

# Fire Science Technology

## PROGRAM DESCRIPTION



The Fire Science Technology program is designed to provide students with sound technical and academic experiences, enabling them to assume positions of responsibility as members of fire departments or as technical employees of industrial firms and insurance companies.

The first year of the program provides training in building construction, system design for detecting and eliminating fire hazards and trains students to reduce hazard through periodic inspections, remedial recommendations, and systematic follow-ups. The second year focuses on aspects of leadership, command, control, and education.

The ultimate goal is to assist the in-service student to develop the appropriate skills and knowledge both to further their ability as a front-line firefighter, but also to develop the skills to assume a leadership role in their community. Students who are not employed in a related field are highly encouraged to pursue a live-in position or other hands-on application of the curriculum.



Graduates of the associate in applied science degree program are prepared to assume positions of leadership within their department and to manage teams performing tasks in the community and on the fire ground. Graduates will be employed as industrial fire protection specialists, safety technicians, fire insurance inspectors, inspection bureau representatives, state fire inspectors, and municipal fire department employees, many of whom will earn their degree while employed in their area of specialty.

All Fire Science Technology students are strongly encouraged to take EMS123 (EMT) and to complete the Firefighter I/II certification. Both of these will be needed for employment by a fire department. Live-in students will complete FF I/II during the summer before school and should complete EMS 123 in their first semester.

Courses may also be taken individually or in clusters to meet National Fire Protection Association (NFPA) Certification for various professional standards.

## KEY LEARNING OBJECTIVES

Graduates of this program will be prepared to:

- Analyze and apply proactive fire prevention and control methods for safe and cost effective fire protection.
- Analyze and apply reactive fire and emergency scene operations for safe and cost effective fire protection.
- Examine and appraise principles of supervision and management necessary for effective leadership and administration in the fire/rescue service.
- Access, evaluate, and synthesize information independently using appropriate technology.

## PREREQUISITES

**AAS Degree & Certificate:** high school level Algebra I required. Geometry desired

**IMPORTANT NOTE:** EMCC does not currently conduct criminal background screening for applicants to Fire Science; however, individuals who have engaged in certain criminal activity could be denied access to gainful employment in their intended field. Additionally, licensing boards for certain professions may deny the individual the opportunity to sit for an examination if they have been convicted of certain crimes. Individuals who have engaged in any activity which may be considered abuse, neglect or exploitation of a minor or of an incapacitated or dependent adult, or who have been convicted of any crime involving fraud or dishonesty, or drugs, or for which imprisonment of one year or more has been imposed are urged to seek clarification from the Director of Admissions prior to an application submission.



## Programs of Study

Automotive  
Building Construction  
Business Management-Career Option  
Business Management-Transfer Option  
Business Management-Small Business  
Career Studies  
Computer Systems Technology  
Criminal Justice  
Culinary Arts  
Diesel, Truck & Heavy Equipment  
Digital Graphic Design  
Early Childhood Education  
Education-Career & Technical Ed  
Education-Elementary Ed  
Education-Secondary Ed  
Electrical and Automation  
Electricians Technology  
Emergency Medical Services  
Fine Woodworking & Cabinet Making  
Fire Science  
Human Services  
Liberal Studies  
Medical Assistant  
Medical Office-Coding Option  
Medical Office-Health Care Secretary  
Medical Radiography  
Nursing  
Outdoor Recreation & Tourism  
Plumbing  
Refrigeration, Air Conditioning & Heating  
Restaurant & Food Service Management  
Surgical Technology  
Trade & Technical Occupations  
Welding

## Admissions Office—EMCC

354 Hogan Road

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Toll-Free: 800-286-9357 (in Maine)

FAX: 207-974-4683

Email: [admissions@emcc.edu](mailto:admissions@emcc.edu)

[www.emcc.edu](http://www.emcc.edu)

## LIVE-IN STUDENT FIREFIGHTER EXTERNSHIP

The Live-In Firefighter Externship is offered in cooperation with various area fire departments. Through this externship, students are hired to live in area fire houses (rent free) in exchange for being "on call" during specific hours. Admission to the Live-In Student Firefighter Program is not guaranteed (space is limited) and depends upon a successful job interview and satisfactory completion of pre-service training. Early application for the limited Live-In positions is strongly encouraged. Live-In students have a greater persistence rate, with 85% reaching graduation within three years. They also have a greater success rate in classes because they apply what they learn on a daily basis. In addition, these students have access to members of their host departments who can tutor them on topics and skills.

## FIRE SCIENCE TECHNOLOGY Associate in Applied Science Degree

### FIRST SEMESTER

FIR 110	Fire Protection Systems	3
FIR 115	Fire Service Building Construction	3
ENG 101	College Composition	3
MAT 113	Technical Mathematics I	3
Restricted Elective: Social Science (100 level or higher)		3

### SECOND SEMESTER

FIR 152	Fire Inspection and Prevention	3
FIR 155	Fire Science Hydraulics	3
CHE 103	Chemistry for Emergency Responders	3
MAT 114	Technical Mathematics II or higher level math	3
Restricted Elective: Any Humanities/Social Science (100 level or higher)		3

### THIRD SEMESTER

FIR 202	Hazardous Incident Management	3
FIR 215	Fire Service Leadership	3
Elective	Fire Science/EMS*	3
ENG 215	Business and Technical Writing	3
PHY 108	Survey of Applied Physics	4

### FOURTH SEMESTER

FIR 250	Fire Ground Operations	3
FIR 260	Fire Administration	3
Electives	Fire Science/EMS*	3
Electives	Fire Science/EMS*	3
Restricted Elective: Communications/Social Sciences/Humanities (100 level or higher)		3

**TOTAL AAS DEGREE CREDITS** **61**

## FIRE SCIENCE TECHNOLOGY Certificate

### FIRST SEMESTER

FIR 110	Fire Protection Systems	3
FIR 115	Fire Service Building Construction	3
ENG 101	College Composition	3
MAT 113	Technical Mathematics I	3
Restricted Elective: Social Science (100 level or higher)		3

### SECOND SEMESTER

FIR 152	Fire Inspection and Prevention	3
FIR 155	Fire Science Hydraulics	3
Elective	Fire Science*	3
CHE 103	Chemistry for Emergency Responders	3
PHY 108	Survey of Applied Physics	4

**TOTAL CERTIFICATE CREDITS** **31**

\*Fire Science elective options, as well as the curriculum for the Live-In Student Externship track, can be found in the College Catalog on our website.

*STILL IN HIGH SCHOOL?* Concurrent enrollment agreements with many high schools and technical education centers are available. Information can be found on <http://www.emcc.edu/academics/programs/dual-enrollment/>.

## DID YOU KNOW?

**EMCC provides campus housing for over 260 students.**



**EMCC's Student Success Center offers tutoring services free of charge to our students.**



**EMCC's Athletic Department sponsors many on-campus intramural sports and recreational events.**

**EMCC students enjoy small class sizes, supportive faculty, transferable courses and leadership/engagement opportunities all for under \$4,000 per year**

*(most programs, based on 30 credit hours, in-state rate)*

**Campus tours are available.**

**Call 207-974-4857 or schedule an appointment through our website.**

**For more information or to apply online, visit us on the web at**

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**EMCC is an equal opportunity/affirmative action institution and employer. For more info, please call 207-974-4633.**