Design, Materials, Manufactoring- Design
Department of Mechanical and Aerospace Engineering, Ohio State University

- A total of 12 credit hours are required to complete the Technical Elective Requirements
- Students must complete two courses (a minimum of 6 credit hours) from two of the three categories (Design, Computational, Applications)
- **This is an example curriculum. All students must meet program requirements as detailed here:** https://mae.osu.edu/mechanical-engineering-technical-electives

Design Classes- Take up to 9 credit hours of		
Course	Hours	Course Name
ME 5194 (Metzler)	3	Smart Product Design
ME 5194 (Srinivasan)	3	Control System Design
ME 5240	3	Mechanical Vibration
ME 5372	3	Design and Control of Mechatronic Systems
ME 5374	3	Smart Materials and Intelligent Systems
ME 5512	2	Design of Heat Exchangers
ME 5680	4	Computer Aided Design and Manufacturing
ME 5682.01	3	Fundamentals of Product Design Engineering
ME 5683	3	Product Design Engineering Laboratory
ME 5751	3	Design and Manufacturing of Compliant Mechanisms and Robots
Computational Classes- Take up to 9 credit hours of		
Course	Hours	Course Name
ME 5139	3	Applied Finite Element Method
ME 5194 (Shah)	3	CAD Modeling Techniques for Mechanical Design using CATIA
ME 5339	3	Simulation Techniques for Dynamic Systems
Applications Classes- Take up 6 credit hours of		
Course	Hours	Course Name
ME 5194 (Midlam-Mohler)	3	Model Based Design and Hardware in the Loop
ME 5241	3	Engineering Acoustics
Other Classes- Take no more than 3 credit hours of the following		
Course	Hours	Course Name
ACCTMIS 2000	3	Foundations of Accounting
BUSMHR 2500	3	Entrepreneurship
ECE 5553	3	Autonomy in Vehicles
ECE 5554	3	Powertrain Control Systems
ENGR 5050	3	Introduction to Humanitarian Engineering

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Other Classes- Take no more than 3 credit hours of the following (continued from page 1)		
Course	Hours	Course Name
ISE 5501	3	Fundamentals of Solid State Processing
ISE 5503	3	Manufacturing Processes and Simulation
ISE 5555	3	Manufacturing Processes and Machine Tools
ISE 5710	3	Behind Human Error: Safety and Complex Systems
ISE 5740	3	Cognitive Engineering Systems: Human-Centered Automation
ME 5600	3	Applied Project Management in Product Development Team Environments
PUBAFRS 3000	3	Introduction to Public Policy Analysis
PUBAFRS 5600	3	Science, Engineering, and Public Policy