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 2
ME 429 Senior Design Project II 2
ME 430 Senior Design Project III 2
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).