

Degree in Fire Science Technology

Program Details

The Fire Science Technology program is designed to provide career fire department personnel in the communities served by the College with a two-year career program whereby they may upgrade their educational levels and improve their effectiveness in the use of modern fire science techniques. Furthermore, the program will prepare students to begin a career in fire service.

The curriculum combines career and general education courses. In addition to firefighting, graduates of this program may find employment in private industry, or they may transfer to a college offering a Bachelor of Science Degree in Fire Science or Public Safety.

Graduates earn an Associate in Science Degree.

Program Outcomes

Upon completion of the program, graduates will be able to:

- Explain the history and basic principles of the fire service.
- Provide an in-depth analysis of the principles of fire control through the utilization of personnel, equipment, and extinguishing agents on the fire ground
- Demonstrate knowledge of the legal aspects of the fire service and emergency medical service.
- Demonstrate an understanding of the principles of fire development, cause, and prevention
- Apply theoretical knowledge of hydraulic principles to solving water supply problems for fire protection
- Understand the principles of supervision and management necessary for leadership and administration in the fire service
- Know the duties and responsibilities of Incident Command.
- Demonstrate effective communication and interpersonal skills with supervisors, peers and the public.
- Utilize knowledge of building construction principles, fire protection systems, and fire prevention codes to affect safer occupancies
- Demonstrate a working knowledge of fire investigation principles.
Identify hazardous materials, hazardous properties, and successful emergency scene operations.

Academic Map

Degree in Fire Science Technology

A minimum of 20 classes and 60 credits is required. At least 15 credits of your program must be taken at Massasoit. Note: Each course completed and passed can only fulfill one program requirement. The same course cannot be used to satisfy multiple program requirements.

Semester 1

3 Credits in FIRE 101
Principles of Emergency Services
3 Credits in FIRE 103
Fundamentals of Fire Prevention
3 Credits in either CHEM 131 or CHEM 151
(Survey of Chemistry or General Chemistry I)
3 Credits in ENGL 101
English Composition I
3 Credits in Math elective - Introduction to Statistics or higher

Semester 2

3 Credits in FIRE 107
Legal Aspects of Emergency Services
3 Credits in FIRE
Fire Science elective
3 Credits in PHYS 120
Science of Fire Behavior and Combustion
3 Credits in ENGL 102
English Composition II
3 Credits in PSYC 101
General Psychology

Semester 3

3 Credits in FIRE 211
Hazardous Material Incident Response
3 Credits in FIRE 213
Building Construction, Blueprint, and Plan Review
3 Credits in FIRE 301
Fire Company Officership - Tactics and Strategy
3 Credits in either GOVT 105 or GOVT 200
(American National Government or State and Local Government)
3 Credits in SOCI 104
Principles of Sociology

Semester 4

3 Credits in FIRE 111
Fire Investigation I
3 Credits in FIRE 205
Fire Service Safety and Survival
3 Credits in FIRE 206
Fire Protection Systems and Equipment
3 Credits in FIRE 208
Fire Hydraulics and Water Distribution Systems
3 Credits in SPCH 105
Speech Communication

This academic map is a suggested semester-by-semester guide to keep you on a clear path to program completion. Please note that some classes are offered only in certain semesters, have prerequisites, or minimum passing grades. Winter and/or Summer Session classes may be available for some classes. Your [academic advisor](#) will provide you with clear direction needed to stay on course and discuss scheduling options with you. Taking courses not reflected on this map may result in courses not counting toward the completion of your requirements.

Advisory Committee

This committee is comprised of fire service professionals, emergency management experts, educators, and community leaders who work collaboratively to ensure the program remains aligned with current industry standards, certification requirements, and public safety needs. By offering guidance on curriculum development, training practices, and emerging trends in fire science and emergency response, the committee plays a vital role in preparing students for successful careers in fire service and related fields. Together, we are committed to advancing excellence in fire science education and supporting the development of the next generation of public safety professionals.

- **Lance Benjamino**
Chief
Middleborough Fire Department
- **Elaine deCiutis**
Fire Science Technology Program Scholarship Representative
Stonington, CT
- **Richard Donovan**
Chief
Randolph Fire Department
- **Charles Dooty**
Chief
Canton Fire Department
- **Shawn Goyette**
Student
Fire Science Program – Massasoit Community College
- **David Ladd**
Director
Massachusetts Hazardous Material Response
- **Thomas Leonard**
Massachusetts Deputy Fire Marshal (retired)
Department of Fire Sciences
- **John Nuttall**
Chief
Abington Fire Department