# MECHANICAL ENGINEERING - GENERAL CONCENTRATION

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME 326</td>
<td>Intermediate Dynamics</td>
<td>4</td>
</tr>
<tr>
<td>ME 418</td>
<td>Implementation of Mechanical Controls</td>
<td>4</td>
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<tr>
<td>or ME 419</td>
<td>Advanced Control Systems</td>
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<tr>
<td>ME 428</td>
<td>Senior Design Project I</td>
<td>2</td>
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<tr>
<td>ME 429</td>
<td>Senior Design Project II</td>
<td>2</td>
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<tr>
<td>ME 430</td>
<td>Senior Design Project III</td>
<td>2</td>
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**Technical Electives**<sup>2,3,4</sup>

Select from the following: 11-12

- ME 305 Introduction to Mechatronics
- ME 359 Fundamentals of HVAC Systems
- ME 401 Stress Analysis
- ME 402 Orthopedic Biomechanics
- ME 403 Access by Design: Introduction to Rehabilitation Engineering
- ME/CE 404 Applied Finite Element Analysis
- ME 405 Mechatronics
- ME 410 Experimental Methods in Mechanical Design I
- ME 412 Composite Materials Analysis and Design
- ME 415 Energy Conversion
- ME 416 Ground Vehicle Dynamics and Design
- ME 423 Robotics: Fundamentals and Applications
- ME 431 Mechanical Design Techniques
- ME 434 Enhanced Oil Recovery
- ME 435 Drilling Engineering
- ME 436 Petroleum Production Engineering
- ME 437 Nuclear Energy Power Generation
- ME 438 Nuclear Power Plant Design
- ME 439 Nuclear Power Plant Operations
- ME 441 Single Track Vehicle Design
- ME 442 Design of Machinery
- ME 443 Turbomachinery
- ME 444 Combustion Engine Design
- ME 450 Solar Thermal Power Systems
- ME 453 Trends and Opportunities in HVAC&R
- ME 454 Benchmarking and Assessment of Building Energy Performance
- ME 455 Introduction to Building Energy Modeling
- ME 456 HVAC Air and Water Distribution System Design
- ME 457 Refrigeration Principles and Design
- ME 458 Building Heating and Cooling Loads
- ME 488 Wind Energy Engineering
- ME 501/CE 511 Continuum Mechanics and Elasticity
- ME 503/CE 513 Inelastic Stress Analysis
- ME/CE 504 Finite Element Analysis
- ME 506 System Dynamics
- ME 507 Mechanical Control System Design
- ME 517 Advanced Vibrations
- ME 518 Machinery Vibration and Rotor Dynamics
- ME 540 Viscous Flow
- ME 541 Advanced Thermodynamics
- ME 542 Dynamics and Thermodynamics of Compressible Flow
- ME 552 Advanced Heat Transfer I
- ME 553 Advanced Heat Transfer II
- ME 554 Computational Heat Transfer
- ME 556 Advanced Heat Transfer III
- ME 579 Fluid Power Control

Select 0 - 4 units from:

Any upper-division or graduate level course in the College of Engineering with the exception of GE Upper-Division B, ENGR 301, senior project, thesis, special problems and co-op courses.

Total units: 25-26

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1. ENGR 459, ENGR 460 and ENGR 461 (6), or ENGR 463, ENGR 464 and ENGR 465 (6) may substitute for ME 428, ME 429 and ME 430 (6).
2. Consultation with advisor is recommended prior to selecting Technical Electives. Note that 300-level Technical Electives cannot be used for graduate credit in the blended BS + MS Mechanical Engineering program.
3. ME 470, ME 471, ME 570 and ME 571 are variable topics courses, and may or may not count as ME Electives. Please contact instructor for additional information. A course substitution form may be required.
4. ME 400 and ME 500 are independent study classes and may be acceptable for Technical Elective credit. A course substitution form is required.