MECHANICAL ENGINEERING: FIRE PROTECTION SYSTEMS, BSME

Requirements for Students Matriculating in or before Academic Year 2024-2025. Learn more about University Academic Regulation 3.1 (http://catalog.okstate.edu/university-academic-regulations/ #matriculation).

Minimum Overall Grade Point Average: 2.00

Total Hours: 130

Code	Title	Hours			
General Education R	equirements				
All General Education coursework requirements are satisfied					
upon completion of this degree plan					
English Composition					
<u> </u>	See Academic Regulation 3.5 (http://catalog.okstate.edu/				
university-academic-regulations/#english-composition)					
ENGL 1113	Composition I 1	3			
or ENGL 1313	Critical Analysis and Writing I				
Select one of the fol	3	3			
ENGL 1213	Composition II 1				
ENGL 1413	Critical Analysis and Writing II				
ENGL 3323	Technical Writing ¹				
American History & G	overnment				
Select one of the fol	lowing:	3			
HIST 1103	Survey of American History				
HIST 1483	American History to 1865 (H)				
HIST 1493	American History Since 1865 (DH)				
POLS 1113	American Government	3			
Analytical & Quantita	tive Thought (A)				
MATH 2144	Calculus I (A) 1	4			
MATH 2153	Calculus II (A) ¹	3			
MATH 2163	Calculus III ¹	3			
MATH 2233	Differential Equations ¹	3			
Humanities (H)					
Courses designated (H) 6					
Natural Sciences (N)					
Must include one La	boratory Science (L) course				
CHEM 1414	General Chemistry for Engineers (LN) 1	4			
or CHEM 1515	Chemistry II (LN)				
PHYS 2014	University Physics I (LN) 1	4			
Social & Behavioral S	ciences (S)				
Course designated (S)	3			
Hours Subtotal		42			
Diversity (D) & Intern	national Dimension (I)				
May be completed in any part of the degree plan					
Select at least one Diversity (D) course					
Select at least one International Dimension (I) course					
College/Departmental Requirements					
3					

UNIV 1111	First Year Seminar (or other approved first	1
Basic Science	year seminar course)	
PHYS 2114	University Physics II (LN) ¹	4
		4
Engineering and En	Engineering Design with CAD for MAE ¹	2
ENGR 1332 ENGR 1412		2
	Introductory Engineering Computer Programming (1) ¹	
ENSC 2113	Statics 1	3
ENSC 2123	Elementary Dynamics	3
ENSC 2143	Strength of Materials 1	3
ENSC 2213	Thermodynamics ¹	3
ENSC 2613	Introduction to Electrical Science 1	3
Choose one of the	e below laboratory options: 1	3
OPTION 1 (ENGI	R 2421 is required for this option)	
ENGR 2421	Engineering Data Acquisition Controls Lab	
and two more f	rom the following labs:	
ENSC 2141	Strength of Materials Lab	
ENSC 2411	Electrical Science Lab	
ENSC 2611	Electrical Fabrication Lab	
ENSC 3231	Fluids and Hydraulics Lab	
ENSC 3311	Material Science Lab	
ENSC 3431	Thermodynamics and Heat Transfer Lab	
OPTION 2	•	
MAE 3113	Measurements and Instrumentation ²	
Hours Subtotal		27
Upper Division Ma	njor Requirements ²	
ENSC 3313	Materials Science	3
FPST 1213	Fire Safety Hazards Recognition	3
FPST 1373	Fire Suppression and Detection Systems	3
FPST 2243	Design and Analysis of Sprinkler Systems	3
FPST 3373	Fire Dynamics	3
FPST 4143	Industrial Ventilation and Smoke Control	3
IEM 3503	Engineering Economic Analysis	3
MAE 3013	Engineering Analysis and Methods I	3
MAE 3153	Introduction to MAE Design	3
MAE 3233	Heat Transfer	3
MAE 3333		3
MAE 3324	Fundamental Fluid Dynamics	4
MAE 3403	Mechanical Design I	
	Computer Methods in Analysis and Design	3
MAE 3524	Thermal Fluids Design	4
MAE 3724	Dynamic Systems Analysis and Introduction to Control	4
	ne following 2 categories, selecting one course	7
	y so that both categories are represented:	
Category I (Realiza		
MAE 4243	Aerospace Propulsion and Power	
MAE 4263	Energy Conversion Systems	
MAE 4353	Mechanical Design II	
NAAE 4000		
MAE 4363	Advanced Methods in Design	
MAE 4363 MAE 4513	Advanced Methods in Design Aerospace Structures	
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Thermal Systems Realization

MAE 4713

Refrigeration Systems Design

MAE 4723

WIAL 4125	ricingeration dystems besign	
Category II (Capstone	e Design): ²	
MAE 4344	Design Projects	
MAE 4354	Aerospace Systems Design for Mechanical Engineers	
MAE 4374	Aerospace System Design	
Upper Division Elective	e Requirements	
	ves to be selected from the following list, e Category I listed above, but not used to equirement:	3
MAE 3033	Design of Machines and Mechanisms	
MAE 3123	Manufacturing Processes	
MAE 3223	Thermodynamics II	
MAE 3253	Applied Aerodynamics and Performance	
MAE 3293	Fundamentals of Aerodynamics	
MAE 4003	Introduction to Autonomous Systems	
MAE 4010	Mechanical and Aerospace Engineering Projects	
MAE 4053	Automatic Control Systems	
MAE 4063	Mechanical Vibrations	
MAE 4273	Experimental Fluid Dynamics	
MAE 4313	Advanced Processing of Engineered Materials	
MAE 4333	Mechanical Metallurgy	
MAE 4583	Corrosion	
MAE 4733	Mechatronics Design	
3 hours of FPST/CET	electives to be selected from the following	3

3 hours of FPST/CET electives to be selected from the following list, or from courses in the Category I listed above, but not used to satisfy the category requirement:

3000-level or above from:

Total Hours		130
Hours Subtotal		61
FPST 4383	Fire and Evacuation Modeling	
FPST 4213	Advanced Building Design and Analysis	
FPST 3383	Building Electrical Systems	
FPST 3113	Advanced Special Hazard Suppression and Detection	
CET 4443	Construction Safety and Loss Control	
3000-level of above	e irom.	

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MAE requires grades of "C" or better for any course that is a pre-requisite or co-requisite to a required course on the degree plan.

2

Grades of "C" or higher in all Upper Division Major Requirements courses and ME Realization Category course and Capstone Design Category course.

Graduation Requirements

- A "C" or better is required in each course taken that is designated with footnote 1 or footnote 2.
- The major engineering design experience, capstone course, is satisfied by MAE 4344 Design Projects or MAE 4354 Aerospace Systems Design for Mechanical Engineers or MAE 4374 Aerospace Systems Design.

Additional State/OSU Requirements

- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.
- Limit of: one-half of major course requirements as transfer work; onefourth of hours earned by correspondence; 8 transfer correspondence hours
- Students will be held responsible for degree requirements in effect at
 the time of matriculation and any changes that are made, so long as
 these changes do not result in semester credit hours being added or
 do not delay graduation.
- Degrees that follow this plan must be completed by the end of Summer 2030.