

## FIRE SCIENCE

### Program Overview

Fire service personnel perform the critical work of saving lives and protecting property. This work is often thought of as exciting and rewarding, but it is carried out in difficult and often life-threatening conditions and requires highly trained, physically fit professionals. It also requires an increasing level of technical knowledge, including principles of building construction and design, chemicals and codes, and modern methods of extinguishing a fire.

The Fire Science Program at MCC provides opportunities for a range of students and working professionals in this important field:

- Students preparing for a career in fire suppression develop the skills and knowledge for an entry-level position. The program includes a balance of classroom sessions and practical hands-on training.
- Career and volunteer firefighters increase their knowledge, upgrade their job skills and enhance their personal growth. The program also offers instruction in fire service management and operations.

- Students and professionals in related fields—e.g., fire protection engineering, insurance investigations and inspection services, and fire service instruction/training—expand their knowledge base through this program.

Students who plan to pursue a bachelor's degree may take advantage of transfer opportunities with Southern Illinois University Carbondale and Western Illinois University. Since these baccalaureate programs have specific course and admission requirements, it is important for interested students to work with the department chair of Fire Science and academic advisors.

**NOTE:** *It is strongly recommended that students interested in this program meet with the department chair of Fire Science prior to enrolling.*

For more information, visit: [www.mchenry.edu/firescience](http://www.mchenry.edu/firescience)

**The primary purpose of an Associate in Applied Science degree is to prepare students for employment. The AAS degree is not designed specifically for transfer; however, there are opportunities to apply some coursework or the whole degree to a bachelor's degree program. For more information, see an academic advisor and the department chair.**

### Requirements for the Associate in Applied Science (AAS) in Fire Science

Curriculum: OCC 550	Credit Hours		
<b>General Education Core</b>			
<b>Communications</b> 2 courses SPE 151 required; ENG 151 recommended	6	(3) ENG 105 Technical Communications (3) ENG 151 Composition I	(3) ENG 152 Composition II (3) SPE 151 Intro to Speech
<b>Humanities &amp; Fine Arts, Social &amp; Behavioral Sciences</b> Select 1 course from Humanities & Fine Arts <b>and</b> 1 course from Social & Behavioral Sciences	6	<b>Humanities &amp; Fine Arts</b> <i>Select 1 course from the following prefixes or course numbers:</i> ART (does not include: 166, 190, 290, 299) (3) AET 141 Interior Design I (3) AET 142 History of Interiors (3) AET 241 Interior Design II (3) DGM 168 Computer Art I ENG (does not include: 088-099, 105, 151, 152) FRE GER (3) GRA 167 Graphic Design I (3) JRN 152 Intro to Mass Communication (3) JRN 155 Newswriting (3) JRN 165 Intro to Broadcasting (3) JRN 170 Feature Writing (3) JRN 180 Intro to Film MUS (does not include: 100, 104, 111, 160, 161, 162, 201-218) PHI	<b>Humanities &amp; Fine Arts cont'd.</b> (4) SPA 151 Elementary Spanish I (4) SPA 252 Intermediate Spanish II (4) SPA 152 Elementary Spanish II (4) SPA 251 Intermediate Spanish I (3) SPE 155 Interpersonal Communication (3) SPE 161 Small Group Communication (3) SPE 251 Intercultural Communication (3) SPE 265 Fundamentals of Oral Interpretation THE  <b>Social &amp; Behavioral Sciences</b> <i>Select 1 course from the following prefixes or course numbers:</i> ANT ECO (3) GEG 202 Geog. of the Developed World (3) GEG 203 Geog. of the Developing World (3) GEG 204 Economic Geography HIS PLT PSY SOC

<b>Mathematics, Physical or Life Sciences, Technology</b> Select 1 course from Mathematics, Physical or Life Sciences, <u>or</u> Technology	3	<b>Mathematics</b> MAT (100 level or above)  <b>Physical or Life Sciences</b> Select from the following prefixes or course numbers: BIO CHM EAS (4) GEG 107 Physical Geography (3) GEG 123 Energy Resources (3) GEG 220 The Global Environment	<b>Physical or Life Sciences cont'd.</b> GEL (3) HFE 250 Nutrition for Wellness (4) HRT 103 Intro to Plant Science (4) HRT 105 Intro to Soil Science PHY  <b>Technology</b> (3) GRA 100 Adobe Design Suite (3) PRG 105 Programming Logic (3) WEB 105 Web Fundamentals
<b>Program Core</b>	30	(3) CDM 110 Computer Literacy for Windows (3) EMS 105 First Responder Emergency Aid (3) FRS 101 Intro to Fire Science (3) FRS 121 Fire Suppression (3) FRS 122 Building Construction – Fire Science	(3) FRS 123 Fire Protection Systems (3) FRS 220 Fire Service Management I (3) FRS 223 Fire Service Tactics & Strategies I (3) FRS 224 Fire Prevention Principles I (3) MAT 150 Elements of Mathematics <b>or</b> (3) MAT 161 College Algebra
<b>Program Electives</b>	16	(7) EMS 110 EMT – Basic (2) FRS 100 Intro to Emergency Services (15) FRS 150 Basic Operations Firefighter (3) FRS 221 Fire Service Management II (3) FRS 222 Fire Service Instructor I (1-6) FRS 250 Fire Science Practicum	(3) FRS 252 Haz-Mat First Responder – Operations (2.5) FRS 253 Fire Apparatus Engineer (3-9) FRS 290 Topics in Fire Science (3) MGT 150 Principles of Management (3) PHI 255 Living with Death (3) SPE 155 Interpersonal Communication
<b>Total Degree Credits</b>	61		

**NOTE:** Students can apply credit toward an MCC degree or certificate with FRS 150 or 252, but not both.

**Other AAS Graduation Requirements:**

- 2.0 minimum cumulative GPA at MCC upon completion of program
- 15 semester hours of program-specific coursework taken at MCC
- Completion of graduation application
- Completion of end-of-program assessment as directed by this department

**Requirements for the Firefighter Basic Certificate**

The Firefighter Basic Certificate Program prepares individuals who are affiliated with a fire department to sit for the Office of the State Fire Marshal (OSFM) Firefighter

Basic Exam. Knowledge and skills required for fire suppression activities are the focus of this certificate.

<b>Curriculum: OCC 551</b>	<b>Credit Hours</b>	
<b>Program Core</b>	15	(15) FRS 150 Basic Operations Firefighter
<b>Total Certificate Credits</b>	15	

For more information, visit: [www.mchenry.edu/firefighter](http://www.mchenry.edu/firefighter)

**NOTE:** Individuals participating in coursework for the Firefighter Basic Certificate must be affiliated with a fire department as required by the Illinois Administrative

Code, which may require meeting that department's physical ability standards. Sponsoring agency must have an equipment agreement on file with the College's Business Service Office.

## Requirements for the Fire Officer I Certificate

The Fire Officer I Certificate Program prepares individuals and fire service personnel with the knowledge required for

managing, instructing, developing tactical strategies and basic fire principles.

Curriculum: OCC 552	Credit Hours		
Program Core	21	(3) FRS 101 Intro to Fire Science (3) FRS 121 Fire Suppression (3) FRS 220 Fire Service Management I (3) FRS 221 Fire Service Management II	(3) FRS 222 Fire Service Instructor I (3) FRS 223 Fire Service Tactics & Strategies I (3) FRS 224 Fire Prevention Principles I
Total Certificate Credits	21		

For more information, visit: [www.mchenry.edu/fireofficer](http://www.mchenry.edu/fireofficer)

**NOTE:** FRS 101 and FRS 121 not required by OSFM.

**NOTE:** To challenge the five OSFM Exams, an individual must be affiliated with a fire department as required by the Illinois Administrative Code and be certified as an Illinois Firefighter Basic.

### Other Requirements:

Some fire science courses offered are eligible for state certification. Upon successful completion, qualified students who are engaged in an organized Illinois fire department as a fire protection person or trainee according to the Illinois Administrative Code (Chapter 85, Section 140.50a, Paragraph 521 et seq.) as attested to by the Illinois Fire Chief of the individual seeking certification may challenge the OSFM Certification Exams. Here are the courses and corresponding exams:

#### Course(s) OSFM Exam(s)

FRS 150	Basic Operations Firefighter
FRS 220	Fire Service Management I
FRS 221	Fire Service Management II
FRS 222	Fire Service Instructor I
FRS 223	Fire Service Tactics & Strategies I
FRS 224	Fire Prevention Principles I
FRS 252	Haz-Mat First Responder Operations
FRS 253	Fire Apparatus Engineer

### Other Certificate Graduation Requirements:

- 2.0 minimum cumulative GPA at MCC upon completion of program
- For certificates of less than 12 credit hours, all required credits must be completed through MCC coursework. For all other certificates, one-half of the minimum credit hours required must be completed through MCC coursework.
- Completion of graduation application

For more information, contact the department chair: (815) 455-8565.