

FIRE SCIENCE TECHNOLOGY (AAS)

Degree: Associate of Applied Science
Major: Fire Science Technology
Program Code: 1314

About This Major . . .

The Fire Science Technology program is designed to prepare students for entry level occupation in Structural fire service as well as provide training and skills for individuals already employed in the fire service that are interested in career advancement.

Job opportunities may be found in small or large municipal fire departments, fire protection districts, or industrial fire departments.

This program provides intensive instruction that satisfies the certification requirement to take the State Colorado Division of Fire Prevention and Control Firefighter I exam. The Academy's rigorous instruction includes lectures at CMU Tech/CMU by seasoned firefighters, and hands-on practice at state-of-the-art live burn facilities.

The Academy student will experience operations such as house burns, car fires, forcible entry, and many others. If you are looking for a career in firefighting, or if you simply want to serve as a volunteer firefighter, this is an excellent place to begin.

Students wishing to further their education with a four-year degree have the opportunity to do so through select university programs.

Program courses will be offered in two formats, traditional lecture and lab activities and as hybrid courses (partially face-to-face and partially online). The Fire Science curriculum is designed in accordance with the International Fire Service Training Association (IFSTA) standards.

For more information on what you can do with this major, visit CMU Tech's [Programs of Study page](#).

All CMU/CMU Tech associate graduates are expected to demonstrate proficiency in specialized knowledge/applied learning, quantitative fluency, communication fluency, critical thinking, personal and social responsibility, and information literacy. In addition to these campus-wide student learning outcomes, graduates of this major will be able to:

- Locate, gather and organize evidence and be able to demonstrate basic principles of determining area or origin, cause of fire, and application of sound investigative principles. (Specialized Knowledge)\ \
 - Apply Chemistry and Mathematics principles to solve fire protection problems and concepts and be able to demonstrate those methods to analyze and explain issues in quantitative terms. (Quantitative Fluency)
 - Demonstrate proficient formal and informal communication and writing skills that are professional in nature. (Communication Fluency)
 - Demonstrate the scope and application of principle skills, fire behavior, and core practices of firefighting strategies, practices and policies that guide the modern fire and emergency services profession, particularly in a dynamic and multicultural environment. (Critical Thinking)
- Reflect on and respond to ethical, social, civic, and/or environmental challenges at local, national, and/or global levels of firefighting.\ (Personal/Social Responsibility)\
 - Explain the administrative workings of a fire department including budget preparation, resource allocation, long-range planning, and fiscal projections.\ (Information Literacy)\

Requirements

Each section below contains details about the requirements for this program. Select a header to expand the information/requirements for that particular section of the program's requirements.

To print or save an overview of this program's information, including the program description, learning outcomes, requirements, suggested course sequencing (if applicable), and advising and graduation information, scroll to the bottom of the left-hand navigation menu and select "Print Options." This will give you the options to either "Send Page to Printer" or "Download PDF of This Page." The "Download PDF of This Page" option prepares a much more concise presentation of all program information. The PDF is also printable and may be preferable due to its brevity.

Institutional Degree Requirements

The following institutional degree requirements apply to all CMU and CMU Tech Associate of Applied Science (AAS) degrees. Specific programs may have different requirements that must be met in addition to institutional requirements.

- 60 semester hours minimum.
- Students must complete a minimum of 15 of the final 30 semester hours of credit at CMU/CMU Tech.
- 2.00 cumulative GPA or higher in all CMU/CMU Tech coursework.
- A course may only be used to fulfill one requirement for each degree/certificate.
- No more than six semester hours of independent study courses can be used toward the degree.
- Non-traditional credit, such as advanced placement, credit by examination, credit for prior learning, cooperative education and internships, cannot exceed 20 semester credit hours for an AAS degree.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- Capstone exit assessment/projects (e.g., Major Field Achievement Test) requirements are identified under Program-Specific Degree Requirements.
- The Catalog Year determines which program sheet and degree requirements a student must fulfill in order to graduate. Visit with your advisor or academic department to determine which catalog year and program requirements you should follow.
- See "Requirements for Undergraduate Degrees and Certificates" in the catalog for a complete list of graduation requirements.

Specific to this degree:

- 63 semester hours required for the AAS in Fire Science Technology
- Only the courses listed may be used as substitutes, if a student has already taken a required course. A substitution form approved by the department must be submitted to the Registrar's Office to allow the change.
 - FSTR 201 Instructional Methodology
 - FSTR 203 Fire Hydraulics and Water Supply

- FSTR 205 Fire Investigation I
- FSTR 252 Fire Investigation II
- FSWM 156 Firefighter Type I and Fire Line Leadership
- FSWM 244 Wildland Training for Structural Fire Fighters

Essential Learning Requirements

(16 semester hours)

See the current catalog for a list of courses that fulfill the requirements below. If a course is an Essential Learning option and a requirement for your major, you must use it to fulfill the major requirement and make a different selection for the Essential Learning requirement.

Code	Title	Semester Credit Hours
English		
ENGL 111	English Composition I-GTCO1	3
Select one of the following courses:		3
ENGL 112	English Composition II-GTCO2	
SPCH 101	Interpersonal Communication	
SPCH 102	Speechmaking	
Mathematics		
MATH 113	College Algebra-GTMA1 (or higher)	4
Other Essential Learning Core Courses		
Select one Social and Behavioral Sciences, Natural Sciences, Fine Arts, or Humanities course		3
Select one Social and Behavioral Sciences, Natural Sciences, Fine Arts, or Humanities course		3
Total Semester Credit Hours		16

Other Lower Division Requirements

Code	Title	Semester Credit Hours
Wellness Requirements		
KINE 100	Health and Wellness	1
KINA 127	Physical Conditioning	1
Total Semester Credit Hours		2

Program Specific Degree Requirements

Code	Title	Semester Credit Hours
EMTS 115	Emergency Medical Responder	3
FSTR 100	Fire Fighter I	9
FSTR 101	Fire Fighter II	3
FSTR 102	Principles of Emergency Service Suppression	3
FSTR 103	Fire Behavior and Combustion	3
FSTR 105	Building Construction for Fire Protection	3
FSTR 106	Fire Prevention	3
FSTR 107	Hazardous Materials Operations Level I	3
FSTR 109	Occupational Safety and Health for Fire	3
FSTR 151	Driver-Operator	3

FSTR 202	Strategy and Tactics	3
FSTR 206	Fire Officer Supervision and Leadership	3
FSTR 209	Fire Protection Systems	3
Total Semester Credit Hours		45

Suggested Course Plan

First Year

Fall Semester		Semester Credit Hours
FSTR 102	Principles of Emergency Service Suppression	3
FSTR 105	Building Construction for Fire Protection	3
FSTR 106	Fire Prevention	3
FSTR 109	Occupational Safety and Health for Fire	3
MATH 113	College Algebra-GTMA1	4
Semester Credit Hours		16

Spring Semester

FSTR 103	Fire Behavior and Combustion	3
FSTR 151	Driver-Operator	3
FSTR 209	Fire Protection Systems	3
EMTS 115	Emergency Medical Responder	3
ENGL 111	English Composition I-GTCO1	3
Semester Credit Hours		15

Second Year

Fall Semester

FSTR 100	Fire Fighter I	9
FSTR 107	Hazardous Materials Operations Level I	3
KINA 127	Physical Conditioning	1
Essential Learning Elective - Any Social Behavioral Sciences, Natural Sciences, Fine Art or Humanities		3
Semester Credit Hours		16

Spring Semester

FSTR 101	Fire Fighter II	3
FSTR 202	Strategy and Tactics	3
FSTR 206	Fire Officer Supervision and Leadership	3
KINE 100	Health and Wellness	1
Essential Learning Elective - Any Social Behavioral Sciences, Natural Sciences, Fine Art or Humanities		3

Choose one of the following:

ENGL 112	English Composition II-GTCO2	
SPCH 101	Interpersonal Communication	
SPCH 102	Speechmaking	
Semester Credit Hours		16

Total Semester Credit Hours

63

Advising and Graduation

Advising Process and DegreeWorks

Documentation on the pages related to this program is intended for informational purposes to help determine what courses and associated requirements are needed to earn a degree. The suggested course sequencing outlines how students could finish degree requirements. Some courses are critical to complete in specific semesters, while others may be moved around. Meeting with an academic advisor is essential in planning courses and altering the suggested course sequencing. It is ultimately the student's responsibility to understand and fulfill the requirements for their intended degree(s).

DegreeWorks is an online degree audit tool available in MAVzone. It is the official record used by the Registrar's Office to evaluate progress towards a degree and determine eligibility for graduation. Students are

responsible for reviewing their DegreeWorks audit on a regular basis and should discuss questions or concerns with their advisor or academic department head. Discrepancies in requirements should be reported to the Registrar's Office.

Graduation Process

Students must complete the following in the first two months of the semester prior to completing their degree requirements:

- Review their DegreeWorks audit and create a plan that outlines how unmet requirements will be met in the final semester.
- Meet with their advisor and modify their plan as needed. The advisor must approve the final plan.
- Submit the "Intent to Graduate" form to the Registrar's Office to officially declare the intended graduation date and commencement ceremony plans.
- Register for all needed courses and complete all requirements for each degree sought.

Submission deadlines and commencement details can be found on the [Graduation](#) web page.

If a student's petition for graduation is denied, it will be their responsibility to apply for graduation in a subsequent semester. A student's "Intent to Graduate" does not automatically move to a later graduation date.