

# 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 <sup>1</sup>	2
ME 429	Senior Design Project II <sup>1</sup>	2
ME 430	Senior Design Project III <sup>1</sup>	2
<b>Technical Electives</b> <sup>2,3,4</sup>		
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 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**

- <sup>1</sup> 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).
- <sup>2</sup> 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.
- <sup>3</sup> 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.
- <sup>4</sup> ME 400 and ME 500 are independent study classes and may be acceptable for Technical Elective credit. A course substitution form is required.