# Engineering Technology: Fire Safety and Explosion Protection, MS

Requirements for Students Matriculating in or before Academic Year 2019-2020. Learn more about Graduate College Academic Regulation 7.0 (http://catalog.okstate.edu/graduate-college).

## Thesis Option

**Total Hours:** 30 Hours

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Core Courses</td>
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<tr>
<td>POLS 5013</td>
<td>Quantitative Methods</td>
<td>3</td>
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<tr>
<td>or GENT 5013</td>
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<tr>
<td>IEM 5603</td>
<td>Project Management</td>
<td>3</td>
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<td>or GENT 5023</td>
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<td>GENT 5033</td>
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<tr>
<td>FSEP 5113</td>
<td>Fire and Explosion Hazard Recognition</td>
<td>3</td>
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<tr>
<td>FSEP 5133</td>
<td>Principles of Process Safety</td>
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<tr>
<td>FSEP 5143</td>
<td>Structural Design for Fire and Life Safety</td>
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<td>Hours Subtotal</td>
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**Electives**

Select 6 hours, minimum of 3 hours from FSEP courses:

- FSEP 5123: Fire and Explosion Detection and Mitigation
- FSEP 5153: Critical Infrastructure Vulnerability and Risk
- FSEP 5163: Principles of Industrial, Physical and Building Security
- FSEP 5990: Special Topics
- FPST 4143: Industrial Ventilation and Smoke Control
- FPST 4383: Fire and Evacuation Modeling
- ETM 5153: Foundations of Engineering Management
- ETM 5221: Engineering Teaming
- ETM 5291: Failure Mode and Effects Analysis in Design
- ETM 5341: Leadership Strategies for Technical Professionals
- ETM 5371: Ethics for Practicing Engineers
- ETM 5411: Engineering Economic Analysis
- IEM 5143: Reliability and Maintainability
- IEM 5990: Special Topics in Industrial Engineering and Management
- ENGR 5133: Advanced Environmental Law for Technical Professionals
- POLS 5303: Fire Dynamics in Forensic Investigations
- FRNS 5123: Methods in Fire and Explosion Investigation NFPA 921/1033
- FRNS 5143: Advanced Fire Dynamics
- FRNS 5173: Advanced Explosion Investigation
- FRNS 5183: Computer Fire Modeling

**Master’s Thesis**

FSEP 5000: Master’s Thesis 6

Each M.S. candidate must prepare a written thesis and defend it before a thesis committee of at least three faculty members (minimum two from the FPST program). The written document must satisfy the requirements of the Graduate College for format and structure. The thesis defense consists of a twenty-minute oral presentation, followed by questions from the committee.

**Hours Subtotal** 6

**Total Hours** 30

## Non-Thesis Option

**Total Hours:** 32 Hours

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<tr>
<td>Hours Subtotal</td>
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**Electives**

Select 12 hours, minimum of 3 hours from FSEP courses:

- FSEP 5123: Fire and Explosion Detection and Mitigation
- FSEP 5153: Critical Infrastructure Vulnerability and Risk
- FSEP 5163: Principles of Industrial, Physical and Building Security
- FSEP 5990: Special Topics
- FPST 4143: Industrial Ventilation and Smoke Control
- FPST 4383: Fire and Evacuation Modeling
- ETM 5153: Foundations of Engineering Management
- ETM 5221: Engineering Teaming
- ETM 5291: Failure Mode and Effects Analysis in Design
- ETM 5341: Leadership Strategies for Technical Professionals
- ETM 5371: Ethics for Practicing Engineers
- ETM 5411: Engineering Economic Analysis
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- FRNS 5123: Methods in Fire and Explosion Investigation NFPA 921/1033
- FRNS 5143: Advanced Fire Dynamics
- FRNS 5173: Advanced Explosion Investigation
- FRNS 5183: Computer Fire Modeling

**Hours Subtotal** 6
The FSEP 5990 course is used for a creative component. A report (a “mini-thesis”) must be submitted, prepared in the style of an M.S. thesis, but not submitted for Graduate College approval.

General Graduate College Requirements

- A minimum Grade-Point-Average of 3.00 is required
- A minimum Grade of "C" is required in all degree applicable courses
- No courses utilizing the Pass-No Pass grading system are permitted
- GRAD 5082 or GRAD 5092 may not be used to meet degree requirements

Additional Graduate College Masters Degree Requirements

Plan I (coursework with thesis)

- A minimum of 30 credit hours
  - A minimum of 24 coursework credit hours comprised of:
    - 6 research or creative component credit hours
    - 21 in-residence credit hours (maximum of 9 transfer hours with "B" or better)
- 21 credit hours at 5000- or 6000-level

Plan II (coursework without thesis)

- A minimum of 32 credit hours
  - A maximum of 3 credit hours of research or creative component
  - A minimum of 23 in-residence credit hours (maximum of 9 transfer credit hours with "B" or better)
  - A minimum of 21 credit hours at the 5000- or 6000-level