

FIRE TECHNOLOGY (503)

503-112 - Advanced Firefighting

Explores advanced firefighting skills, including rapid intervention and firefighter self-survival and rescue. Fulfills job performance requirements for Wisconsin Firefighter 2 certification eligibility.

3 Credit hours

18 Lecture hours

72 Lab hours

503-130 - Fire Protection Internship

This course provides students with an immersive, hands-on experience in a professional fire department setting. Over the course of 216 field hours, students will apply classroom knowledge to real-world situations, performing routine and emergency tasks under the supervision of experienced fire service personnel. The internship emphasizes safety, teamwork, and professional conduct while offering opportunities to participate in station operations, apparatus maintenance, and emergency response activities. Students will gain practical insight into fire department structure, policies, and community service responsibilities, preparing them for successful careers as Firefighters. Reflection and evaluation throughout the experience will help students assess their growth, competency, and readiness for the demands of the fire service profession. This course is about applying your classroom knowledge and skills in a real-world fire department setting through hands-on experience. It ties to previous courses by building on foundational firefighting principles, safety standards, and emergency medical training, and it connects to future courses by preparing you for advanced certifications and professional practice as a Firefighter. (Prerequisites: 503-151 Fire Prevention; Concurrent enrollment in all Semester 4 503-xxx courses).

3 Credit hours

216 Other hours

503-142 - Fire Fighting Principles

Describes basic fire behavior, techniques used to control structural and related fire emergencies, and life safety practices. Students perform all practical evolutions necessary to control and extinguish fires and otherwise meet all requirements for Firefighter I certification with the State of Wisconsin. (Prerequisites: 503-189 Introduction to Firefighting; Concurrent enrollment in all Semester 2 503-xxx courses)

4 Credit hours

36 Lecture hours

72 Lab hours

503-151 - Fire Prevention

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. (Prerequisites: 503-142 Fire Fighting Principles; Concurrent enrollment in 503-154 Hazardous Materials Chemistry)

4 Credit hours

72 Lecture hours

503-153 - HazMat Awareness and Operations

Examines characteristics relating to hazardous materials including problems of recognition and mitigation. Prepares students to Hazardous Materials Technician Level. (Prerequisites: Completion of or concurrent enrollment in 531-100 EMR/EMT 1; Concurrent enrollment in all Semester 1 503-xxx courses)

1 Credit hours

9 Lecture hours

18 Lab hours

503-154 - Hazardous Materials Chemistry

This course provides basic chemistry relating to the categories of hazardous materials including recognition, identification, reactivity, and health hazards encountered by emergency services. (Prerequisites: 503-142 Fire Fighting Principles; Concurrent enrollment in 503-151 Fire Prevention)

2 Credit hours

36 Lecture hours

503-156 - Strategies, Tactics, and Incident Management

This course provides the principles of fire ground control through utilization of personnel, equipment, and extinguishing agents. (Prerequisites: 503-151 Fire Prevention; Concurrent enrollment in all Semester 4 503-xxx courses)

4 Credit hours

72 Lecture hours

503-157 - Fire Investigation

This course is intended to provide the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire setter, and types of fire causes. (Prerequisites: 503-151 Fire Prevention; Concurrent enrollment in all Semester 4 503-xxx courses)

3 Credit hours

54 Lecture hours

503-189 - Introduction to Firefighting

This course introduces the student 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. (Prerequisites: Completion of or concurrent enrollment in 531-100 EMR/EMT 1; Concurrent enrollment in all Semester 1 503-xxx courses)

2 Credit hours

18 Lecture hours

36 Lab hours

503-190 - Fire Safety and Survival

This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout emergency services. (Prerequisites: Completion of or concurrent enrollment in 531-100 EMR/EMT 1; Concurrent enrollment in all Semester 1 503-xxx courses)

3 Credit hours

54 Lecture hours

503-194 - Fire Protection Hydraulics

This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems.

(Prerequisites: 503-151 Fire Prevention; Concurrent enrollment in all Semester 4 503-xxx courses)

3 Credit hours

36 Lecture hours

36 Lab hours

503-195 - Fire Behavior and Combustion

This course explores the theories and fundamentals of how and why fires start, spread, and are controlled. (Prerequisites: Completion of or concurrent enrollment in 531-100 EMR/EMT 1; Concurrent enrollment in all Semester 1 503-xxx courses)

3 Credit hours

54 Lecture hours