

course	unique	days	time	room	instructor	course	unique	days	time	room	instructor
M E 338	MACHINE ELEMENTS Analysis for the design and manufacture of basic mechanical elements, and their role in the design of machines; application of finite element modeling. Prerequisite: Engineering Mechanics 319 with a grade of at least C-, and credit or registration for Mechanical Engineering 334. • 17825 MWF 800 - 900 ETC 2.108 • 17830 MWF 100 - 200P ETC 2.136						• 17925 W 1200 - 100P ETC 2.108 TH 1200 - 200P ETC 3.157 • 17930 W 1200 - 100P ETC 2.108 W 100 - 300P ETC 3.157 • 17935 W 1200 - 100P ETC 2.108 T 230 - 430P ETC 3.157 • 17940 W 1200 - 100P ETC 2.108 M 300 - 500P ETC 3.157 • 17945 W 1200 - 100P ETC 2.108 TH 300 - 500P ETC 3.157 • 17950 W 1200 - 100P ETC 2.108 W 330 - 530P ETC 3.157 • 17955 W 1200 - 100P ETC 2.108 T 500 - 700P ETC 3.157	MASADA, G MASADA, G MASADA, G MASADA, G MASADA, G MASADA, G MASADA, G			
M E 339	HEAT TRANSFER Steady and transient heat conduction; forced and natural convection; radiation; introduction to heat exchangers and applications. Prerequisite: Mechanical Engineering 218 or 318M, 330, and 130L with a grade of at least C- in each; and credit or registration for Mechanical Engineering 139L. • 17835 TTH 200 - 330P BUR 216 HEAT TRANSFER Designed to accommodate 100 or more students. Steady and transient heat conduction; forced and natural convection; radiation; introduction to heat exchangers and applications. Prerequisite: Mechanical Engineering 218 or 318M, 330, and 130L with a grade of at least C- in each; and credit or registration for Mechanical Engineering 139L. • 17840 TTH 930 - 1100 ETC 2.136					M E 343	THERMAL-FLUID SYSTEMS Designed to accommodate 35 or fewer students. Analysis and design of integrated systems involving simultaneous application of thermodynamics, heat transfer, and fluid mechanics. Applications to power generation, vehicle engineering, materials processing, environmental control, and manufacturing. Prerequisite: Mechanical Engineering 330, 130L, 339, and 139L with a grade of at least C- in each. • 17960 TTH 330 - 500P ETC 2.132 WANG, Y M 500 - 600P ETC 7.146				
M E 139L	EXPERIMENTAL HEAT TRANSFER Experimental design concepts, uncertainty analysis, and systems analysis as applied to thermodynamics, fluid mechanics, and heat transfer systems. Prerequisite: Credit or registration for Mechanical Engineering 339. • 17845 M 300 - 400P JGB 2.324 SHI, L W 800 - 1000 ETC 7.162 • 17850 M 300 - 400P JGB 2.324 SHI, L W 1000 - 1200 ETC 7.162 • 17855 M 300 - 400P JGB 2.324 SHI, L F 1000 - 1200 ETC 7.162 • 17860 M 300 - 400P JGB 2.324 SHI, L W 1200 - 200P ETC 7.162 • 17865 M 300 - 400P JGB 2.324 SHI, L TH 1200 - 200P ETC 7.162 • 17870 M 300 - 400P JGB 2.324 SHI, L W 200 - 400P ETC 7.162 • 17875 M 300 - 400P JGB 2.324 SHI, L F 200 - 400P ETC 7.162 • 17879 M 300 - 400P JGB 2.324 SHI, L T 800 - 1000 ETC 7.162 • 17880 M 300 - 400P JGB 2.324 SHI, L W 400 - 600P ETC 7.162 • 17881 M 300 - 400P JGB 2.324 SHI, L TH 1200 - 200P ETC 7.162 • 17882 M 300 - 400P JGB 2.324 SHI, L TH 600 - 800P ETC 7.162 • 17883 M 300 - 400P JGB 2.324 SHI, L T 600 - 800P ETC 7.162 • 17884 M 300 - 400P JGB 2.324 SHI, L F 400 - 600P ETC 7.162 • 17885 M 300 - 400P JGB 2.324 SHI, L W 600 - 800P ETC 7.162 • 17886 M 300 - 400P JGB 2.324 SHI, L F 800 - 1000 ETC 7.162 • 17887 M 300 - 400P JGB 2.324 SHI, L F 1200 - 200P ETC 7.162 • 17888 M 300 - 400P JGB 2.324 SHI, L TH 400 - 600P ETC 7.162 • 17889 M 300 - 400P JGB 2.324 SHI, L W 1000 - 1200 ETC 7.162					M E 344	DYNAMIC SYSTEMS AND CONTROLS Lumped physical system models; electrical, fluid, mechanical, and thermal system analysis; linear system transient, steady-state behavior; introduction to feedback control. Prerequisite: Mathematics 427J or 427K, Mechanical Engineering 205 or 318M, and 324 or 314D with a grade of at least C- in each; Mechanical Engineering 340 and 140L with a grade of at least C- in each; and credit or registration for Mechanical Engineering 144L or 244L. • 17965 TTH 930 - 1100 ETC 3.108 • 17970 TTH 1230 - 200P ETC 3.108 • 17975 MWF 100 - 200P ETC 3.112				
						M E 144L	DYNAMIC SYSTEMS & CONTROLS LAB Modeling of engineering systems, digital simulation, and assessment of results with experimental study; methods for analysis of first- and second-order systems, system identification, frequency response and feedback control principles; hands-on experimentation with mechanical, fluid, electrical, and magnetic systems; data acquisition and analysis using oscilloscopes and microcomputer-based analog-to-digital and digital-to-analog conversion; theoretical and practical principles governing the design and use of various sensors and transducers. Prerequisite: Credit or registration for Mechanical Engineering 344. • 17980 F 1200 - 100P ETC 2.108 LONGORIA, R M 900 - 1100 ETC 4.160 • 17985 F 1200 - 100P ETC 2.108 LONGORIA, R W 900 - 1100 ETC 4.160 • 17990 F 1200 - 100P ETC 2.108 LONGORIA, R TH 900 - 1100 ETC 4.160 • 17995 F 1200 - 100P ETC 2.108 LONGORIA, R TH 930 - 1130 ETC 4.160 • 18000 F 1200 - 100P ETC 2.108 LONGORIA, R M 100 - 300P ETC 4.160 • 18005 F 1200 - 100P ETC 2.108 LONGORIA, R W 100 - 300P ETC 4.160 • 18010 F 1200 - 100P ETC 2.108 LONGORIA, R M 400 - 600P ETC 4.160 • 18015 F 1200 - 100P ETC 2.108 LONGORIA, R T 400 - 600P ETC 4.160 • 18020 F 1200 - 100P ETC 2.108 LONGORIA, R W 400 - 600P ETC 4.160 • 18025 F 1200 - 100P ETC 2.108 LONGORIA, R TH 400 - 600P ETC 4.160				
M E 340	MECHATRONICS Theory and application of electrical circuits, electronics, and electromechanical devices; concepts in electrical power transmission; instrumentation; feedback; integration of electronics and instrumentation with mechanical engineering systems (mechatronics). Aerospace Engineering 375 and Mechanical Engineering 340 may not both be counted. Prerequisite: Mathematics 408D, Physics 303L, and 103N with a grade of at least C- in each; and credit or registration for Mechanical Engineering 140L. • 17890 TTH 1100 - 1230P ETC 2.136 • 17895 TTH 330 - 500P ETC 2.136					M E 350	MACHINE TOOL OPERATN FOR ENGRS Offered on the letter-grade basis only. Hands-on manual and computer-numerical-controlled machine tool operation. Part design and tool selection for production. Mechanical Engineering 350 and 379M (Topic 7: Machine Tool Operations for Engineers) may not both be counted. • 18030 W 1000 - 1100 ETC 5.132 CULLINAN, M TTH 900 - 1200 ETC 1.210 • 18035 W 1000 - 1100 ETC 5.132 CULLINAN, M TTH 100 - 400P ETC 1.210				
M E 140L	MECHATRONICS LABORATORY Hands-on laboratory using hand-held and bench-top electronic test and prototyping equipment for circuits and mechatronics applications; computer-aided instrumentation and data acquisition; laboratory study in design, prototyping, and testing with electrical and electronics components and electromechanical devices. Prerequisite: Credit or registration for Mechanical Engineering 340. • 17900 W 1200 - 100P ETC 2.108 MASADA, G M 900 - 1100 ETC 3.157 • 17905 W 1200 - 100P ETC 2.108 MASADA, G T 900 - 1100 ETC 3.157 • 17910 W 1200 - 100P ETC 2.108 MASADA, G W 900 - 1100 ETC 3.157 • 17915 W 1200 - 100P ETC 2.108 MASADA, G M 1200 - 200P ETC 3.157 • 17920 W 1200 - 100P ETC 2.108 MASADA, G T 1200 - 200P ETC 3.157					M E 353	ENGINEERING FINANCE Additional hour(s) to be arranged. Evaluating the financial impact of engineering decisions. Comparing alternatives with cash flow analysis considering rate of return, inflation, and taxes, with emphasis on analyzing risk. Managing complex projects with activity scheduling and resource allocation considering cash flows. Methods include probabilistic analysis and simulation. Prerequisite: Mathematics 408D or 408M, Mechanical Engineering 205 or 318M, and 335 with a grade of at least C- in each. • 18040 TTH 330 - 500P CPE 2.214 BICKEL, J M 800 - 1000 ETC 2.140 • 18045 TTH 330 - 500P CPE 2.214 BICKEL, J W 800 - 1000 ETC 3.112 • 18050 TTH 330 - 500P CPE 2.214 BICKEL, J M 1000 - 1200 ETC 2.140 • 18055 TTH 330 - 500P CPE 2.214 BICKEL, J W 1000 - 1200 ETC 2.140				