

# FIRE TECHNOLOGY (503)

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## 503-108

**Credits:** 4

The basic principles of structural design, masonry, frame, veneer, structural steel and reinforced construction are studied, with fire ordinances that apply during construction.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

## 503-109

**Credits:** 3

This course provides an introduction to the Hazardous materials problem by presenting the foundation needed to go further in the study of hazardous materials, such as "hands on" courses and incident-command courses. The chemistry presented in this course is designed to be the minimum a firefighter will need to understand and recognize in each hazard class. In general, each hazard class shows what a firefighter can expect in fire and non-fire situations.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

## 503-113

**Credits:** 3

This course is designed to give the student an over view of such supervisory skills as leadership and interpersonal skills, planning, staffing, organizing, and control at the first-time supervision level. The duties and responsibilities of supervisors, the role of supervision in an organization and making the transition to supervisor are also included.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

## 503-115

**Credits:** 3

This is a study of the properties, derivations, and uses of explosives and other dangerous chemicals such as flammable liquids, flammable solids, oxidizing materials, corrosive liquids and solids, compressed gasses, radioactive materials, poisons and their modes of transportation and storage. The procedures as to dealing with these chemicals on the foreground are also studied.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

## 503-117

**Credits:** 4

This course discusses the organization and function of fire prevention and fire protection systems. Topics include inspection, surveying and mapping procedures, recommendations for correction of fire hazards, engineering as a solution to fire hazards, code enforcement at the federal, state, and local levels, public relations as affected by fire prevention, portable fire extinguisher equipment, sprinkler systems, standpipe systems, protection systems for special hazards, and fire alarm and protection systems. Students will visit local facilities to make mock inspections and to see how fire protection equipment and systems work in order that critical appraisals can be made.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

## 503-118

**Credits:** 3

Fire fighting problems are presented that are commonly encountered by the firefighter at the company level. Fundamental strategy and methods of attack employed for each fire problem presented are thoroughly reviewed.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

## 503-122

**Credits:** 3

This course is designed to give the student a basic knowledge of hydraulics relative to the fire service field. The theoretical aspects as well as the practical fire ground approach is studied.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

## 503-125 Emergency Medical Technician Fundamentals

**Credits:** 2

This 2 credit, 8 week course covers the basics of the Emergency Medical Technician-Basic certification course to include CPR, airways, anatomy, hazmat response requirements, lifting and moving patients, incident command, and other technical information. It is the first part of a two course system to prepare students for national certification testing for EMT-Basic.

**Aid Code:** 10 - Associate Degree.

**Pre-requisites:** (COMPASS Pre-Algebra Skills, 044 or ACT Math, 17 or ASSET Numerical Skills, 40 or Test Waived-College Degree or 834-109 or 834-109 or 804-107 or (AccuPlacer Arithmetic, 089 or AccuPlacer Arithmetic, 065 and AccuPlacer Elem Algebra, 030)) and (COMPASS Writing Skills, 070 or ACT English, 18 or ASSET Writing Skills, 44 or AccuPlacer Sentence Skills, 083 or Test Waived-College Degree or 851-782 or 851-782 or 851-783 or 831-103 or 831-103 or 801-195) and (COMPASS Reading Skills, 073 or ACT Reading, 16 or ASSET Reading Skills, 39 or AccuPlacer Reading Comp, 076 or Test Waived-College Degree or 838-104 or 838-104 or 801-196 or 801-198 or 804-133 or 806-110 or 806-112 or 806-118 or 806-134 or 806-139 or 806-154 or 806-177 or 806-186 or 806-194 or 806-199 or 809-103 or 809-166 or 809-172 or 809-188 or 809-195 or 809-143 or 809-196 or 809-198 or 809-199)

Complete Course Listing

## 503-126

**Credits:** 3

The scope and functions of administrative management personnel in the fire department are studied. Discussions include fire service role in the community, selection, training and advancement, line and staff functions, and developing and conducting short courses on fire protection subjects.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

### 503-128 Emergency Medical Technician Applications

**Credits:** 3

This course is an extension of, and completion of, the EMT Fundamental course. This course covers the bulk of the Emergency Medical Technician-Basic certification course to include the handling of cervical and spine injuries, burn injuries, heart and breathing related problems, shock, and other trauma injuries. This course includes several lab days to practice and perfect skills, clinical time, and extensive hands-on activities. This course prepares students for national certification testing for EMT-Basic. Admittance into this course must be within 2 years of completing Course # 503-125, EMT Fundamentals.

**Aid Code:** 10 - Associate Degree.

**Pre-requisites:** (503-125)

Complete Course Listing

### 503-135

**Credits:** 3

Problems and techniques of fire and arson investigation are studied with emphasis on the application and assistance of various aids to the investigation.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

### 503-139

**Credits:** 3

Provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/ service; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; and fire service nomenclature.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

### 503-142

**Credits:** 4

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.

**Aid Code:** 10 - Associate Degree.

**Co-requisites:** (503-153)

Complete Course Listing

### 503-143 Building Construction for Fire Protection

**Credits:** 3

Provides the components of building construction that relate to fire and life safety.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

### 503-144

**Credits:** 3

This course is designed to allow a student to research and dissect a problem area in Fire Science.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

### 503-146

**Credits:** 2

This course is designed to allow a student to research and dissect a second problem area in Fire Science.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

### 503-147

**Credits:** 4

Provides information relating to the features of design and operation of fire detection and suppression systems.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

### 503-148

**Credits:** 3

This course allows the student to make knowledgeable decisions regarding fire ground tactics both from a battalion and company level, and provides insight into unusual circumstances often encountered in the fire service. The student will also learn the procedures used in the development of disaster planning and the relationship between various local, state, and federal agencies from an administrative viewpoint.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

### 503-150

**Credits:** 3

Students need to understand how officers and personnel units work together to manage firefighters. This course presents basic ideas that all officers need to effectively manage personnel activities.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

### 503-151 Fire Prevention

**Credits:** 4

Provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, and identification and correction of fire hazards. Meets all requirements for Fire Inspector I certification with the State of Wisconsin.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

### 503-154 Hazardous Materials Chemistry

**Credits:** 2

This course provides basic chemistry relating to the categories of hazardous materials including recognition, identification, reactivity, and health hazards encountered by emergency services.

**Aid Code:** 10 - Associate Degree.

**Pre-requisites:** (503-142) and (503-153)

Complete Course Listing

**503-156****Credits:** 4

Provides an in-depth analysis of the principles of emergency response through utilization of an incident management system. Prepares students to pursue current national ICS training requirements.

**Aid Code:** 10 - Associate Degree.**Pre-requisites:** (503-142) and (503-153)

Complete Course Listing

**503-157****Credits:** 3

Provides learners with the fundamentals and technical knowledge needed for proper fire scene investigations.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

**503-159****Credits:** 2

Builds on the basic skills learned in Fire Fighting Principles with an emphasis on scene management, communication, and fire operations processes.

**Aid Code:** 10 - Associate Degree.**Pre-requisites:** (503-142) and (503-153)

Complete Course Listing

**503-160 Fire Protection Technician Internship****Credits:** 3

The Fire Protection Technician Internship is designed for students who meet the required prerequisites in order to serve at district fire departments as a responder. This opportunity affords each intern with the learning and understanding of the day-to-day worklife and culture of fire service. Included in the student intern's responsibilities will be station duties of cleaning, maintenance of fire equipment and apparatus, response to EMS and fire emergencies and fire inspections under the supervision of a designated Fire Department supervisor. FPT interns may also be involved in public relations and fire prevention, responsibilities of a subordinate, chain of command, organizational requirements, and the formal and informal relationships, work climate, and complexities of fire service culture. The total time on the job as an intern is 216 hours and is designed to be served in the assigned fire station, under supervision. The shift schedule will be determined by the Fire Coordinator, student, and hosting fire department based on program outcomes and student needs but must be completed in one semester. Completion requires satisfactory reporting from assigned agency fire chief, Fire Coordinator, and a passing grade on the final portfolio submitted by the student for the internship.

**Aid Code:** 10 - Associate Degree.**Pre-requisites:** (503-142) and (503-153) and (503-128 or 531-110)

Complete Course Listing

**503-191 Principles of Emergency Services****Credits:** 2

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.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

**503-192 Principles of Emergency Services Safety & Survival****Credits:** 3

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 the emergency services.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

**503-193 Fire Protection Systems****Credits:** 3

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.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing

**503-194 Fire Protection Hydraulics****Credits:** 3

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.

**Aid Code:** 10 - Associate Degree.**Pre-requisites:** (503-142) and (503-193) and (503-153)

Complete Course Listing

**503-195 Fire Behavior and Combustion****Credits:** 3

This 3 credit course provides an in-depth look at the combustion process and chemical reaction along with an analysis of fire behavior, principles, and theories. This course will also examine the physics of the combustion process, the products of combustion, and the effects of fire and combustion inside a structure, and the impact on the firefighter and victims who are involved in the fire environment. A key component to this course will be observations of fire and the products of combustion within scale models.

**Aid Code:** 10 - Associate Degree.

Complete Course Listing