



# FIRE SCIENCE

## Fire Science at City College

Fire Science studies at City College focus on evidenced-based, best practices in modern fire environments. Students will become familiar with fire and emergency services culture, will learn standard-based, entry-level firefighting skills, and will develop leadership ability to make positive change in the fire and emergency service and the communities they serve. The Fire Science program at City College is committed to progressive, safe, and forward-thinking firefighting thought and methodology.

## Type of College Degree

Associate of Science in Fire Science (ASFS)

## Accreditation

The Fire Science program at City College is International Fire Service Accreditation Congress (IFSAC) Degree Assembly accredited. Montana State University Billings is accredited by the Northwest Commission of Colleges and Universities (NWCCU).

## Certifications and Standards

Fire Science courses and workshops at City College are designed around National Institute of Science & Technology (NIST) and Underwriters Laboratories (UL) fire science research, and also fire behavior research conducted in Sweden. Where applicable, courses follow National Fire Protection Association (NFPA) standards, Occupational Safety & Health (OSHA) law, and industry best practices.

Students may earn certifications in National Incident Management System (NIMS), Wildland firefighting, Hazardous Materials, and Fire Service Instructor.

## What You Will Learn

- Safe, standards-based, entry-level firefighting skills
- Principles of followership and leadership
- How to be a resilient Firefighter
- Incident command and fireground strategy and tactics
- Modern fire behavior, science, and application

- Principles of air management, crew resource management, and firefighter safety
- How to safely control, contain, and confine hazardous materials incidents
- National standards in wildland firefighting
- Why it's important to develop proactive fire prevention and public education programs
- How firefighters learn and how to instruct firefighters

## Career Information

Fire and Emergency Services careers offer students exciting and rewarding opportunities to make a difference and to earn a living. The Fire Science program at City College is committed to providing excellence in fire science education, training and experience, and preparing students for the workforce. Students will be exposed to several careers in Fire and Emergency Services, to include structure firefighter, fire inspector, arson investigation, hazardous materials technicians, wildland firefighter, industrial fire protection, and public education and fire prevention.

## Job Outlook and Pay

Median Wage (MT)*	\$49,310 yearly \$23.71 per hour
Median Wage (US)*	\$48,030 yearly \$23.09 per hour

\*Bureau of Labor Statistics, Office of Employment Projections; MT Dept. of Labor and Industry, Research and Analysis Bureau (projections through MT 2022 U.S. 2024). For more information visit <http://www.careerinfonet.org/Occupations>.

City College entry-level wages of graduates: **\$41,800** (2013-2016)

# Fire Science

## (Associate of Science Degree Program of Study)

Students should consult with an academic advisor before registering for General Education courses in order to maximize the number of elective credits allowed in the degree.

Required Courses	Credits
<b>General Education Requirements.....</b>	<b>31</b>
FIRE 105 Fire Apparatus, Equipment and Hydraulics .....	3
FIRE 115 Firefighter I Foundations .....	3
FIRE 130 Firefighter Leadership and Influence .....	3
FIRE 172 Wildlands Standards for Survival .....	3
FIRE 180 Incident Command.....	3
FIRE 201 Firefighter Resilience.....	3
FIRE 214 Inspection Codes and Practice .....	3
FIRE 255 Cause and Origin .....	2
FIRE 275 Fire Service Instructor .....	3
TRID 160 Hazardous Materials Technician General Training .....	3
<b>Total minimum credits required for degree .....</b>	<b>60</b>

*Students should check the course descriptions for required prerequisites. Math and English requirements are usually determined by performance on placement tests or transfer credits. Check with Student Services to determine how to meet these requirements.*

### PHYSICAL REQUIREMENTS

Hiring Fire Departments generally require individuals to pass a written exam and physical ability assessment. While not always used, the most common physical ability assessment given is the Candidate Physical Ability Test (CPAT). More information can be found here: [http://www.iaff.org/hs/CPAT/cpat\\_index.html](http://www.iaff.org/hs/CPAT/cpat_index.html). At present, the Fire Science program at City College does not offer a fitness or physical ability course, however, students are encouraged to begin preparing for the physical ability assessment early. \*Always consult a physician before beginning a fitness routine.

### EMT TRAINING

Hiring Fire Departments generally require individuals to possess a valid, current EMT license before applying for job openings. At present, City College does not offer an EMT course. Several agencies throughout Montana offer EMT courses at various times and locations. Students are encouraged to complete an EMT course as early as possible in their studies.

### BACHELOR OF SCIENCE (BS)

#### Outdoor Adventure Leadership – Fire Science Track

Upon completion of an Associate of Science degree in Fire Science at City College, students may transfer into the Outdoor Adventure Leadership - Fire Science track at Montana State University Billings and complete a Bachelor of Science degree.

## Suggested Plan of Study

### Fire Science, Associate of Science Degree Program of Study

First Semester	Credits
FIRE 115 .....	3
FIRE 130 .....	3
General Education .....	9
<b>Total.....</b>	<b>15</b>

Second Semester	Credits
FIRE 275 .....	3
FIRE 172 .....	3
General Education.....	7
<b>Total.....</b>	<b>13</b>

Third Semester	Credits
FIRE 201 .....	3
FIRE 255 .....	2
FIRE 214 .....	3
General Education .....	9
<b>Total.....</b>	<b>17</b>

Fourth Semester	Credits
FIRE 105 .....	3
FIRE 180 .....	3
TRID 160 .....	3
General Education .....	6
<b>Total.....</b>	<b>15</b>