MECHANICAL ENGINEERING - GENERAL CONCENTRATION

ME 326  Intermediate Dynamics  4
ME 418  Implementation of Mechanical Controls  4
or ME 419  Advanced Control Systems
ME 428  Senior Design Project I  4
ME 429  Senior Design Project II  4
ME 430  Senior Design Project III  4

Technical Electives  1,2,3
Select from the following:  11-12
Select 8-12 units from the following ME courses:
ME 305  Introduction to Mechatronics
ME 359  Fundamentals of HVAC Systems
ME 401  Stress Analysis
ME 402  Orthopedic Biomechanics
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 Area B7, ENGR 301, senior project, thesis, special problems, and coop courses.

Total units  25-26

1 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.
2 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.
3 ME 400 and ME 500 are independent study classes and may be acceptable for technical elective credit. A course substitution form is required.
4 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).