

Chattanooga State



Fire Science Technology

Your Guide

A National Leader in Technology

Chattanooga State

Community College

Fire Science Technology

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Fire Science Technology

Associate of Applied Science

Today's emergency workers are highly-trained professionals whose ultimate goal is the preservation of life and property. Because of the diversity and complexity of emergency service work, formal education is playing an increasingly important role in the emergency service field.

Students complete General Education and Technical Core courses and then complete courses in one or more of the three concentrations; Fire Suppression concentration, ESSA concentration, EMC concentration.

Note: Both general and technical courses offered through the Center for Distributed Education.

General Education Requirements

Course ID	Course Title	Hours
ENGL 1010	Composition I	3
SP 110	Public Speaking	3
PSY 101, SOC 110 or PO 110	Social Science Elective	3
	Math Elective	3
	Humanities Elective	3
BIOL, CHEM, PHYS, ASTR or ESC	Natural Science	4
		<u>19</u>

In addition to your concentration courses you must also show proficiency with computers. You may be required to complete a computer literacy course or proficiency exam prior to graduation.

Total program hours: 60

Fire Science Technology Center for Distributed Education

Two of the three concentrations (Fire Suppression, and Emergency Service Supervision & Administration) within the Emergency Service Technology Degree Program are available online.

The objectives of an online degree are twofold:

- To provide educational opportunities which meet the demanding schedules of emergency workers.
- To provide quality course work which addresses current issues in the emergency service field.

What is online or distributed education learning?

Online learning is a way of taking college-credit courses in a location other than the traditional college campus. These courses are designed to meet the demanding schedules of emergency service personnel.

In essence the student can take the classes at home as long as he/she has access to a reliable computer with internet capabilities. Assignments can be mailed, faxed or e-mailed to the instructor. Chat sessions and virtual blackboards are available in some of the courses.

Is online/distributed education learning easy?

Our goal is to provide an accessible quality education addressing current issues within the emergency service field. However, taking quality courses through the online format may not be for everyone. To succeed in this program, the student must have prior experience in the emergency service field and must be self-disciplined and motivated enough to overcome procrastination.

Contact Information

Division of Nursing / Allied Health
(423) 697-4728 or (423) 697-4450
Center for Distributed Education
1-800-207-8202

E-mail robert.prytula@chattanoogaastate.edu

FAX (423) 493-8771 (Allied Health)
(423) 697-4479 (Center for Distributed Ed.)

Mail Chattanooga State
Allied Health
4501 Amnicola Highway
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Web Page chattanoogaastate.edu
chattanoogaastate.edu/allied_health/emergsrvs/fstmain.html
For tuition and fee information, chattanoogaastate.edu/bursar



FI 221-Fire Administration I (3)

Organization and management of fire department. Focus on fire service leadership from the perspective of the company officer; study relationships with governmental agencies.

FI 222-Fire Administration II (3)

Organization and management of fire department. Budget administration, organization of divisions, relationships with outside agencies.

FI 230-Certified Firefighter II (3)

Credit given for completion of standards set for state or national advanced Firefighter II.

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, general safety, protective clothing and safety equipment.

FI 240-Emergency Service Instructor (3)

Credit given for state or national certification to NFPA 1041 Instructor level I.

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.

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.

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.

FI 270-Emergency Service Strategic Planning & Innovation (3)

Basic concepts of 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.

FI 280-Emergency Services Practicum (3)

Research paper on contemporary issues or problems within emergency service field; written report required; findings may be applied in work environment.

FI 299-Special Topics (1-3)

Topics of traditional and current interest in emergency service field; repeatable for credit.

Fire Suppression Concentration

The Fire Suppression concentration is designed for students preparing for a career in the emergency response field or for those employed in entry-level positions who desire additional training and education for improved job performance and advancement.

Required Courses

Course ID	Course Title	Hours
FI 111	Introduction to Emergency Services	3
FI 113	Fire Protection Systems	3
FI 114	Building Construction	3
FI 116	Firefighting Tactics and Strategy I	3
FI 124	Firefighting 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
		<u>27</u>
	Technical Electives	14
	(Technical elective hours must be selected from courses with the following prefixes: EA, FI, HZ, MG, OS.)	14
	General Education	19
	Suppression Concentration	27
	Technical Electives	<u>14</u>
		60

Emergency Service Supervision & Administration (ESSA) Concentration

The ESSA concentration is designed for students with experience in the emergency service field who desire additional education for improved job performance and/or advancement. Concentration courses focus on current supervision and administration issues within the emergency service field such as information management, administration, and strategic planning for emergency services.

Required Courses

Course ID	Course Title	Hours
FI 111	Introduction to Emergency Services	3
FI 113	Fire Protection Systems	3
FI 114	Building Construction	3
FI 221	Fire Administration I	3
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
		<u>27</u>

Emergency Service Supervision & Administration continued

Technical Electives	14
(Technical elective hours must be selected from courses with the following prefixes: EA, FI, HZ, MG, OS)	14
General Education	19
Supervision and Admin. Conc.	27
Technical Electives	14
	<u>60</u>

Students may transfer both Emergency Services and general education courses from other accredited institutions to Chattanooga State. National Fire Academy and federal courses listed in the American Council on Education (ACE) manual may also be applied toward the degree.

Emergency Medical Care (EMC) Concentration

The EMC concentration is designed for students with experience in the emergency medical/emergency services field who desire additional education for improved job performance and/or advancement. This concentration allows students who are currently state or nationally certified as paramedics to receive 32 hours of advanced standing credit. These students complete the technical fire science courses (9 hours) and the general education courses (19 hours) to earn the degree. General education courses can be transferred to Chattanooga State from an accredited institution.

Required Courses

Paramedic Certification (Students must be licensed in advance) 32 paramedic advanced standing hours will be the result of a student's completion of Chattanooga State's on-campus Paramedic Program or current state or national paramedic certification/licensure. Certification/ licensure is not available via distributed education.

Required Courses

Course ID	Course Title	Hours
FI 113	Fire Protection Systems	3
FI 114	Building Construction	3
FI 215	Fire Behavior and Combustion	<u>3</u>
		9
Advanced standing paramedic hours		32
	General Education	19
	Emergency Medical Care Conc.	9
	Advanced Standing	<u>32</u>
		<u>60</u>

Fire Science Course Descriptions

FI 111–Introduction to Emergency Services (3)

Emergency/non-emergency operations typically provided by municipal, volunteer, industrial emergency service organizations; historical perspectives, relevant statistics, current and future challenges, services and operations, and external agencies that regulate or impact emergency response.

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.

FI 114–Building Construction for the Fire Service (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.

FI 116–Firefighting Tactics and Strategy I (3)

Fire control techniques and attack strategies. Focus on residential fires; fire apparatus and equipment, forcible entry, ladder use, hose and hose stream application, extinguishing agents, ventilation, overhaul, and salvage.

FI 124–Firefighting Tactics and Strategy II (3)

Fire control techniques and attack strategies. Focus on commercial, industrial, and non residential fires; personnel and equipment distribution and use; hazard control. Prerequisite FI 116.

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.

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).

FI 148–Firefighter I (3)

Credit given for state or national certification to NFPA 1001 Firefighter I.

FI 215–Fire Behavior and Combustion (3)

Theories and fundamentals of how and why fires start, spread, and how they are controlled.

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.