

# OSU - College of Engineering, Architecture & Technology

## Mechanical Engineering - Fire Protection Systems Option

2024-2025

REFER TO THE CATALOG TO CONFIRM PREREQUISITE COURSES

| Semester 1, 17 credit hours   | Semester 2, 18 credit hours   | Semester 3, 17 credit hours   | Semester 4, 16 credit hours  |
|---|---|---|--|
| <p>UNIV 1111<br/>First Yr Seminar</p> <p>MATH 1513<br/>ALEKS &gt;=56</p> <p>CHEM 1414<br/>Chem for Engineers</p> <p>ENSC 2213<br/>ENSC 3313</p> <p>ENGR 1332<br/>CAD/SolidWorks For MAE</p> <p>MATH 1813<br/>ALEKS &gt;=75</p> <p>MATH 2144<br/>Calc 1</p> <p>MATH 2153<br/>PHYS 2014<br/>ENSC 2113<br/>ENSC 2213</p> <p><sup>1</sup>ENGL 1113<br/>Comp 1</p> <p>ENGL 1213</p> <p>FPST 1213<br/>Hazards Recognition</p> | <p>ENGR 1412<br/>Intro Eng Computer Prgm</p> <p>MAE 3403</p> <p>HIST 1103 or 1483 or 1493<br/>Am History</p> <p>MATH 2144</p> <p>PHYS 2014<br/>Physics 1</p> <p>ENSC 2113<br/>ENSC 2213<br/>PHYS 2114<br/>MAE 3013</p> <p>MATH 2144</p> <p>MATH 2153<br/>Calc 2</p> <p>MATH 2163<br/>MATH 2233<br/>ENSC 2613<br/>MAE 3333<br/>IEM 3503</p> <p>ENGL 1113</p> <p><sup>1</sup>ENGL 1213<br/>Comp 2</p> <p>FPST 1373<br/>Suppress &amp; Detect</p> <p>FPST 2243</p> | <p>MATH 2144<br/>PHYS 2014</p> <p>ENSC 2113<br/>Statics</p> <p>ENSC 2123<br/>ENSC 2143<br/>MAE 3333<br/>MAE 3153<sub>cc</sub></p> <p>CHEM 1314, 1414, or 1515<br/>MATH 2144<br/>PHYS 2014</p> <p>ENSC 2213<br/>Thermo</p> <p>MAE 3153<sub>cc</sub></p> <p>PHYS 2014</p> <p>PHYS 2114<br/>Physics 2</p> <p>MATH 2153</p> <p>MATH 2163<br/>Calc 3</p> <p>MATH 2153</p> <p>MATH 2233<br/>Diff Eq</p> <p>MAE 3013</p> <p><sup>2</sup>ENGR 2421<br/>Data Acq Ctrl Lab</p> <p>MAE 3333<sub>cc</sub><br/>MAE 3724<br/>MAE 4344</p> | <p>ENSC 2113</p> <p>ENSC 2123<br/>Dynamics</p> <p>MAE 3403<br/>MAE 3724</p> <p>ENSC 2113</p> <p>ENSC 2143<br/>Strengths</p> <p>MAE 3324</p> <p>ENSC 2113<br/>MATH 2153<br/>ENGR 2421<sub>cc</sub></p> <p>MAE 3333<br/>Fluids</p> <p>MAE 3233<sub>cc</sub></p> <p>MAE 3333</p> <p>FPST 2243<br/>Sprinkler Design &amp; Analysis</p> <p>MATH 2233<br/>PHYS 2014</p> <p>MAE 3013<br/>Engr Analysis</p> <p>MAE 3724<br/>MAE 3403</p> <p>See note 2</p> <p>Engineering Science Laboratory</p> <p>MAE 4344</p> |

**Summary of Graduation and School Requirements:** Please consult Degree Requirements published in official University Catalog for specific course letter grade requirements Graduation Requirements.

- If a "B" or better is earned in ENGL 1113 or 1313, ENGL 3323 may be substituted for ENGL 1213 or 1413 (per Academic Regulation 3.5)
- In order to fulfill the ENSC Lab requirement you must complete ENGR 2421 and select two labs from list found on published Degree Requirements in University Catalog.

| 130 hours               |            |  |
|-------------------------|------------|--|
| Required for Course ABC | Course ABC | Course ABC is required for the following courses |

Prerequisites Note: FPST 2243 currently requires FPST 2483 - Exception to allow MAE 3333 instead

FPST 3373 currently requires FPST 2483 and STAT 2013 - Exception to allow MAE 3333 instead (STAT 2013 no longer (required))

FPST 4143 currently requires FPST 2343 and 2483 - exception to allow MAE 3333 instead (2343 no longer required)

For Reference Only - Edited 09/10/2024

# OSU - College of Engineering, Architecture & Technology

## Mechanical Engineering - Fire Protection Systems Option

2024-2025

REFER TO THE CATALOG TO CONFIRM  
PREREQUISITE COURSES

| Semester 5, 15 credit hours   | Semester 6, 16 credit hours   | Semester 7, 15 credit hours  | Semester 8, 16 credit hours  |
|---|---|--|--|
| <p>MAE 3333<sub>cc</sub> <b>MAE 3233 Heat Transfer</b> MAE 3524</p>                         | <p>ENSC 2213 MAE 3153 MAE 3233 MAE 3333 <b>MAE 3524 Thermal Fluids Design</b> MAE 4344 Various Electives</p>                    | <p>Prereqs Vary by Course <b>3 MAE CAT I Elective</b></p>  | <p>MAE 3524 MAE 3324 MAE 3724 ENGR2421 See notes 2 and 4 <b>MAE 4344 Senior Design Project</b></p> |
| <p>ENSC 2113<sub>cc</sub> <b>MAE 3153 Intro ME Design</b> MAE 3324 MAE 4243 MAE 3524</p>    | <p>MAE 3153 ENSC 3313 ENSC 2143 <b>MAE 3324 Mech Des 1</b> MAE 4344 Various Electives</p>                                       | <p>Prereqs Vary by Course <b>4 MAE Elective</b></p>  | <p>FPST 3373 MAE 3333 MAE 3233 <b>FPST 4143 Ventilation &amp; Smoke Ctrl</b></p>                   |
| <p>#=-U 1314, 1414, or 1515 <b>ENSC 3313 Materials Science</b> MAE 3324</p>                 | <p>ENGR 2421 ENSC 2123 ENSC 2613 MAE 3013 <b>MAE 3724 Systems Analysis</b> MAE 3403<sub>cc</sub> MAE 4344 Various Electives</p> | <p>ENGR 1412 ENSC 2123 MAE 3013 MAE 3724<sub>cc</sub> <b>MAE 3403 Computer Methods</b> Various Electives</p> | <p><b>5 FPST/CET ELECTIVE</b></p>  |
| <p>MATH 2153 <b>ENSC 2613 Circuits</b> MAE 3724</p>   | <p><b>POLS 1113 Am Govt</b></p>   | <p>MATH 2153 <b>IEM 3503 Engr Econ</b></p>   | <p><b>6 Humanities (H)</b></p>   |
| <p>MATH 2153 MAE 3333 CHEM 1314, 1414, or 1515 <b>FPST 3373 Fire Dynamics</b> FPST 4143</p> | <p>See note 2 <b>Engineering Science Laboratory</b> MAE 4344</p>  | <p><b>6 Social &amp; Behavioral Sciences (S)</b></p>   | <p><b>6 Humanities (H)</b></p>   |

- If a "B" or better is earned in ENGL 1113 or 1313, ENGL 3323 may be substituted for ENGL 1213 or 1413 (per Academic Regulation 3.5)
- In order to fulfill the ENSC Lab requirement you must complete ENGR 2421 and select two labs from list found on published Degree Requirements in University Catalog.
- Category (CAT) I - MAE 4243, 4263, 4353, 4363, 4513, 4623, 4703, 4713, or 4723 (See Catalog for Prerequisites). For AERS dual degree CAT I is equal to MAE 4243 or 4513.
- MAE Elective (6 hours) - MAE 3033, 3123, 3223, 3253, 3293, 4003, 4010, 4020, 4053, 4063, 4273, 4313, 4333, 4583, 4733 or courses in the Category I listed above, but not used to satisfy the category requirement. (See Catalog for Prerequisites) For AERS dual degree MAE Elective is equal to 3253, 3293.
- FPST/CET Elective (3 hours) – CET 4443, FPST 3113, 3383, 4213, 4383
- You must complete 6 hours of Humanities (H) credits and 3 hours of Social and Behavioral Science (S) credits.
- You are also required to meet the Board of Regents Diversity (D) and International (I) attributes by completing one course in each dimension. These attributes can be combined with your (H) and (S) requirements.

**7**International Attribute (I)

**7**Diversity Attribute (D)

# MAE ELECTIVE COURSES

*\*The listed courses are all electives in the MAE Catalog, courses offered vary by campus, semester, and faculty availability, please speak with your academic advisor about course availability.*

## OSU - College of Engineering, Architecture & Technology Mechanical Engineering - Fire Protection Systems 2024-2025

| Category I Electives                  |  | MAE Electives                                    |   | MAE Electives                                    |  |
|---------------------------------------|--|--|---|--|--|
| MAE 3153<br>MAE 3524                  | MAE 4263<br>Energy Conversion Systems              | ENGR 1332<br>MAE 3013<br>MAE 3324                | MAE 3033<br>Design of Machines and Mechanisms           | ENSC 3313  | MAE 4583<br>Corrosion                            |
| MAE 3324                              | MAE 4353<br>Mechanical Design II                   | ENSC 3313  | MAE 3123<br>Manufacturing Processes                     | MAE 3153<br>MAE 3403<br>ENGR 2421<br>ENSC 2411   | MAE 4733<br>Mechatronics Design                  |
| MAE 3324<br>ENSC 2613                 | MAE 4363<br>Advanced Methods in Design             | MAE 3153   | MAE 3223<br>Thermodynamics II                           | <b>Aerospace MAE Electives</b>                   |  |
| MATH 2163<br>MAE 3153<br>MAE 3324     | MAE 4623<br>Biomechanics                           | MAE 3403<br>(MAE 3724<br>or<br>ECEN 3723)        | MAE 4003<br>Introduction to Autonomous Systems          | MATH 2233<br>MAE 3293                            | MAE 3253<br>Applied Aerodynamics and Performance |
| MAE 3524                              | MAE 4703<br>Design of Indoor Environmental Systems | Consent of<br>Instructor<br>and Advisor          | MAE 4010<br>MAE Engineering Special Project             | MATH 2233<br>MAE 3333                            | MAE 3293<br>Fundamentals of Aerodynamics         |
| MAE 3524                              | MAE 4713<br>Thermal Systems Realization            | (MAE 3724<br>or<br>ECEN 3723)                    | MAE 4053<br>Automatic Control Systems                   | MAE 3253<br>ENGR 2421<br>ENSC 2411 <sub>cc</sub> | MAE 4213<br>Spacecraft Design                    |
| MAE 3524                              | MAE 4723<br>Refrigeration Systems Design           | MAE 3724   | MAE 4063<br>Mechanical Vibrations                       |  |  |
| <b>Aerospace Category I Electives</b> |  | MAE 3333<br>ENGR 2421<br>ENSC 3231 <sub>cc</sub> | MAE 4273<br>Experimental Fluid Dynamics                 |  |  |
| MAE 3153<br>MAE 3293                  | MAE 4243<br>Aerospace Propulsion and Power         | ENSC 3313<br>MAE 3153                            | MAE 4313<br>Advanced Processing of Engineered Materials |  |  |
| MAE 3324<br>MAE 3403<br>MAE 3253      | MAE 4513<br>Aerospace Structures                   | ENSC 3313<br>ENGR 2421                           | MAE 4333<br>Mechanical Metallurgy                       |  |  |