FIRE SCIENCE TECHNOLOGY WITH NFPA CERTIFICATIONS (AAS)

Overview

Degree: Associate of Applied Science
Major: Fire Science Technology with NFPA Certifications
Program Code: 1407

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. The student must hold a current National Fire Protection Association (NFPA) Firefighter I Certification and a current NFPA HazMat Certification as admission requirements.

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

Specific Requirements of this Program:

- The student must hold a current National Fire Protection Association (NFPA) Firefighter I Certification and a current NFPA HazMat Certification for entry into this program. Other NFPA Certifications are optional. Copies of all Certifications must be on file in the Office of the Registrar prior to enrollment in the program.

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:

1. 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)\ \
2. 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)
3. Demonstrate proficient formal and informal communication and writing skills that are professional in nature. (Communication Fluency)
4. 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)
5. Reflect on and respond to ethical, social, civic, and/or environmental challenges at local, national, and/or global levels of firefighting.\ (Personal/Social Responsibility)\
6. Explain the administrative workings of a fire department including budget preparation, resource allocation, long-range planning, and fiscal projections.\ (Information Literacy)\

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.

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 with NFPA Certifications.
- The student must hold a current National Fire Protection Association (NFPA) Firefighter I Certification and a current NFPA HazMat Certification. Other NFPA Certifications are optional and may count toward the degree.
- Copies of all Certifications used toward this degree must be on file in the Office of the Registrar prior to enrollment in the program.
- Credit granted for NFPA Certifications applies only to Fire Science Technology programs.
- Students may earn only the Fire Science Technology with NFPA Certifications AAS or the Fire Science Technology AAS.
- 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 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]	1
Total Semester Credit Hours		**2**

[1] KINA 127 will be satisfied by the NFPA Firefighter I Certification, which is required for admission to the program.

Program Specific Degree Requirements

(45 semester hours)

Code	Title	Semester Credit Hours
Required Courses and Certifications		
NFPA Firefighter I Certification [1,2]		9
NFPA HazMat Awareness/Operations Certification [1,2]		3
EMTS 115	Emergency Medical Responder	3
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
FSTR 201	Instructional Methodology	3
Other Requirements		
All categories below must be completed.		
Firefighter II - Complete one of the following:		*3*
NFPA Firefighter II Certification [1,3]		
FSTR 101	Fire Fighter II	
Fire Behavior - Complete one of the following:		*3*
NFPA Fire Behavior Certification [1,3]		
FSTR 103	Fire Behavior and Combustion	
Driver Operator - Complete one of the following:		*3*
NFPA Driver Operator Certification [1,3]		
FSTR 151	Driver-Operator	
Strategy and Tactics - Complete one of the following:		*3*
NFPA Strategy and Tactics Certification [1,3]		
FSTR 202	Strategy and Tactics	
Fire Officer I - Complete one of the following:		*3*
NFPA Fire Officer I Certification [1,3]		

FSTR 206	Fire Officer Supervision and Leadership	
Total Semester Credit Hours		**45**

[1] Credit granted for NFPA Certifications applies only to Fire Science Technology programs.

[2] NFPA Firefighter I Certification and NFPA HazMat Awareness/ Operations Certification are required for admission to the program and will grant credit towards hours needed for the degree. The NFPA Firefighter I Certification also satisfies the KINA 127 requirement.

[3] This Certification will grant credit towards hours needed for the degree.

Suggested Course Plan

Based upon the NFPA Certifications a student brings to the program, the below Plan of Study may need adjusted. Please see the Program Director to discuss the student's specific plan to earn the degree.

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 151	Driver-Operator	3
MATH 113	College Algebra-GTMA1	4
	Semester Credit Hours	**16**
Spring Semester		
FSTR 103	Fire Behavior and Combustion	3
FSTR 109	Occupational Safety and Health for Fire	3
EMTS 115	Emergency Medical Responder	3
ENGL 111	English Composition I-GTCO1	3
FSTR 201	Instructional Methodology	3
	Semester Credit Hours	**15**
Second Year		
Fall Semester		
Essential Learning Elective - Any Social Behavioral Sciences, Natural Sciences, Fine Art or Humanities		3
See Advisor for Specific Required Courses		13
	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:		3
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.