# General Curriculum in BS Mechanical Engineering

**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**  
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 409** Interdisciplinary Study in Biomechanics  
**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 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.