

FIRE SCIENCE, B.S.

Completion of this major prepares one for a career in the Fire Service and related industries. It also prepares one to be firefighters and fire officers. In the Fire Protection industry, completion of this major prepares one for code enforcement, fire investigation, and fire protection systems. Our majors are also prepared for fire-related private industry.

| Code | Title | Credits |
|---|--|---------|
| Required Courses: 30 Credits | | |
| FS 150 | Introduction to Engine Company Operations | 3 |
| FS 151 | Introduction to Ladder Company Operations | 3 |
| FS 241 | Fire Prevention & Related Codes | 3 |
| FS 336 | Firefighting Tactics | 3 |
| FS 342 | Building Construction | 3 |
| FS 344 | Hazardous Materials | 3 |
| FS 365 | Fire Officer Company Management | 3 |
| FS 435 | Problems in Fire Engineering | 3 |
| FS 436 | Firefighting Strategies | 3 |
| FS 464 | Fire Department Organization & Administration | 3 |
| Required Electives - Select a Minimum of 15 Credits: | | |
| FS 137 | Emergency Personnel Fitness | |
| FS 140 | Introduction to Fire Science | |
| FS 243 | Fire Detection & Suppression Systems | |
| FS 334 | Fire Investigation & Arson | |
| FS 431 | Transportation & Industrial Fire Hazards | |
| | Work/Study Cooperative Education (2-6 credits) | |
| | Portfolio/Certification Review (1-6 credits) | |
| Total Credits | | 30 |

| Course | Title | Credits |
|-------------------------|--|---------|
| Freshman | | |
| Semester 1 | | |
| ENGL 101 or ESL 101 | English Composition I or English Composition I for English as a Second Language Students | 4 |
| FS 150 | Introduction to Engine Company Operations (Fall Only) | 3 |
| MATH 114 or MATH 140 | Contemporary Mathematics or Statistics I | 3 |
| | General Education Tier I Course | 3 |
| | General Education Tier I Course | 3 |
| INTD 101 | Orientation to College ^{*first time freshmen only} | 1 |
| | Credits | 17 |
| Semester 2 | | |
| FS 137 | Emergency Personnel Fitness | 3 |
| FS 151 | Introduction to Ladder Company Operations (Spring Only) | 3 |
| ENGL 102 or ESL 102 | English Composition II or English Composition II for English as a Second Language Students | 4-6 |
| | General Education Tier I Course | 3 |

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| General Education Tier I Course | 3 |
| Credits | 16-18 |

Sophomore

Semester 1

| | | |
|--------|--|---|
| FS 243 | Fire Detection & Suppression Systems (FS243 Fall Odd Year Only) Or Fire Science Elective | 3 |
| | General Education Tier II Course | 3 |
| | General Education Tier II Course | 3 |
| | General Education Tier II Course | 3 |
| | Elective or Minor | 3 |

Credits 15

Semester 2

| | | |
|--------|--|---|
| FS 140 | Introduction to Fire Science (or other Fire Science Elective) | 3 |
| FS 241 | Fire Prevention & Related Codes (Spring Odd Years Only) | 3 |
| FS 342 | Building Construction (Spring Odd Years Only) | 3 |
| | General Education Tier II Course | 3 |
| | General Education Tier II Course | 3 |

Credits 15

Junior

Semester 1

| | | |
|--------|--|---|
| FS 334 | Fire Investigation & Arson (FS 334 Fall Even Years Only) or Fire Science Elective | 3 |
| FS 336 | Firefighting Tactics (Fall Odd Years Only) | 3 |
| | General Education Tier II Course | 3 |
| | Elective or Minor | 3 |

Credits 12

Semester 2

| | | |
|--------|---|---|
| FS 344 | Hazardous Materials (Spring Even Years Only) | 3 |
| FS 436 | Firefighting Strategies (Spring Even Years Only) | 3 |
| | General Education Tier III Course | 3 |
| | Elective Course/Minor | 3 |
| | Elective Course/Minor | 3 |

Credits 15

Senior

Semester 1

| | | |
|--------|--|---|
| FS 431 | Transportation & Industrial Fire Hazards (FS 431 Sum I Only) or Fire Science Elective | 3 |
| FS 464 | Fire Department Organization & Administration (Fall Even Years Only) | 3 |
| | Elective Course/Minor | 3 |
| | Elective Course/Minor | 3 |
| | Elective Course/Minor | 3 |

Credits 15

Semester 2

| | | |
|--------|--|---|
| FS 365 | Fire Officer Company Management (Spring Only) | 3 |
| FS 435 | Problems in Fire Engineering (Spring Only) | 3 |
| | Elective Course/Minor | 3 |

| | |
|-----------------------|---------|
| Elective Course/Minor | 3 |
| Elective Course/Minor | 3 |
| <hr/> | |
| Credits | 15 |
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| Total Credits | 120-122 |

Student Learning Outcomes

Upon completion of the Fire Science BS program, students will be able to:

1. Students will be able to communicate clearly and concisely (orally and/or in writing) regarding current critical emergency service issues.
2. Evaluate the role of risk management in the proper formulation of effective tactics and strategies to safely and successfully mitigate fire and emergency events.
3. Appraise and analyze building construction in terms of structural limitations and collapse / fire spread potential.
4. Utilize available technology and/or software to research and analyze data to create solutions to enhance decision-making on the emergency ground.
5. Apply ethical reasoning and analysis to the decision-making process in regard to personnel and resource management.