of Georgia, 2003.
- Beth Keylon-Randolph**, (2005) Counselor, Recruiting. B.S., Tennessee Technological University, 1996.
- Lucas Kilburn**, (2002) Systems Accountant, Business Office. B.A., Michigan State University, 1994.
- Sandra K. King**, (2001) Director, Transitional Studies. M.S., University of Tennessee, 1988.
- Sandra J. Klutzz**, (1991) Dean, Student Life and Judicial Affairs—Student Affairs. M.S., University of Tennessee, 1978.
- Mary E. Knaff**, (1990) Director, Multicultural Services. M.S., University of Tennessee at Chattanooga, 1993.
- Rex H. Knowles, Jr.**, (2002) Director, Theater Arts. M.A., Union Theological Seminary, 2002.
- Sherry Landrum Knowles**, (2002) Director, Theater Arts. M.A., Antioch University, 1992.
- Brooke C. Kocher**, (2007) Counselor, Career Planning and Counseling. M.S., University of Tennessee, 2005.
- Georgiana C. Kotarski**, (2000) Director, Sequatchie/Bledsoe Site--Extended Services. M.P.A., University of Tennessee at Chattanooga, 1994.
- Mark Lander**, (2005) Specialist, Web Development—Center for Distributed Education. B.S., Jacksonville State University, 1971.
- Brenda Langston**, (2002) Director—TECTA Program. M.S., Nova Southeastern University, 2006.
- Victoria P. Leather**, (1981) Dean, Library Services. M.S.L.S., University of Tennessee, 1978.
- Norma L. Lee**, (1981) Registrar, Records—Admissions/Registration and Records. B.S., Covenant College, 1994.
- Terrence E. Lee**, (1981) Programmer/Analyst 2, Computer Services. B.S., University of Tennessee at Chattanooga, 1980.
- Aleta F. Lenyard**, (2001) Manager, Math Center. B.S., Tulane University, 1970.
- C. Matthew Little**, (2008) Director, Recruitment Services--Student Affairs. B.S., University of Memphis, 2003..
- Judy K. Lowe**, (2002) Assistant Vice President, Center for Distributed Education and Multi Media. Graduate Diploma in Higher Education, University of New South Wales, 1992.
- Ju-Hsin W. Lusk**, (2006) Manager, Online Training and Development Projects—Build Your Own Business. M.B.A., Georgia State University, 1991.
- Kathryn L. Lutes**, (1998) Director, Disabilities Support Services. M.Ed., University of Tennessee at Chattanooga, 1992.
- Deborah J. Mailen**, (1994) Assistant Vice President, Grants, Contracts and Student Accounts—Business Office. B.S., University of Tennessee, 1975.
- Larry E. Mangrum**, (2004) Manager, Business and Industry Training—Business and Community Development Center. M.Ed., Mississippi State University, 1983.
- Brenda R. Maples**, (1987) Assistant Coordinator, Testing Center. Certificate, University of Tennessee at Chattanooga, 1979.
- Sabra J. Marshall** (2007) Assistant Director, Child Development Center. A.A., Kansas City Kansas Community College, 2000.
- Ronald L. Martin**, (2002) Purchasing Agent, Business Office. B.S., University of Tennessee, 1977.
- Gayle A. Maul**, (2005) Specialist, Leaning Disabilities—Disabilities Support. M.S., New York State University, 1988.
- Kevin L. Maxfield**, (2005) Director, Small Business Development Center—Economic and Community Development. B.S., Middle Tennessee State University, 1993.
- Elaine D. McCalla**, (1999) Programmer Analyst 2, Computer Services. B.S., Florida A & M University, 1988.
- Janelle T. McDonald**, (2006) Accompanist--Humanities and Fine Arts. B.M., University of Cincinnati, 1973.
- Sarah F. McDowell**, (1993) Coordinator, College Reading and Writing Center. M.A., University of Tennessee at Chattanooga, 1996.

For more information see the "Chattanooga State Digital Directory" online at <http://www.chattanoogaastate.edu/facultypages/default.asp>

**Tim J. McGhee**, (2005) Department Head, Engineering Technologies--Engineering Technologies. Director, Business and Construction Institute of the Southeast. B.S., University of Louisville, 2003. M.S.E. M., University of Tennessee, Chattanooga, 2007.

**Phyllis P. Mescon**, (2007) Director, Center for Applied Legal Studies/East Campus--Extended Services B.A., University of Kentucky, 1980.

**Rosemary C. Milburn**, (1988) Library Associate, Library Services. B.A., Smith College, 1973.

**Carol A. Moore**, (2006) Director, Institutional Research--Institutional Effectiveness. Ph.D., University of Tennessee, 1991.

**Barbara S. Morgan**, (1968) Executive Assistant to the President. A.S., Chattanooga State Technical Institute, 1967.

**Jenny Muckenthaler**, (2007) Specialist, TECTA--Social and Behavioral Sciences. B.S., University of Tennessee at Chattanooga, 2005.

**Billy R. Noble**, (2007) Counselor, Small Business Development Center--Economic and Community Development, B.S., University of Tennessee at Chattanooga, 1983. C.P.A.

**Diane C. Norris**, (1982) Interim Director, Admissions/Registration and Records.

**Michelle R. Olson**, (2002) Coordinator, AHEAD Program. B.S., Berry College, 1990.

**Charles M. Owen**, (2002) Systems Programmer 1, Computer Services. B.A., University of Tennessee, 1986.

**Rebecca A. Owens**, (2003) Specialist, TECTA--Social and Behavioral Sciences. B.S., University of Alabama, 1998.

**Percy K. Parakh**, (1995) Coordinator, Training--Computer Services. B.S., Mysore University, 1975.

**Charles H. Parks**, (2006) Producer--Media Services. A.A., Art Institute of Atlanta, 1980.

**Peter Y. Peter**, (2004) Coordinator, Math Center--Math and Sciences. B. S., Austin Peay University, 1994.

**Darryl J. Pirtle**, (1994) Programmer/Analyst 2, Computer Services. B.S, Freed-Hardeman University, 1983.

**Garry L. Posey**, (2007) Coordinator, Theater--Humanities and Fine Arts. M.F.A., University of Mississippi, 2006.

**Jay I. Price**, (2005) Counselor, Recruiting.

**Betty A. Proctor**, (1991) Designer, Marketing. B.A., Governors State University, 2004.

**Michael E. Ricketts**, (1983) Assistant Dean--TN Technology Center; Ed.D., University of Tennessee, 1996.

**Bonnie H. Riggs**, (1988) Assistant Director, Institutional Research--Academic Affairs. M.B.A., University of Tennessee at Chattanooga, 1996.

**Carolann Roberts**, (2000) Counselor, Career Planning and Counseling. M.S., University of Tennessee at Chattanooga, 1984.

**Michael L. Rogers**, (2000) Programmer/Analyst 2, Computer Services. B.S., University of Tennessee at Chattanooga, 1980.

**Keith A. Russell**, (2000) Senior Telecommunications Analyst, Computer Services. Professional Telecommunications Technician Licensure, BICSI, 2005.

**Jack B. Sample**, (2006) Director, Economic and Community Development Projects--Continuing Education. M.A., University of Tennessee, 1969.

**Sonja A. Sanders**, (2005) Coordinator, Payroll and Personnel Budget--Business Office. M.A., Tennessee Technological University, 2003.

**Tamberly S. Sawyers** (2007) Coordinator, Fundraising/Special Gifts--Leadership and Fund Development. A.S., Chattanooga State Technical Community College, 1988.

**Gregory C. Schuck**, (2001) Director, Food Services.

**T. Elijah Scott**, (2002) Librarian 1, Library Services. M.S., University of Tennessee, 1997.

**Tiffany C. Scruggs**, (2001) Advisor, Educational Planning and Advising. M.S., University of Tennessee at Chattanooga, 1997.

**Robert P. Sefcik**, (2002) Designer, Computer Services. B.S., Bryan College, 2005.

**Nancy W. Shiles**, (2006) Coordinator, Nursing Skills--Allied Health. M.S.N., Vanderbilt University, 1989.

**Belinda S. Smith**, (1998) Counselor, Career Planning and Counseling. M.S., Alabama A & M University, 1982.

**Kathrandra D. Smith**, (1994) Coordinator, Marketing. M.A., University of North Carolina at Chapel Hill, 1994.

**Robin J. Smith**, (2002) Coordinator, Recruiting--Community Outreach. B.S., Tennessee Technological University, 1992.

**Kassandra J. Sneed**, (2005) Counselor, AHEAD Program. A.A.S., Chattanooga State Technical Community College, 1995

**Joyce G. Stakely**, (1984) Director, Institutional Development--Institutional Advancement. B.S., Covenant College, 2000.

**Benney N. Standifer**, (1998) Manager, Computer Lab--Computer Services. B.S., University of Tennessee at Chattanooga, 1991.

**James L. Steele, Jr.**, (1998) Dean/Associate Professor, Management-- Business and Information Technologies. M.B.A., Vanderbilt University, 1982.

**Robert R. Steinmetz**, (2002) Director, Recruitment, Enrollment and Retention Services--Student Affairs. M.P.A., University of Tennessee at Chattanooga, 2006.

**Jacklyn J. Stephenson**, (2007) Director, Systems Development and Operations--Computer Services. B.S., Covenant College, 2004.

**Kathy L. Streetman**, (2007) Coordinator, Data, Business Office.

**Cynthia W. Swafford**, (1987) Director, Nursing--Nursing/Allied Health. Ed.D., University of Tennessee, 1992.

**Carol Swayze**, (2001) Director, Dual Enrollment--Academic Affairs. M.A., Tusculum College, 1992.

**Pamela P. Temple**, (1980) Librarian 3, Library Services. M.L.S., George Peabody College, 1968.

**Harold M. Terrell**, (2004) Network Analyst, Computer Services. B.S., Tennessee Temple University, 1987.

**Willie R. Thomas, III**, (2007) Assistant Director, Financial Aid. B.A., Morehouse College, 2003.

**Sheila A. Thompson**, (1997) Director, Community Outreach--Community Outreach. B.S., University of Tennessee at Chattanooga, 1987.

**Lynda Timmons**, (1989) Systems Analyst 1, Computer Services. B.S., University of Tennessee at Chattanooga, 1993.

**Bart M. Walker**, (2004) Counselor, Recruiting. M.Ed., Lincoln Memorial University, 2000.

**Lori D. Warren**, (2008) Librarian 1, Library Services. M.S., University of Tennessee, 2003.

**Nancy V. Watts**, (1997) Director, Pharmacy Technician Program--Math and Sciences. Pharm.D., Mercer University, 1990.

**Hollyanna K. White**, (2007) Specialist, On-line Learning--Center for Distributed Education and Multi Media. M.B.A., Brenau University, 2004.

**Katharine A. White**, (2006) Technician, Veterinary Technician Program--Math and Sciences. Licensed Veterinary Medical Technician, 2005.

**Napoleon Williams**, (1993) Assistant Director, Safety/Security--Plant Operations. B.S., University of Tennessee at Chattanooga, 1996.

**Sandra B. Williford**, (1993) Assistant Librarian 1, Library Services. M.L.I.S., Louisiana State University, 1988.

**Joshua J. Wilson**, (2006) Coordinator, Student Activities and Orientation--Student Affairs. M.S., Georgia Southern University, 2006.

**Howard L. Yarbrough**, (1973) Dean, Nursing/Allied Health; Professor, Biology. Ed.D., University of Tennessee, 1986.

**Laura Young**, (1994) Assistant Librarian 1, Library Services. M.S.L.S., University of North Carolina, 1971.

## Faculty

**Gabriele M. Aborn**, (2005) Assistant Professor, Biology—Math and Sciences. M.S., University of Southern Mississippi, 1992.

**Marcia E. Abernathy**, (1997) Associate Professor, Nursing—Nursing/Allied Health. M.S.N., University of Alabama, 1985.

**Cinda J. Adams**, (1992) Associate Professor, Economics— Social and Behavioral Sciences. M.S., University of Illinois at Urbana-Champaign, 1976.

**Rodney L. Adams**, (2003) Vocational Associate Instructor, Cosmetology—TN Technology Center. Cosmetologist Instructor License, Tennessee State Board of Cosmetology, 2001.

**S. Paulette Amsler**, (2002) Instructor, Real Time Reporting—Business and Information Technologies. A.S., Kelsey-Jenney College, 1994.

**Donald F. Andrews**, (1980) Interim Dean of Humanities and Fine Arts/Professor, English. Ph.D., University of Tennessee, 1977.

**Curtis E. Aukerman**, (2001) Assistant Professor/Director, Emergency Medical Services Program—Allied Health. B.S., Lee University, 1996.

**Sherri L. Barnes**, (1993) Associate Professor, Mathematics—Math and Sciences. M.S., University of Tennessee, 1992.

**K. Shay Bean**, (2006) Associate Professor, Chemistry—Math and Sciences. Ph.D., University of New Orleans, 1993.

**Cindy D. Birchell**, (1993) Instructor, Physical Therapist Assistant—Nursing/Allied Health. A.S., Chattanooga State Technical Community College, 1981; Licensed Physical Therapist Assistant in Tennessee.

**Leslie S. Brabham**, (2004) Instructor, English—Humanities and Fine Arts. M.A., Tennessee Technological University, 2003.

**Marilyn B. Brown**, (1979) Associate Professor/Department Head, Mathematics—Math and Sciences. M.Ed., University of Tennessee at Chattanooga, 1975.

**Pamela M. Brune**, (2001) Associate Professor, Office Administration— Business and Information Technologies. M.S., University of Tennessee, 1989.

**Joyce B. Campbell**, (1988) Associate Professor, Nursing—Nursing/Allied Health. M.S.N., University of Tennessee, 1982.

**Tina R. Cannon**, (1993) Associate Professor, Mathematics—Math and Sciences. Ed.D., University of Tennessee, 2005.

**Rebecca A. Cantrell**, (1988) Associate Professor, Writing— Humanities and Fine Arts. M.A., University of Tennessee at Chattanooga, 1990.

**Kenneth F. Cardillo**, (1999) Associate Professor/Coordinator, Music— Humanities and Fine Arts. D.Phil., Oxford Graduate School, 1992.

**Anne A. Carroll**, (2006) /Interim Dean/Assistant Professor, Psychology—Social and Behavioral Sciences. M.A., University of Tennessee, 2002.

**Karen W. Castleberry**, (1976) Associate Professor, Dental Assisting—Nursing/Allied Health. B.S., Covenant College, 1996.

**Rhonda S. Castleberry**, (2004) Vocational Senior Instructor, Cosmetology—TN Technology Center. Cosmetologist Instructor License, Tennessee State Board of Cosmetology, 1973.

**Richard D. Claburn**, (2004) Vocational Associate Instructor, Industrial Electricity—Industrial Technology. Electrical License, State of Tennessee, 2004.

**William M. Clem**, (2005) Vocational Associate Instructor, Commercial Truck Driving—TN Technology Center. B.S., University of Tennessee at Chattanooga, 1989.

**Richard K. Clements**, (1994) Professor, Biology—Math and Sciences. Ph.D., University of Kentucky, 1995.

**Charles L. Cofer**, (1988) Master Instructor, Electrical/Electronic Engineering Technology—TN Technology Center. B.S.E., University of Tennessee at Chattanooga, 1986, P.E.

**Gay D. Cohen**, (1991) Associate Professor, Nursing—Nursing/Allied Health. M.S.N., University of Tennessee, 1981.

**John E. Cousino**, (1991) Associate Professor, Respiratory Care—Nursing/Allied Health. M.A., University of South Florida, 1986.

**April C. Crenshaw**, (2007) Instructor, Mathematics--Math and Sciences. M.S., Florida State University, 2004.

**Sarah E. D'Angelo-Woody**, (2005) Assistant Professor, Voice/Speech—Humanities and Fine Arts. M.F.A., University of Montana, 2003.

**Emitt L. Daniel**, (2005) Instructor, Information Systems—Business and Information Systems. M.C.S., Texas A & M University, 1973.

**Gregory F. Dennis**, (2003) Assistant Professor, Physical Education— Humanities and Fine Arts. M.S., Baylor University, 1989.

**Carolyn F. Dodson**, (1990) Associate Professor, Biology—Math and Sciences. M.S., Arizona State University, 1970.

**T. Scott Douglass**, (1991) Professor, English;—Humanities and Fine Arts. Ph.D., Florida State University, 1982.

**Robert N. Dreyer**, (2005) Associate Professor, Engineering Technologies. M.S.E., University of Michigan, 1968.

**Linda D. Duke**, (2004) Associate Professor, Nursing—Nursing/Allied Health. M.S.N., Andrews University, 1988.

**Jennifer M. Duncan**, (2001) Assistant Professor, English— Humanities and Fine Arts. M.A., University of South Carolina, 1999.

**Linda S. Edwards**, (1985) Associate Professor, Reading— Humanities and Fine Arts. M.S., University of Tennessee at Chattanooga, 1982.

**Ann R. Ehmling**, (1988) Associate Professor, Emergency Medical Services—Nursing/Allied Health. B.S., Covenant College, 1993; EMT-Paramedic.

**Michelle L. Ehmling**, (2005) Instructor, Dental Assisting—Nursing/Allied Health. B.S., Bryan College, 2006.

**Angela Jordan Everett**, (1997) Associate Professor, Mathematics—Math and Sciences. Ed.D., University of Tennessee at Knoxville, 2001.

**Lisa L. Evers**, (1998) Associate Professor, Nursing—Nursing/Allied Health. M.S., Southern Illinois University, 1994.

**Libby W. Farrelly**, (2005) Instructor, Biology—Math and Sciences. M.S., University of Charleston, 1999.

**Arlene Flerchinger**, (2000) Assistant Professor, Information Systems— Business and Information Technologies. M.A., University of Denver, 1974.

**Toni W. Fountain**, (1992) Associate Professor, Mathematics—Math and Sciences. M.Ed., University of Tennessee at Chattanooga, 1991.

**James E. Garner**, (1983) Associate Professor, Mathematics—Math and Sciences. M.A., University of Mississippi, 1964.

**Max D. Gartman**, (2005) Assistant Professor, Spanish— Humanities and Fine Arts. Ph.D., University of Alabama Tuscaloosa, 1965.

**Gary Gilreath**, (2002) Assistant Professor, Mathematics—Math and Sciences. M.S., Rensselaer Polytechnic Institute, 1972.

**Hisel H. Gobble**, (1978) Associate Professor, Accounting— Business and Information Technologies. M.B.A., East Tennessee State University, 1974.

**Glenda R. Goodwin**, (2006) Instructor, Business Systems Technology--Business and Information Technologies. M.Ed., University of Tennessee at Chattanooga, 1985.

**E. Frank Gordy, Jr.**, (2002) Assistant Professor, Mathematics—Math and Sciences. M.Ed., University of Tennessee at Chattanooga, 1991.

**Donald W. Green**, (1986) Vocational Senior Instructor, Air Conditioning, Refrigeration, and Heating—TN Technology Center. Certificate, Chattanooga State Technical Community College, 1984; A.B.S., McKenzie College, 1977.

**Flavius L. Green (Wilkie)**, (1999). Associate Professor/Coordinator, Physical Education—Social and Behavioral Sciences. M.Ed., Middle Tennessee State University, 1970.

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**Yolanda J. Green**, (1988) Associate Professor, Nursing—Nursing/Allied Health. M.S.N., University of Alabama in Birmingham, 1983.

**David E. Guinn**, (1998) Vocational Associate Instructor, Heating, Air Conditioning, and Refrigeration—TN Technology Center. Certificate, Chattanooga State Technical Community College, 1993.

**Hennie Gunter**, (1988) Associate Professor, Nursing—Nursing/Allied Health. M.S.N., University of Tennessee, 1981.

**Brian P. Hale**, (2003) Associate Professor, English—Humanities and Fine Arts. Ph.D., University of South Carolina, 1993.

**Sharon E. Hall**, (1988) Associate Professor, Respiratory Therapy—Nursing/Allied Health. Mount Marty College, 1978.

**Lucy W. Hampton**, (1995) Vocational Master Instructor, Surgical Technology/Director, Medical Programs—TN Technology Center. B.S.N., University of Tennessee at Chattanooga, 1983.

**Jody Arnold Hancock**, (1993) Associate Professor/Program Director, Diagnostic Medical Sonography—Nursing/Allied Health. M.A., University of Phoenix, 2004; R.D.M.S.; R.T.(R).

**Michael R. Harris**, (2005) Vocational Senior Instructor, Diesel—TN Technology Center. Diesel Mechanics Certificate, Sequoyah Technology Center, 1977

**Ross V. Hart**, (2007) Instructor, Psychology—Social and Behavioral Sciences. Ed.D., Mississippi State University, 1972..

**Darrin J. Hassevoort**, (2000) Assistant Professor/Department Head, Fine Arts—Humanities and Fine Arts. M.A., Bob Jones University, 1996.

**Robert C. Hawfield**, (1986) Vocational Senior Instructor, Industrial Technology—TN Technology Center. M.A., University of Tennessee, 1994.

**John M. Haworth**, (2006) Assistant Professor, Psychology—Social and Behavioral Sciences. M.S., Augusta State University, 1994.

**Travis L. Hayes**, (2005) Instructor, Management—Business and Information Technologies. M.B.A., University of Tennessee at Chattanooga, 1993.

**Betsy K. Headrick**, (1983) Associate Professor, Information Systems—Business and Information Technologies. M.S., University of Tennessee at Chattanooga, 1992.

**Denise I. Frank Heinly**, (1979) Associate Professor, Art—Humanities and Fine Arts. M.A., University of Tennessee at Chattanooga, 1991; M.Ed., University of Florida, 1977.

**William J. Helseth**, (1980-83, 1992) Associate Professor/Coordinator, Art—Humanities and Fine Arts. M.S., Florida State University, 1976; M.F.A., Pennsylvania State University, 1973.

**Joel B. Henderson**, (1998) Associate Professor, English—Humanities and Fine Arts. M.S., Harding University, 1993.

**Alan D. Herweyer**, (1989) Associate Professor, Mathematics—Math and Sciences. M.A.T., Calvin College, 1985; M.S., Purdue University, 1973.

**Marian A. Higginbotham**, (1999) Associate Professor, Mathematics—Math and Sciences. M.Ed., Alabama State University, 1990.

**C. Bruce Hilbert**, (2000) Assistant Professor, Mathematics—Math and Sciences. M.Ed., University of Tennessee at Chattanooga, 2001.

**Sara J. Hill (Jackie)**, (1990) Associate Professor, Early Childhood Education—Social and Behavioral Sciences. M.Ed., University of Tennessee at Chattanooga, 1987.

**Stuart R. Hilton**, (1989) Associate Professor, Manufacturing Engineering Technology—Engineering Technologies. M.S., University of Tennessee at Chattanooga, 1994.

**Constance C. Hitchcock**, (1999) Associate Professor, Management—Business and Information Technologies. M.B.A., Vanderbilt University, 1987.

**Mary Lee Hopson**, (2002) Vocational Instructor, Licensed Practical Nursing—TN Technology Center. RN, Baroness Erlanger Hospital, 1980.

**S. Amanda Hyberger**, (2007) Assistant Professor, Music—Humanities and Fine Arts. D.M.A., University of Iowa, 2006.

**Linda Jarrett**, (2005) Instructor, Early Childhood Education—Social and Behavioral Sciences. M.Ed., Middle Tennessee State University, 1975.

**Alexis D. Jenkins**, (1988) Vocational Master Instructor, Medical Office Assisting—TN Technology Center. M. A., Tennessee Technological University, 1992.

**Diane P. Johnson**, (2000) Associate Professor, Nursing—Nursing/Allied Health. M.S., College of St. Francis, 1996.

**William A. Johnson**, (1990) Professor/Program Director, Dental Assisting & Hygiene—Nursing/Allied Health. D.M.D., University of Oregon Dental School, 1969.

**Debra S. Jones**, (1998) Associate Professor/Coordinator, Speech—Humanities and Fine Arts. M.S., Texas Christian University, 1978.

**James L. Jones**, (2004) Vocational Associate Instructor, Commercial Truck Driving—TN Technology Center. Certified Commercial Truck Driving License, State of Tennessee, 1990.

**Jimmy E. Jones**, (1996) Vocational Senior Instructor, Marine Engine Technology/Department Head, Transportation—TN Technology Center. A.A.S., Chattanooga State Technical Community College, 1995.

**Wayne C. Jones**, (1981) Professor, Electrical/Electronic Engineering Technology—Engineering Technologies. Ed.D, University of Tennessee, 1977.

**Patricia W. Kato**, (1980) Associate Professor, Writing—Humanities and Fine Arts. M.A., East Tennessee State University, 1980.

**Denis O. Kiely**, (2000) Assistant Professor, English—Humanities and Fine Arts. M.A., Western Kentucky University, 1983.

**Shirley A. Kilgore**, (1985) Associate Professor, Nursing—Nursing/Allied Health. M.S.N., University of Tennessee, 1986.

**Virginia M. Kilgore**, (1995) Vocational Associate Instructor, Cosmetology—TN Technology Center. Cosmetologist Instructor License, Tennessee State Board of Cosmetology, 1993.

**Michael D. Krogman**, (1999) Associate Professor, Philosophy—Social and Behavioral Sciences. Ph.D., University of Tennessee, 1998.

**Sara E. Kuhn**, (1980) Professor, English—Humanities and Fine Arts. Ed.D., University of Georgia, 1979.

**Richard K. Lamerand**, (1980-87, 1992) Associate Professor, Pre-Engineering—Engineering Technologies. M.S., University of Houston, 1977.

**Lori Lammert**, (2003) Assistant Professor, Spanish—Humanities and Fine Arts. M.A., Vanderbilt University, 2002.

**K. Labron Lawson**, (1989) Vocational Master Instructor, Collision Repair Technology—TN Technology Center. B.S., Tennessee Wesleyan College, 1997; ASE Certified; ICAR Certified, Unibody.

**Douglas M. Ledford**, (1997) Vocational Senior Instructor, Surgical Technology—TN Technology Center. Certified Surgical Technologist, 1984; B.S., Tennessee Temple University, 1981.

**Lisa Legg**, (1993) Associate Professor/Program Director, Radiation Therapy—Nursing/Allied Health. B.S., Covenant College, 1994.

**Zoila G. Leon**, (2006) Associate Instructor, L.P.N.—TN Technology Center. A.S., Southern Adventist University, 1980; R.N.

**Dorothy L. Lochridge**, (2005) Instructor, English—Humanities and Fine Arts. M.A., University of North Carolina at Greensboro, 1971.

**Marie P. Loisy**, (1999) Associate Professor, Nursing—Nursing/Allied Health. M.S., Michigan State University, 1997.

**Kathy L. Long**, (1988) Associate Professor, Social Sciences—Social and Behavioral Sciences. M.S., M.A., Florida State University, 1973, 1974.

**Sandra K. Lowery**, (1996) Associate Professor, Nursing—Nursing/Allied Health. M.S., Indiana University, 1978.

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**Judy L. Mabe**, (2000) Assistant Professor, Dental Hygiene—Nursing/Allied Health. M.Ed., University of Tennessee at Chattanooga, 1974.

**Warren C. Mackey**, (1976) Professor, History—Social and Behavioral Sciences. D.A., Middle Tennessee State University, 1980.

**Angie P. Maida**, (2002) Assistant Professor, Dental Hygiene—Nursing/Allied Health. M.Ed., University of Louisville, 1998.

**Teresa T. Marcus**, (1998) Associate Professor, Biology—Math and Sciences. M.S., University of Tennessee, 1974; TN Licensed Dietitian/Nutritionist; GA Licensed Dietitian.

**Michael Matthews**, (2007) Vocational Instructor, Massage Therapy—TN Technology Center. M.S., University of Tennessee 1975; Massage License, Tennessee Massage Licensure Board.

**Susie Jo Matthews**, (2005) Assistant Professor, Biology—Math and Sciences. D.V.M., University of Tennessee, 1985.

**Will E. McDonald**, (2004) Instructor, Mass Communications—Business and Information Technologies. M.A., Communications, Western Kentucky University, 1989.

**Jeffrey McEwen**, (1995) Associate Professor, Social Sciences, Social and Behavioral Sciences. M.A., University of Tennessee, 1995.

**Kathryn L. McMillan** (2007) Associate Professor/Program Director, Health Information Management—Nursing/Allied Health. M.E.d., Vanderbilt University, 1994.

**Stacie L. McPherson**, (2004) Instructor, Radiologic Technology—Allied Health. B.S., East Tennessee State University, 2002

**Jeffery S. Mendenhall**, (2003) Assistant Professor, Speech—Humanities and Fine Arts. M.A., Ball State University, 2001.

**Carolyn S. Miller**, (1989) Associate Professor, Reading—Humanities and Fine Arts. M.Ed., University of Tennessee at Chattanooga, 1976.

**Cheryl L. Miller**, (1988) Professor, Nursing—Nursing/Allied Health. Ed.D., University of Tennessee, 2001.

**Joann K. Miller**, (2008) Instructor, Health Information Management—Nursing/Allied Health. B.S., Ithaca College, 1986.

**Linda P. Miller**, (1981) Associate Professor, English—Humanities and Fine Arts. M.A., University of Tennessee at Chattanooga, 1990.

**Stuart B. Miller**, (1982) Vocational Master Instructor, Landscaping and Turf Management/Department Head, Occupational Technologies—TN Technology Center. Vocational Education, UCF, 1981; M.A.T., Rollins College, 1976.

**Christopher B. Mobley**, (2005) Assistant Professor, Political Science—Social and Behavioral Sciences. Ph.D., Purdue University, 1992.

**Evelyn M. Mobley**, (2007) Assistant Professor, Biology—Math and Sciences, Ph.D., University of Chicago, 2000.

**Christine Moniyung**, (1999) Associate Professor, Nursing—Nursing/Allied Health. M.S., Andrews University, 1997.

**M. Jeffrey Morris**, (1996) Associate Professor, Advertising Arts—Business and Information Technologies. M.F.A., University of Memphis, 2005.

**Roy H. Morris**, (1992) Vocational Associate Instructor, Automotive Technology—TN Technology Center. Master ASE Certified in eight automotive fields, GM Master Technician.

**Michelle R. Mould**, (2005) Instructor, Dental Hygiene—Nursing/Allied Health. B.S., University of Missouri, 1991.

**Samuel J. Nalley**, (1971) Professor, Physics—Math and Sciences. Ph.D., University of Tennessee, 1971.

**Lucilla A. Nash**, (2006) Instructor/Program Director, Human Services—Social and Behavioral Sciences. M.S.W., Atlanta University, 1989.

**Shirley F. Nelson**, (1990) Associate Professor, English—Humanities and Fine Arts. M.A., Middle Tennessee State University, 1978.

**Dean Alan Nichols**, (2001) Associate Professor, Music—Humanities and Fine Arts. D.M.A., University of Kentucky, 2000.

**Edward C. Nichols**, (1993) Professor/Coordinator, Mathematics—Math and Sciences. Ph.D., University of Tennessee, 1986.

**Patricia Ochoa**, (1998) Associate Professor, Physical Education—Social and Behavioral Sciences. Ph.D., University of Alabama, 1999.

**Merrill B. Parker**, (1976) Professor, Information Systems—Business and Information Technologies. Ph.D., Peabody College of Vanderbilt University, 1979.

**Barbara Y. Partridge**, (2003) Assistant Professor, Radiologic Technology—Nursing/Allied Health. B.S., Covenant College, 1997.

**Karen M. Payne**, (2004) Assistant Professor, Biology—Math and Sciences. D. C., Life University, 1997.

**Claire M. Peacock**, (1988) Associate Professor, Mathematics—Math and Sciences. M.Ed., University of Tennessee at Chattanooga, 1995

**Michiba L. Pendgergrass**, (2007) Associate Professor, Surgical Technology—TN Technology Center, Certificate, Surgical Technology, Chattanooga State Technical Community College, 2000.

**Brian M. Phillippi**, (2007) Vocational Associate Instructor, Computer Operations Technology—TN Technology Center M.Ed., University of Southern Mississippi, 1972..

**Janet E. Pickard**, (2002) Associate Professor, Information Systems—Business and Information Technologies. M.S., University of Tennessee at Chattanooga, 1988.

**Anita Polk-Conley**, (1989) Associate Professor, Mathematics—Math and Sciences. Ph.D., University of Texas at Austin, 2006.

**Larry Ponder**, (1979) Vocational Instructor, Welding Technology—TN Technology Center. Certified Combination Welder, 1976; Diploma, Chattanooga Area Vocational Technical School, 1976.

**Robin L. Popp**, (2005) Instructor, Psychology—Social and Behavioral Sciences. M.A., Lewis and Clark College, 1996.

**Robert E. Prytula**, (2005) Assistant Professor/Program Coordinator, Fire Science—Nursing and Allied Health. B.S., Eastern Kentucky University, 1995.

**Kathleen M. Puri**, (1992) Associate Professor, Nursing—Nursing/Allied Health. M.S.N., University of Connecticut, 1987.

**Azar D. Raiszadeh**, (1993) Professor, Mathematics—Math and Sciences. Ed.D., University of Tennessee, 1997.

**Margaret S. Ramsey**, (1988) Associate Professor, Mathematics—Math and Sciences. M.M., University of Tennessee, 1991.

**Paul A. Ray**, (1995) Associate Professor, Paralegal Studies—Business and Information Technologies. J.D., University of Arkansas School of Law, 1988.

**Ronald W. Reese**, (1983) Assistant Professor, Electrical/Electronic Engineering Technology—Engineering Technologies. B.S.E.E., University of Tennessee, 1969.

**Mitchell A. Rhea**, (2002) Associate Professor, Chemistry—Math and Sciences. Ph.D., University of Tennessee, 1990.

**Jeffrey L. Rinkel**, (1995) Associate Professor, Speech—Humanities and Fine Arts. M.A., University of Northern Iowa, 1982.

**Paul A. Robertson**, (1983, 1999) Associate Professor, Mathematics—Math and Sciences. M.M., University of Tennessee, 1994.

**Lori A. Robinson**, (2006) Instructor/Program Coordinator, Cardiovascular Program—Nursing/Allied Health. A.A.S., Chattanooga State Technical Community College, 1985. —

**Kathleen S. Rose**, (1996) Assistant Professor, Nursing—Nursing/Allied Health. M.S., University of Tennessee at Chattanooga, 1996.

**Leesa A. Ross**, (1996) Associate Professor, Nuclear Medicine Technology—Nursing/Allied Health. B.S., Covenant College, 1997; C.N.M.T.

**Timmy L. Ross**, (2006) Instructor, Physics—Math and Sciences. M.A., University of North Alabama, 1985.

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**McIver Rountree, Jr.**, (1987) Assistant Professor/Program Director, Respiratory Care—Nursing/Allied Health. B.S., Medical College of Georgia, 1977.

**April C. Royer**, (2005) Assistant Professor, Chemistry—. Ph.D., University of Alabama, 1999.

**Deborah J. Rudd**, (1987) Associate Professor, English— Humanities and Fine Arts. M.A., University of Tennessee at Chattanooga, 1990.

**Susan E. Ruta (Beth)**, (1987) Assistant Professor, Chemical Technology—Engineering Technologies. M.S., University of Tennessee at Chattanooga, 1986.

**George R. Ryan**, (1996) Associate Professor, Mathematics—Math and Sciences. M.S., California State University, 1986.

**Andrea Sanders**, (2003) Associate Professor, English— Humanities and Fine Arts. Ph.D., University of Chicago, 1996.

**Margery K. Sanders**, (1997) Associate Professor, Radiologic Technology—Nursing/Allied Health. M.B.A., University of Tennessee at Chattanooga, 1985.

**Rose N. Scalise**, (1997) Assistant Professor, Office Administration— Business and Information Technologies. B.S., University of Pittsburgh, 1974.

**Ann D. H. Schide**, (2000) Assistant Professor, Nursing—Nursing/Allied Health. M.S., University of Tennessee at Chattanooga, 2004.

**Marsha M. Schoonover**, (1983) Associate Professor, Mathematics—Math and Sciences. M.Ed., University of Tennessee at Chattanooga, 1981.

**Donna L. Seagle**, (1998) Associate Professor/ Psychology. Department Head— Social and Behavioral Sciences. M.A., Middle Tennessee State University, 1994.

**William W. Shifflett**, (1984) Associate Professor, Accounting— Business and Information Technologies. M.B.A., University of Tennessee at Chattanooga, 1983; Certified Financial Planner; C.P.A.

**Wade C. Silvey**, (2005) Vocational Senior Instructor, Machine Tool Technology—TN Technology Center. Machine Tool Certificate, Northwestern Technical College, 1989.

**Stephen K. Simmerman**, (2006) Assistant Professor, Graphic Design—Business and Information Technologies. M.F.A., Savannah College of Art and Design, 2002.

**Joyce Smith**, (1987) Professor, Mathematics—Math and Sciences. Ed.D., University of Tennessee at Chattanooga, 1997.

**Kimberly W. Smith**, (1997) Associate Professor, Physical Education— Social and Behavioral Sciences. M.S., University of Tennessee, 1988.

**Roy K. Sofield**, (1998) Professor/Coordinator, Biology—Math and Sciences. Ph.D., Rutgers University, 1983.

**Laqueta A. Soule**, (1991) Associate Professor, Court Reporting— Business and Information Technologies. B.S., University of Alabama, 1998.

**K. Edward Southeast**, (2006) Instructor, Management—Business and Information Technologies. M.B.A., Alabama A & M University, 1990.

**David Stanislawski**, (1994) Professor, Chemistry—Math and Sciences. Ph.D., University of Wisconsin at Madison, 1978.

**De'Lara Khalili Stephens**, (1997) Associate Professor, English— Humanities and Fine Arts. M.A., University of Tennessee at Chattanooga, 1997.

**William L. Stifler, Jr.**, (1992) Associate Professor, Writing— Humanities and Fine Arts. M.A., University of Tennessee at Chattanooga, 1991.

**Ken Storrs**, (1976) Associate Professor, History— Social and Behavioral Sciences. M.S., University of Tennessee, 1980.

**Erik G. Stubsten**, (1996) Associate Professor, Mathematics—Math and Sciences. M.Ed., University of Tennessee at Chattanooga, 2000.

**Lisa P. Swift**, (2001) Assistant Professor, English— Humanities and Fine Arts. M.A., East Tennessee State University, 1983.

**William M. Teem, IV**, (2005) Assistant Professor, English— Humanities and Fine Arts. M.A., University of Virginia, 1990.

**Katheryn A. Thompson**, (2007) Assistant Professor, Spanish—Humanities and Fine Arts. Ph.D., University of California, 1996.

**Casey Turner**, (2003) Vocational Associate Instructor, Auto Body—TN Technology Center. A.A.S., Chattanooga State Technical Community College, 1992.

**Theresa A. Underwood-Lemons**, (1995) Professor/Coordinator, Physical Sciences—Math and Sciences. Ph.D., University of Tennessee, 1990.

**Sam T. Valcaniant**, (2005) Instructor, Information Systems Technology—Business and Information Technologies. M.A., Nova University, 1991.

**Kathy Veal**, (1995) Vocational Instructor, Practical Nursing—TN Technology Center. B.S.N., East Tennessee State University, 2006.

**Margaret B. Venable**, (1981) Assistant Professor, Biology—Math and Sciences. M.S., Auburn University, 1976.

**Hugh W. Vines**, (1983) Vocational Senior Instructor, Industrial Electricity/Department Head, Industrial Technologies—TN Technology Center. A.G.E., Chattanooga State Technical Community College, 1991; Journeyman electrician, 1972.

**Vicki L. Vonschaaf**, (1989) Vocational Master Instructor, Practical Nursing—TN Technology Center. B.S., University of Tennessee at Chattanooga, 1981.

**Duane J. Walker**, (1999) Vocational Associate Instructor, Automotive Technology—TN Technology Center. Auto Mechanics Certificate, Athens Area Vocational School, 1967; ASE Certified Master Automotive Technician.

**James H. Walker**, (2005) Assistant Professor, Legal Assisting— Business and Information Technologies. J.D., University of Virginia School of Law, 1990.

**James V. Ware**, (2001) Coordinator/Assistant Professor, Engineering Technology/Mechanical Engineering Technology, Environmental and Emergency Technologies—M.S.E.M, University of Tennessee, Chattanooga, 2007.

**Laura P. Warren**, (1984) Associate Professor/ Program Director, Physical Therapist Assistant Program—Nursing/Allied Health. M.S., University of Tennessee, Memphis, 1996; Licensed Physical Therapist.

**Dorothy T. Weathersby**, (1981) Professor/ Coordinator, English— Humanities and Fine Arts. Ed.D., University of Tennessee, 1975.

**Charlotte G. Webb**, (2007) Instructor, Nursing—Nursing/Allied Health. B.S.N., University of Tennessee at Chattanooga, 2005.

**Jill H. Wentworth**, (2003) Vocational Instructor, Computer Operations—TN Technology Center. B.S., University of Tennessee Knoxville, 1981.

**Mary E. White (Libby)**, (1996) Associate Professor, Mathematics—Math and Sciences. M.S., University of Tennessee at Chattanooga, 1999.

**Susan N. White**, (2007) Assistant Professor, Mathematics—Math and Sciences. M.Ed., University of Tennessee at Chattanooga, 2000.

**Nateka N. Williams**, (2008) Associate Instructor, Cosmetology—TN Technology Center. Cosmetologist Instructor License, Tennessee State Board of Cosmetology, 2001.

**Mark W. Wood**, (1992) Associate Professor, Art— Humanities and Fine Arts. M.F.A., Yale University, 1987.

**James Wright**, (2004) Assistant Professor, Sociology— Social and Behavioral Sciences. M.S., University of Tennessee at Chattanooga, 1999.

**Jane M. Yantis**, (1984-86, 1988) Associate Professor, Biology—Math and Sciences. M.S., Cornell University, 1984.

**Dusty M. York**, (2003) Assistant Professor, Nuclear Medicine—Nursing/Allied Health. B.S., Medical College of Georgia, 2000.

**James R. Zimmer**, (1999) Associate Professor, Mathematics—Math and Sciences. M.S., Bob Jones University, 1977.

**Betty R. Zmaj**, (2004) Instructor, Nursing—Nursing/Allied Health. B.S.N., University of Wisconsin, 1974.

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