

## Fire Science Technology

### FST 101

#### Introduction to Fire Science Technology

*Prerequisite:* Placement into ENG 099 or higher

3 lectures per week: 3 hrs credit

This course is an introduction to fire science technology programs. Topics covered include the history of fire service; objectives, roles, and responsibilities of the fire service and its personnel; accountability and liability. An overview of the educational requirements of EMS certification and recertification systems, and the role of the Office of the State Fire Marshal and National Fire Protection Association are discussed.

### FST 102

#### Fire Prevention Principles I

*Prerequisite:* FST 101 or FST 119 with a C or better; and documented affiliation with a fire department.

3 lectures per week: 3 hrs credit

The emphasis of this course is on objectives and techniques of fire prevention programs. Included among the topics are building and electrical codes, zoning controls and other prevention standards, evaluation of fire hazards, and techniques for inspecting various types of buildings. Basic blueprint reading and sketching are also covered.

### FST 104

#### Fire Tactics and Strategy I

*Prerequisite:* FST 119 with a C or better; and documented affiliation with a fire department.

3 lectures per week: 3 hrs credit

This course is an introduction to the basic principles and methods associated with fireground tactics and strategy as required by the company officer. It emphasizes size-up, fireground operations, prefire planning, and basic engine and truck company operations. Included are a survey of fire apparatus and equipment, its operation, the distribution of equipment and personnel, and preplanning of fireground operations.

### FST 105

#### Construction and Fire Systems

*Prerequisite:* Placement into ENG 099 or higher; and documented affiliation with a fire department.

3 lectures per week: 3 hrs credit

This course is an analysis of various methods of building design, construction, and materials. Fire-resistant features of materials, life safety methods of construction, and an introduction to building codes are included. An in-depth study of automatic extinguishing and detection systems with emphasis on automatic sprinkler equipment is covered. Also included are water spray, foam, carbon dioxide, and dry chemicals, stand pipe systems, and protection systems for special hazards.

### FST 106

#### Hazardous Materials Operations

*Prerequisite:* FST 119 with a C or better; and documented affiliation with a fire department.

3 lectures per week: 3 hrs credit

This course identifies the competencies required of the first responder at the operational level responding to hazardous materials incidents. Included are the skills and techniques required to reduce and prevent the possibility of accidents, injuries, disabilities, and fatalities during response to hazardous materials.

### FST 119

#### Basic Firefighter Operations

*Prerequisite:* 18 years of age and COMPASS reading score of 78 or better or placement into ENG 101; and documented affiliation with a fire department. Students must enroll in person.

6 lectures, 2 lab hrs per week: 7 hrs credit

This course equips students with basic knowledge and skills in areas such as fire behavior, equipment use, firefighter safety, rescue, and prevention. After successful completion of this course, students are eligible to write the State Fire Marshal Certification Exam. This program meets National Fire Protection Association (NFPA) standards.

### FST 120

#### Firefighter III

*Prerequisite:* Current Illinois Firefighter II certification. Coordinator consent required; and documented affiliation with a fire department.

5 lectures, 2 lab hours per week; 6 hours credit

This course builds on the foundation material learned in FST 119 Firefighter II and provides students with more in-depth understanding of topics such as fire department organization, fire behavior, safety issues, rescue techniques, public education and inspections. This course prepares students to sit for the State Fire Marshal's exam for Firefighter III and Rescue Awareness certification.

### FST 121

#### Introduction to Homeland Security

*Prerequisite:* Placement into ENG 099 or higher

3 lectures per week: 3 hrs credit

This course examines the programs and activities that have been implemented to improve the safety of our country. Special emphasis is placed on the threat of terrorism and strategies to address that threat. (same as CJ 120)

**FST 201****Arson Investigation**

*Prerequisite: FST 101 with a C or better; and documented affiliation with a fire department.*

3 lectures per week: 3 hrs credit

This course acquaints students with basic investigative techniques used in examining an arson case from its origin to a successful conclusion in the court system. It covers such topics as motives for arson, determining origin, scientific aids in investigation, interviews, statements, reports, interrogation, and presentation of the case in court. The course is of particular significance for firefighters, police, and insurance investigators.

**FST 202****Vehicle and Machinery Operations**

*Prerequisite: FST 119 with a C or better; and documented affiliation with a fire department.*

2 lectures, 2 lab hrs per week: 3 hrs credit

This course provides information on extrication and rescue of victims from vehicles involved in accidents. Emphasis is placed on equipment and techniques used in hazardous rescue operations.

**FST 204****Fire Tactics and Strategy II**

*Prerequisite: FST 104 with a C or better; and documented affiliation with a fire department.*

3 lectures per week: 3 hrs credit

This course covers advanced principles and methods associated with the fire ground strategies, and tactics required of the multi-company officer or chief officer. It emphasizes multi-company alarm assignments, handling disasters, and major fire incidents by occupancy classification.

**FST 205****Hazardous Materials Technician A**

*Prerequisite: FST 106 with a C or better; and documented affiliation with a fire department.*

3 lectures per week: 3 hrs credit

Methods of developing preplans for use by local departments are covered. Identification of hazards in communities and the designing of functional highway, rail, and industrial preplans to fit community needs are discussed.

**FST 207****Fire Department Management I**

*Prerequisite: FST 119 with a C or better; and documented affiliation with a fire department.*

3 lectures per week: 3 hrs credit

This course covers responsibilities of fire service of various ranks. Included are qualifications and sources of authority, role of the company officer, and basic management theories, practices, and functions. This is one of two management courses required of eligible candidates pursuing Illinois Fire Marshal certification as a Fire Officer I.

**FST 208****Fire Department Management II**

*Prerequisite: FST 207 with a C or better; and documented affiliation with a fire department.*

3 lectures per week: 3 hrs credit

This course is an introduction to the elements of management as they apply to fire department administration. Included are principles of management, communication, and group dynamics as they relate to the company officer. This is the second of two management courses required of eligible candidates pursuing Illinois State Fire Marshal certification as a Fire Officer I.

**FST 209****Fire Prevention Principles II**

*Prerequisite: FST 102 with a C or better; and documented affiliation with a fire department.*

3 lectures per week: 3 hrs credit

The emphasis of this course is on public relations and inspection techniques and procedures. The course covers evaluation of fire hazards, inspection techniques, procedures for conducting inspection, record-keeping procedures, arson investigation, and on-site field inspections.

**FST 210****Fire Apparatus Engineer**

*Prerequisite: FST 119 with a C or better; and documented affiliation with a fire department.*

3 lectures per week: 3 hrs credit

This course is designed to train Illinois fire service personnel to the Certified Fire Apparatus Engineer level. Based on State Fire Marshal standards, this course emphasizes terminology, preventive maintenance, pumps, pump controls, water supply, calculations, operations, supply and support of sprinklers and standpipe systems, foam and specialized equipment, pumping apparatus tests, and troubleshooting problems that occur during pump operations.

**FST 212****Fire Service - Instructor I**

*Prerequisite: FST 119 with a C or better; and documented affiliation with a fire department.*

3 lectures per week: 3 hrs credit

This course is designed to meet the needs of firefighters wishing to expand their fire science knowledge in the area of instruction. It provides basic information about human relations in the teaching-learning environment, instructional methodologies, and techniques used in developing lesson plans.

**FST 213****Fire Service - Instructor II**

*Prerequisite: FST 212 with a C or better; and documented affiliation with a fire department.*

3 lectures per week: 3 hrs credit

This course is a continuation of Fire Service - Instructor I. It provides basic information on program management, program development, lesson plan development, instructional development, and techniques used to create evaluation instruments.

## FST 218

### Fire Department Management III

*Prerequisite: FST 208 with a C or better; and documented affiliation with a fire department.*

3 lectures per week: 3 hrs credit

This course covers principles and techniques used by mid-level managers and chief officers in fire service. Principles of time management, decision-making, motivation, and delegation are emphasized. This is one of two management courses required of eligible candidates pursuing Illinois certification as a Fire Officer II.

## FST 219

### Fire Department Management IV

*Prerequisite: FST 218 with a C or better; and documented affiliation with a fire department.*

3 lectures per week: 3 hrs credit

This course covers the techniques used by mid-level managers and chief officers in fire service. Principles of time management, decision-making, motivation, and delegation are emphasized. This is the second of two management courses required of eligible candidates pursuing Illinois certification as a Fire Officer II.

## First Responder

(See Emergency Medical Services)

## Geography

### GEOG 101 (IAI: S4 900N)

#### Cultural Geography

*Prerequisite: Placement into ENG 099 or higher*

3 lectures per week: 3 hrs credit

This social sciences course explores the global diversity of cultures and the fundamental role played by place in shaping human behavior. Course topics include: globalization, population, environment, cultural identity, landscapes, economic development, political geography, and urbanization.

### GEOG 105 (IAI: PI 909)

#### Introduction to Physical Geography

*Prerequisite: Placement into ENG 099 or higher*

3 lectures per week: 3 hrs credit

This is a non-lab physical science course emphasizing the physical aspects of the Earth's environment. Topics surveyed include weather, climate, water, and geologic processes. The distribution of geographic features around the world is studied. Emphasis is on the relationships between human society and the physical environment.

## Geology

### GEOLO 101 (IAI: PI 907L)

(was GEOLO 210)

#### Physical Geology

*Prerequisite: Placement into ENG 099 or higher*

3 lectures, 2 lab hrs per week: 4 hrs credit

Physical geology is a general education course which introduces basic geologic principles. It examines processes that have shaped the Earth including plate tectonics, earthquakes, volcanoes, mountain building, minerals, rocks, water, and glaciers. Laboratory work and field trips emphasize these topics and the scientific method.

## Graphic Communications

(See also Art and Photographic Studies)

### GC 115

#### Introduction to Computer Art

*Prerequisite: Placement into ENG 099 or higher*

6 lab hrs per week: 3 hrs credit

This studio course introduces students to the history and use of computer applications in the visual arts. Students learn to generate, combine, and manipulate traditional and contemporary visual ideas using both raster paint/photo retouching programs and professional quality vector drawing programs. (same as ART 115)

### GC 151

#### Principles of Graphic Design

*Prerequisite: GC 115 or ART 115 or concurrent registration*

6 lab hrs per week: 3 hrs credit

Students are introduced to theoretical and practical aspects of visual communication. Techniques, processes, and terminology of graphic design are covered.

### GC 154

#### Typography

*Prerequisite: GC 151*

1 lecture, 2 lab hrs per week: 2 hrs credit

This course investigates the effective use of type in visual design. Students experiment with the creation of original fonts using digital applications along with some traditional methods.

### GC 156

#### Design Software Workshop: Special Topics

*Prerequisite: Placement into ENG 099 or higher*

1 lecture, 2 lab hrs per week: 2 hrs credit (may be repeated 3 times)

This course provides orientation, concentration, and practical application of a specific computer imaging software programs. Each workshop features one of six leading software packages identified by graphic design professionals.