MECHANICAL ENGINEERING TECHNICAL ELECTIVES

11 Units Total

Subject | Catalog | Course Title | Term Typically Offered
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ME | 305 | Introduction to Mechatronics | F, W, SP
ME | 359 | Fundamentals of HVAC Systems | W
ME | 400 | Special Problems for Advanced Undergraduates | F, W, SP
ME | 401 | Stress Analysis | TBD
ME | 402 | Orthopedic Biomechanics | SP
ME | 404 | Applied Finite Element Analysis | F, W, SP
ME | 405 | Mechatronics | W, SP
ME | 409 | Interdisciplinary Study in Biomechanics | TBD
ME | 410 | Experimental Methods in Mechanical Design I | TBD
ME | 412 | Composite Materials Analysis and Design | F, SP
ME | 415 | Energy Conversion | SP
ME | 416 | Ground Vehicle Dynamics and Design | F
ME | 423 | Robotics: Fundamentals and Applications | SP
ME | 431 | Mechanical Design Techniques | TBD
ME | 434 | Enhanced Oil Recovery | TBD
ME | 435 | Drilling Engineering | TBD
ME | 436 | Petroleum Production Engineering | TBD
ME | 437 | Nuclear Energy Power Generation | F
ME | 438 | Nuclear Power Plant Design | W
ME | 439 | Nuclear Power Plant Operations | SP
ME | 441 | Single Track Vehicle Design | W
ME | 442 | Design of Machinery | F
ME | 443 | Turbomachinery | SP
ME | 444 | Combustion Engine Design | W
ME | 450 | Solar Thermal Power Systems | W
ME | 453 | Trends and Opportunities in HVAC&R | SP

Subject | Catalog | Course Title | Term Typically Offered
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ME | 454 | Benchmarking & Assessment of Building Energy Performance | W
ME | 455 | Introduction to Building Energy Modeling | SP
ME | 456 | HVAC Air and Water Distribution System Design | F
ME | 457 | Refrigeration Principles and Design | SP
ME | 458 | Building Heating and Cooling Loads | F
ME | 470 | Selected Advanced Topics | TBD
ME | 471 | Selected Advanced Laboratory | TBD
ME | 488 | Wind Energy Engineering | SP
ME | 501 | Continuum Mechanics and Elasticity | F
ME | 503 | Inelastic Stress Analysis | W
ME | 504 | Finite Element Analysis | SP
ME | 506 | System Dynamics | SP
ME | 507 | Mechanical Control System Design | F
ME | 517 | Advanced Vibrations | SP
ME | 518 | Machinery Vibration and Rotor Dynamics | W
ME | 540 | Viscous Flow | W
ME | 541 | Advanced Thermodynamics | TBD
ME | 542 | Dynamics and Thermodynamics of Compressible Flow | F
ME | 552 | Advanced Heat Transfer I | F
ME | 553 | Advanced Heat Transfer II | W
ME | 554 | Computational Heat Transfer | SP
ME | 556 | Advanced Heat Transfer III | SP
ME | 570 | Selected Advanced Topics | TBD
ME | 571 | Selected Advanced Laboratory | TBD
ME | 579 | Fluid Power Control | TBD

Consultation with advisor is recommended prior to selecting technical electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.

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 is required.

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