Safety Management, M.S.

Degree Offered
- Masters of Science, Safety Management (M.S.)

Masters of Science, Safety Management

The mission of the safety management program is to prepare program graduates to meet the safety mission of any enterprise. This is stated simply as: The safety mission of an organization is to protect, conserve, and improve the resources—people, property, and efficacy—of the organization. The Master's of Science with a major in Safety Management is accredited by the Applied and Natural Sciences Accreditation Commission (ANSAC) of ABET, http://www.abet.org.

Program Educational Objectives

Drawing from the university's mission, the program mission, the needs of our constituents, and the criteria of the Applied and Natural Sciences Accreditation Commission of ABET, the following educational objectives were developed for the Masters of Science program in Safety Management:

A graduate of the Safety Management program will be able to:

1. Communicate effectively, orally and in writing, including the transmission of safety data to management and employees.
2. Demonstrate knowledge and skills in the area of safety management.
3. Demonstrate knowledge of ethical and professional responsibilities and knowledge of applicable legislation and regulations.
4. Demonstrate the ability to apply various research activities through the decision-making process used in safety management.

Student Outcomes

SAFETY MANAGEMENT

In order to meet Program Educational Objectives of the Safety Management program, students must be able to meet the following outcomes at the time of their graduation:

1. Mathematics and science and/or technical topics to areas relevant to safety management.
2. An ability to formulate or design a system, process, procedure or program to meet desired needs.
3. An ability to develop and conduct experiments or test hypotheses, analyze and interpret data and use scientific judgment to draw conclusions.
4. An ability to communicate effectively with a range of audiences.
5. An ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts.
6. An ability to function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.

Master Admissions

To be eligible for admission into the Master of Science in Safety Management degree program, a candidate must fulfill the following requirements:

- Official transcripts of all previous college course work
- A statement of purpose.
- ABET-ANSAC prerequisite course requirements:
  - sixty-three credit hours of approved science, mathematics, and other technical courses. Of these, at least fifteen credit hours must be junior or senior level.
  - twenty-one hours of social sciences, humanities, and/or communications.
  - Based on application review, additional requirements may be required on a case by case basis
- Applicants must have earned a GPA of 3.0 or better (out of a possible 4.0). Applicants with a cumulative GPA of less than 3.0 may be considered for admission if they have professional or other relevant experience
- International applicants must meet the WVU requirement of English language proficiency (https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2023-2024/international-graduate-applicant/).

Admission Requirements 2024-2025

The Admission Requirements above will be the same for the 2024-2025 Academic Year.

Major Code: 3085
## Curriculum in Masters of Science – Safety Management

A candidate for the M.S. degree with a major in safety management must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Industrial and Management Systems Engineering Department.

### Program Requirements

All M.S. degree candidates are required to perform research (thesis or problem report option) and follow a planned program of study. The student’s faculty advisor, in conjunction with the student’s Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student’s needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Students who do not hold a baccalaureate degree in safety management may be required to take a set of undergraduate courses above and beyond the minimum coursework requirements.

### Curriculum Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAFM 501</td>
<td>Safety Management Integration</td>
<td>3</td>
</tr>
<tr>
<td>SAFM 502</td>
<td>Controlling Environmental and Personnel Hazards</td>
<td>3</td>
</tr>
<tr>
<td>SAFM 505</td>
<td>Safety Legislation and Compliance</td>
<td>3</td>
</tr>
<tr>
<td>SAFM 528</td>
<td>Economic Aspects of Safety</td>
<td>3</td>
</tr>
<tr>
<td>SAFM 534</td>
<td>Fire Safety Management</td>
<td>3</td>
</tr>
<tr>
<td>SAFM 550</td>
<td>Loss Control and Recovery</td>
<td>3</td>
</tr>
<tr>
<td>SAFM 552</td>
<td>Safety and Health Training</td>
<td>3</td>
</tr>
<tr>
<td>SAFM 640</td>
<td>Instrumentation for Safety Managers</td>
<td>3</td>
</tr>
<tr>
<td>SAFM 689</td>
<td>Professional Field Experience</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

Select three from the following:

- SAFM 470 Managing Construction Safety
- SAFM 471 Motor Fleet Safety
- SAFM 533 Disaster Preparedness
- SAFM 539 Security Management
- SAFM 580 Fundamentals of Environmental Management
- OEHS 627 Physical Hazards Measurement and Control
- OEHS 528 Industrial Ventilation Design
- OEHS 725 Industrial Hygiene Sampling and Analysis
- IENG 561 Industrial Hygiene Engineering
- IENG 564 Industrial Ergonomics
- IENG 660 Human Factors System Design
- IENG 662 Systems Safety Engineering
- EWS 515 Hazardous Waste Training
- EWS 515L Hazardous Waste Training Laboratory
- EWS 555 Environmental Sampling and Analysis
- MINE 471 Mine and Safety Management
- RESM 440 Foundations of Applied Geographic Information Systems
- RESM 440L Foundations of Applied Geographic Information Systems Laboratory
- RESM 480 Environmental Regulation
- OEHS 601 Environmental Health
- OEHS 520 Industrial Hygiene
- OEHS 622 Public Health Toxicology
- OEHS 623 Occupational Injury Prevention

A minimum cumulative GPA of 3.0 is required in all courses

A minimum of 60% of courses must be from 500 level or above
Choose 1 of the following options:

---

**Thesis Option - 6 hours**

- SAFM 697 Research (6 hours)
- Final Oral or Written Examination
- Thesis

**Problem Report Option - 3 hours**

- SAFM 697 Research (3 hours)
- Final Oral or Written Examination
- Formal written report or professional report/paper

**Coursework Option**

- Final Oral or Written Examination

Total Hours: 36-42

---

* Students who do not hold a baccalaureate degree in safety management may be required to take a set of undergraduate courses above and beyond the minimum coursework requirements.

** Students who have SHE work experience have the possibility to waive SAFM 689 and take an additional elective, please see your advisor for approval.

*** Credit hours may vary depending on option selected. The coursework option requires 36 hours.

**Final Examination**

M.S. students following the thesis or problem report option must prepare a written research proposal. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination.

All students, regardless of option, are required to pass a final oral or written examination, administered by their AEC, covering the thesis or problem report and/or related course material.

**Suggested Plan of Study**

The plan below illustrates the Coursework Option. It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical M.S. degree program that completes degree requirements in one and half years is as follows.

**First Year**

<table>
<thead>
<tr>
<th></th>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
<th>Summer</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SAFM 501</td>
<td>3</td>
<td>SAFM 528</td>
<td>SAFM 502</td>
<td>3</td>
<td>SAFM 640</td>
</tr>
<tr>
<td></td>
<td>SAFM 505</td>
<td>3</td>
<td>SAFM 550</td>
<td>Elective</td>
<td>3</td>
<td>Elective</td>
</tr>
</tbody>
</table>

Total hours: 12

**Second Year**

<table>
<thead>
<tr>
<th></th>
<th>Fall</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SAFM 552</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>SAFM 534</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credit hours: 36
Student Outcomes

SAFETY MANAGEMENT

In order to meet Program Educational Objectives of the Safety Management program, students must be able to meet the following outcomes at the time of their graduation:

1. Mathematics and science and/or technical topics to areas relevant to safety management.
2. An ability to formulate or design a system, process, procedure or program to meet desired needs.
3. An ability to develop and conduct experiments or test hypotheses, analyze and interpret data and use scientific judgment to draw conclusions.
4. An ability to communicate effectively with a range of audiences.
5. An ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts.
6. An ability to function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.