

# Mechanical Engineering – Technical Electives

## ME TECHNICAL ELECTIVES

ME Courses	F23	S24	F24	S25	F25	S26	F26	S27	F27	F28
ME 4343 – Intermediate Heat Transfer		X			X			X		
ME 4833 – Intermediate Fluid Mechanics			X			X			X	
ME 4353 – Alternative Energy Sources		X		X		X		X		X
ME 4373 – Air Conditioning	X		X		X		X		X	
ME 4543 – Combustion Engines	X		X		X		X		X	
ME 4393 – Power Generation Systems		X		X		X		X		X
ME 4193 – Automotive Engineering		X		X		X		X		X
ME 4123 – Failure of Engineering Materials	X		X		X		X		X	
ME 4133 – Mechanical Metallurgy	X		X		X		X		X	
ME 4233 – Fundamentals of FEA		X		X		X		X		X
ME 4990 – Specials Topics in Mechanical Eng										

## ADDITIONAL TECHNICAL ELECTIVES

### Ag & Bio Engineering

- ABE 4523 – Biomedical Materials
- ABE 4563 – Robotics for Biological Systems
- ABE 4613 – Biomechanics
- ABE 4633 – Biomedical Signals and Sensors

### Aerospace Engineering

- ASE 4233 – Structural Dynamics
- ASE 4423 – Int. Comp Fluid Dynamics
- ASE 4713 – Intro to Unmanned Aircraft

### Chemistry

- CH 4513 – Organic Chemistry I
- CH 4523 – Organic Chemistry II
- CH 4554 – Integrated Organic I
- CH 4564 – Integrated Organic II

### Chemical Engineering

- CHE 4143 – Adv Poly/Composite Materials
- CHE 4733 – Introduction to Sustainability

### Electrical & Computer Engineering

- ECE 4443 – Sensor Processing for Avs
- ECE 4923 – Fdbk Con Sys II

### Engineering Mechanics

- EM 4123 – Intro. to Finite Element Methods
- EM 4133 – Mechanics of Composite Materials
- EM 4213 – Advanced Mechanics of Materials

### Industrial Engineering

- IE 4113 – Human Factors
- IE 4613 – Engineering Statistics I
- IE 4624 – Engineering Statistics II
- IE 4733 – Linear Programming
- IE 4923 – Six Sigma Methods and Project
- CE 4753 – Construction Cost Estimation

### Mechanical Engineering

- ME 4123 – Failure of Engineering Materials
- ME 4133 – Mechanical Metallurgy
- ME 4233 – Fundamentals of FEA
- ME 4343 – Intermediate Heat Transfer
- ME 4543 – Combustion Engines
- ME 4833 – Int. Fluid Mechanics

### Petroleum Engineering

- PTE 4903 – Petr Reservoir Eng 1
- PTE 4913 – Petr Reservoir Eng 2
- PTE 4923 – Completion Design
- PTE 4953 – Formation Eval
- PTE 4963 – Oil Recovery Methods
- PTE 4993 – Petroleum Econ Analysis

### Special Topics

- ASE 4990 – Aerospace Composites Manufacturing
- CHE 4990 – Intro to Nuclear Engineering
- ECE 4990 – Power Systems Grounding

## IMPORTANT NOTES:

1. At least 1 of the 3 technical elective requirements must be a course offered by the ME department (ME 4XXX).
2. The Topic for ME 4990 will be announced during the semester the course will be offered.
3. These courses are outside of ME, and the schedule is subject to change.
4. Students are limited to ONE Directed Individual Studies (DIS) course to apply towards the three technical elective requirements.
5. A MA 4000 level course may be selected (MUST have “MA” prefix // “not ST”)