

# FIRE SERVICE

## ASSOCIATE OF SCIENCE (AS) - 60 CREDITS

### About this program

The Fire Service program provides an opportunity for students to obtain basic and advanced instruction in firefighting techniques, fire prevention, rescue and management of fire services. This degree also provides instruction to become involved in all phases of the decision-making process, from entry level through company officer level, focusing on improving productivity and safety. For those who have completed a local fire academy, the embedded 16-credit fire service preparation certificate can be brought in via credit for prior learning.

### Program outcomes

1. List the major organizations that provide emergency response service and how they interrelate.
2. Describe building construction as it relates to firefighter safety, buildings codes, fire prevention, code inspection, firefighting strategy and tactics.
3. Identify the different types and components of fire suppression systems.
4. Define laws, rules, regulations, ordinances and codes as they relate to emergency services.
5. Explain concepts of risk management and mitigation as they pertain to emergency services.
6. Summarize the elements of public water supply systems as they relate to fire protections systems.
7. Safely respond to emergency incidents.
8. Demonstrate proper use of fire department communication equipment.
9. Demonstrate proper ventilation techniques.
10. Demonstrate techniques for rescuing individuals from vehicles, collapsed structures and confined spaces.
11. Demonstrate proper uses of personal protective equipment, including a self-contained breathing apparatus.
12. Perform decontamination techniques for emergency personnel, victims and equipment.
13. Demonstrate basic lifesaving skills, including CPR, bleeding and shock control, response to breathing difficulties, splinting fractures and dislocations, and assessment of medical emergencies.
14. Employ proper procedures during a commercial inspection.

### Curriculum overview

Crds	Requirement type
52	Required courses
8	Restricted electives in course types
60	<b>Total</b>

**Developmental courses note:** A student may be required to enroll in developmental courses in reading, writing and math. A student's scores on the Accuplacer assessment will determine enrollment in developmental courses. The purpose of developmental courses is to prepare students for the demands of a college-level curriculum. *Credits may vary.*

**Accreditation:** Minnesota State Community and Technical College is accredited by the Higher Learning Commission, a regional accreditation agency recognized by the U.S. Department of Education. The Higher Learning Commission 230 South LaSalle Street, Suite 7-500 Chicago, IL 60604-1411



# Curriculum requirement details

## Required courses

Course	Crds
CHEM1100 - Fundamental Concepts of Chemistry .....	3
ENGL1101 - College Writing .....	3
ENGL1215 - Writing for the Workplace .....	3
FIRE1110 - Firefighter I .....	1
FIRE1111 - Firefighter Skills I .....	2
FIRE1114 - Firefighter II .....	2
FIRE1115 - Firefighter Skills II .....	2
FIRE1150 - HazMat Operational .....	3
FIRE1181 - Building Construction for Fire Protection .....	2
FIRE2021 - Fire and Emergency Services Administration .....	2
FIRE2030 - Fire Instructor I .....	2
FIRE2041 - Fire Protection Systems .....	2
FIRE2051 - Fire Prevention .....	2
FIRE2060 - Strategy and Tactics .....	2
FIRE2081 - Fire Service Leadership and Management ...	2
HLTH2215 - EMT Basic .....	6
MATH1101 - Mathematical Reasoning .....	4
PHIL1200 - Applied and Professional Ethics .....	3
POLS1130 - State and Local Government .....	3
PSYC2800 - Psychology of Health and Resiliency .....	3

## Other requirements or restricted electives

**8 credits from these Course Types:**

- General Education w/MnTC Goals

## Course summaries

**CHEM1100 - Fundamental Concepts of Chemistry** ..... (3 credits)  
 Meets MnTC Goal Areas 2 and 3. Course deals with substances, their structures and properties, the changes they undergo and the laws that govern those changes. Intended for prospective elementary teachers, non-science majors and those who need background for General Chemistry. This course includes a lab.

**Prerequisites:**

- MATH0095 or placement by assessment

**ENGL1101 - College Writing** ..... (3 credits)  
 Meets MnTC Goal Area 1. This is an introductory course designed to prepare students for later college and career writing through a process approach with particular emphasis on revision. Students consider purpose and audience as they read, discuss and refine their work to develop confidence in their writing and communication skills.

**Prerequisites:**

- ELL1085
- ENGL0097
- or placement in College Level English.

**ENGL1215 - Writing for the Workplace** ..... (3 credits)  
 Meets MnTC Goal Area 1. This composition course focuses on writing and designing professional and technical documents, including print and non-print correspondence, descriptions, instructions, reports and proposals, along with promotional material. Analysis, critical thinking and synthesis of sources will be covered, along with the development of presentation skills. Coursework also includes a formally documented, multi-source professional project. This course builds on the foundations of College Writing and provides students with additional opportunities to develop and refine their writing through a process approach.

**Prerequisites:**

- ENGL1101

**FIRE1110 - Firefighter I** ..... (1 credits)  
 This course covers the objectives of the Minnesota Fire Service Certification Board for certification as a Firefighter I. The MFSCB objectives are based on National Fire Protection Association 1001: Standard for Fire Fighter Professional Qualifications. This will prepare the student to function at or above the minimum level of training for entry into a fire protection career field.

**Corequisites:**

- FIRE1111

**FIRE1111 - Firefighter Skills I** ..... (2 credits)  
 This course covers the objectives of the Minnesota Fire Service Certification Board for certification as a Firefighter I. The MFSCB objectives are based on National Fire Protection Association 1001 Standard for Fire Fighter Professional Qualifications. This will prepare the student to function at the minimum level of training for entry into a fire protection career field.

**FIRE1114 - Firefighter II** ..... (2 credits)  
 This course covers the objectives of the Minnesota Fire Service Certification Board for certification as a Firefighter II. The MFSCB objectives are based on National Fire Protection Association 1001: Standard for Fire Fighter Professional Qualifications. This will prepare the student to function at or above the minimum level of training for entry into a fire protection career field.

**Prerequisites:**

- FIRE1110

**Corequisites:**

- FIRE1115

**FIRE1115 - Firefighter Skills II** ..... (2 credits)

This course covers the objectives of the Minnesota Fire Service Certification Board for certification as a Firefighter II. The MFSCB objectives are based on National Fire Protection Association 1001: Standard for Fire Fighter Professional Qualifications. This course will prepare the student to function at or above the minimum level of training for entry into a fire protection career field.

**Prerequisites:**

- FIRE1111

**FIRE1150 - HazMat Operational** ..... (3 credits)

This course is designed to teach the necessary skills to protect yourself, your fellow responder and the public from exposure in a hazardous materials incident. The course meets the requirements of the OSHA (Occupational Safety and Health Administration) 1910.120 for the First Responder Operational level. The student will learn how to recognize and identify the presence of hazardous materials, the proper protective clothing to use, how to decontaminate properly, how to establish an Incident Command System and the proper standard operating procedures to maintain safety at the incident scene. The course follows the NFPA (National Fire Protection Association) Standard 472 requirements for the First Responder Operational level.

**FIRE1181 - Building Construction for Fire Protection** ..... (2 credits)

This course provides the components of building construction related to firefighter and life safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, pre-planning fire operations and operating at emergencies.

**FIRE2021 - Fire and Emergency Services Administration** ..... (2 credits)

This course introduces students to the organization and management of a fire and emergency services department and the relationship of government agencies to the fire service. Emphasis is placed on fire and emergency service, ethics and leadership from the perspective of the company officer as described in the National Fire Protection Association's (NFPA) 1021 Fire Officer Professional Qualifications for State Certification for Fire Officer I and Fire Officer II.

**FIRE2030 - Fire Instructor I** ..... (2 credits)

This course introduces students to the various objectives of the National Fire Protection Association (NFPA) 1041 Fire Service Instructor Professional Qualifications 2009 Edition for state certification for Fire Instructor I. This will prepare the student to function at the minimum level of training for a fire service instructor.

**FIRE2041 - Fire Protection Systems** ..... (2 credits)

This course provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers.

**FIRE2051 - Fire Prevention** ..... (2 credits)

This course provides fundamental knowledge relating to the field of fire prevention. Topics include history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use and application of codes and standards; plans review; fire inspections; fire and life safety education; and fire investigation.

**FIRE2060 - Strategy and Tactics** ..... (2 credits)

This course provides the principles of fire ground control through utilization of personnel, equipment and extinguishing agents.

**FIRE2081 - Fire Service Leadership and Management** ..... (2 credits)

This course will explore the skills necessary to function as a supervisor within a tight-knit, family-like setting. Topics will include motivating employees; group dynamics; managing change; organizational behavior; organizational culture; performance evaluations; leadership theories; group cohesiveness; generational considerations; and personal leadership styles.

**HLTH2215 - EMT Basic** ..... (6 credits)

This course follows the current National Standard Curriculum and will include all skills and classroom information necessary to provide emergency care at the basic life support level. Modules presented include preparation of the EMT-B, airway, patient assessment (medical and trauma), medical/behavioral emergencies and OB/GYN, trauma, infants and children, ambulance operations and interventions (medications and semi-automatic defibrillation). Upon successful completion of the EMT-B course, the student will be eligible to take the state/national registry computer and practical examinations.

**MATH1101 - Mathematical Reasoning** ..... (4 credits)

Meets MnTC Goal Areas 2 and 4. This course will introduce you to mathematical approaches to question asking, understanding, problem solving and presentation. Students will apply mathematical principles to varied disciplines including an exploration of a variety of social and global issues. Students will experience mathematics as a creative and evolving discipline. Practice in these areas may include problems involving sequences, methods of counting, probability, logic, statistics, finance, general problem solving and other topics. This course is not intended to prepare students for any subsequent course. It provides an alternative pathway to completing a college-level liberal arts mathematics course and is not intended for science, technology, engineering or math (STEM) students. Prerequisites: A grade of C or better in MATH 0095 or appropriate score on the math placement exam.

**Prerequisites:**

- Completion of MATH 0095 with a grade of C or higher OR placement into college-level Math.

**PHIL1200 - Applied and Professional Ethics** ..... (3 credits)  
Meets MnTC Goal Areas 2 and 9. In this course students will explore ethical issues that arise in professional settings including business, medical and technical settings. The course will also look at the philosophical underpinnings of current professional policies and how philosophy can offer insights that can enhance and deepen such policies.

**POLS1130 - State and Local Government** ..... (3 credits)  
Meets MnTC Goal Areas 5 and 9. This course provides an analysis of the organization, procedure and functions of state and local governments and their relationship with the national government.

**PSYC2800 - Psychology of Health and Resiliency** ..... (3 credits)  
Meets MnTC Goal Area 5. This course studies the interaction of psychology and health, including how to attain mental and physical health through thoughts, emotions and behavior. Students will explore concepts such as stress, resiliency, personality, happiness, purpose and work-life balance. This course is beneficial for students across career fields such as education, fire, health and law enforcement.



# FIRE SERVICE

## ASSOCIATE OF SCIENCE (AS) - 60 CREDITS

### Program Plan — "Fire Service - AS"

Locations: Online

#### 1st Fall Term (16 credits)

---

##### Courses

Course	Crds
FIRE1110 - Firefighter I .....	1
FIRE1111 - Firefighter Skills I .....	2
FIRE1114 - Firefighter II .....	2
FIRE1115 - Firefighter Skills II .....	2
FIRE1150 - HazMat Operational .....	3
HLTH2215 - EMT Basic .....	6

#### 1st Spring Term (13 credits)

---

##### Courses

Course	Crds
ENGL1101 - College Writing .....	3
FIRE1181 - Building Construction for Fire Protection .....	2
FIRE2021 - Fire and Emergency Services Administration .....	2
PHIL1200 - Applied and Professional Ethics .....	3
POLS1130 - State and Local Government .....	3

#### 2nd Fall Term (13 credits)

---

##### Courses

Course	Crds
FIRE2030 - Fire Instructor I .....	2
FIRE2041 - Fire Protection Systems .....	2
FIRE2051 - Fire Prevention .....	2
MATH1101 - Mathematical Reasoning .....	4
PSYC2800 - Psychology of Health and Resiliency .....	3

#### 2nd Spring Term (18 credits)

---

##### Courses

Course	Crds
CHEM1100 - Fundamental Concepts of Chemistry .....	3
ENGL1215 - Writing for the Workplace .....	3
FIRE2060 - Strategy and Tactics .....	2
FIRE2081 - Fire Service Leadership and Management ....	2

#### 8 credits in one or more of the following:

General Education w/MnTC Goals

---