Graduate Course Offerings

	COURSE No.	*COURSE TITLE*	*PREREQUISITES*	*FA*	*SP*	*SU*
AERODYNAMICS	MAE 4223+	Aerospace Engineering Laboratory	MAE 3113, 3253, 4283		X	
& FLIGHT	MAE 4283+	Aerospace Vehicle Stability & Control	MAE 3253,3723, ENSC 2123	X		
DYNAMICS	MAE 4513+	Aerospace Structures I	MAE 3323, 3403	X		
	MAE 5913	Advanced Aerodynamics	MAE 3233 or equivalent	X		
	MAE 5923	Guidance & Control of Aerospace Vehicles	MAE 4053 or ECEN 4413 or equivalent		Z	
	MAE 5933	Aeroelasticity	Graduate standing or consent of instructor		Y	
	MAE 5943	Unsteady Aerodynamics & Aeroacoustics	ENSC 3233 or equivalent		Y	
	MAE 5953	Aerospace Systems Engineering I	MAE 3253		Z	
THERMAL &	MAE 4243 +	Gas Power Systems	ENSC 3233	X		
FLUIDS	MAE 4263 +	Vapor Power Systems	MAE 3223, 3233		X	
SCIENCES	MAE 4273 +	Experimental Fluid Dynamics	MAE 3113, ENSC 3233	X		
	MAE 4703 +	Design of Indoor Environmental Systems	MAE 3223, 3233	X		
	MAE 4713 +	Thermal Systems Design, Simul., & Optim.	MAE 3233, 3223, ENSC 3233; Co-Requisite: MAE 3403		X	
	MAE 5233 #	Viscous Fluid Dynamics	ENSC 3233	X		
	MAE 5243 #	Micro Flows	Graduate standing or consent of instructor		X	
	MAE 5253 #	Multiphase Flow	Graduate standing	X		
	MAE 5263	Combustion	MAE 3233	AA	AA	
	MAE 5633	Advanced Thermal Systems	MAE 3223, 3233, ENSC 3233	Z		
	MAE 5653	Refrigeration	MAE 3223		Y	
	MAE 5803	Advanced Thermodynamics I	MAE 3223		Z	
	MAE 5813	Intermediate Heat Transfer	MAE 3233 or equivalent		Z	
	MAE 5823	Radiation Heat Transfer	MAE 3233 or equiv. & grad. standing or consent of inst.	Y		
	MAE 5843	Conduction Heat Transfer	ENSC 3233	X		
	MAE 5853	Computational Heat Transfer	MAE 3233, graduate standing, & knowledge of FORTRAN		AA	
	MAE 5863	Bldg Heat Transfer & Simulation	MAE 3223, 3233, ENSC 3233		Z	
	MAE 5873	Advanced Indoor Environmental Systems	MAE 4703		Y	
	MAE 6233	Turbulent Fluid Dynamics	MAE 5233		X	
	MAE 6263 #	Computational Fluid Dynamics	MAE 5233		X	
	MAE 6823	Advanced Radiative Transfer	MAE 5823	AA	AA	
	MAE 6843	Convection Heat Transfer	MAE 5233 or equivalent		Y	
APPLIED	MAE 4333 +	Mechanical Metallurgy	ENSC 3313		X	
MECHANICS	MAE 4353 +	Mechanical Design II	MAE 3033, 3323, 3403		X	
& DESIGN	MAE 4363 +	Experimental Methods in Design	MAE 3113, 3323		X	
	MAE 5093 #, *	Numerical Engineering Analysis	Undergrad. course in comp. prog. & consent of instructor			X
	MAE 5403	Computer-Aided Analysis and Design	Undergrad. course in comp. prog. & consent of instructor	AA	AA	
	MAE 5503	Advanced Composites	ENSC 2113, 2143 & consent of instructor	X		
	MAE 5533	Analysis of Structural Systems	MAE 3323		Z	
	MAE 5553	Fatigue and Fracture Mechanics	MAE 4333 or consent of instructor	AA	AA	
	MAE 5563	Finite Element Methods	Graduate standing or consent of instructor	X		
	MAE 5573 #	Continuum Mechanics	Consent of instructor	X		
	MAE 5593 #	Theory of Viscoelasticity	Consent of instructor		Y	
	MAE 5663	Advanced Finite Element Analysis	MAE 5563 or consent of instructor		X	
	MAE 5673	Mechanics of Fracture, Contact & Friction	Graduate standing or consent of instructor	AA	AA	
	MAE 5743	Geometric Modeling for Design & Manuf.	C programming or consent of instructor	AA	AA	

ATTENTION OSU-TULSA GRADUATE STUDENTS

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AA = As available
X = Every term (as shown above)
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MANUFACTURING	MAE 4313 +	Adv. Processing of Engineered Materials	ENSC 3313		X	
& MATERIALS	MAE 5113	Diffract. for Nondestructive Material Eval.	Graduate standing or consent of instructor	Z		
	MAE 5123	Adv. Material Removal Processes	ENSC 3313, MAE 3123 & grad. standing or consent of inst.	Z		
	MAE 5133 #	Mechanical Behavior of Materials	ENSC 3313 or equivalent		Z	
	MAE 5143	Tribology	Graduate standing or consent of instructor	AA	AA	
	MAE 5153	Precision Engineering I	Graduate standing or consent of instructor	AA	AA	
	MAE 5543 #	Modern Materials	ENSC 3313	Y		
	MAE 5583	Corrosion Engineering	ENSC 3313	X		
	MAE 5683#	Advanced Materials Science I	ENSC 3313 or equivalent		X	
	MAE 5993	Microstructural Mechanics	Graduate Standing or consent of instructor	Y		
	MAE 6123	Non-Traditional Machining	MAE 3123, 5123 & graduate standing or consent of inst.	AA	AA	
	MAE 6133	Surface Mechanics	Consent of instructor		Y	
	MAE 6143	Thermal Analysis of Manuf. Processes	Graduate standing or consent of instructor	AA	AA	
DYNAMICS &	MAE 4053 +	Automatic Control Sys. (X List ECEN 4413)	MAE 3723 or ECEN 3723	X		
CONTROL	MAE 4063 +	Mechanical Vibrations	MAE 3723		X	
	MAE 4733 +	Mechatronics Design	MAE 3113, 3403	X		
	MAE 5073	Advanced Mechanical Vibrations	MAE 4063 or consent of instructor	AA	AA	
	MAE 5083	Engineering Acoustics	Graduate standing or consent of instructor	AA	AA	
	MAE 5413	Optimal Control (X List ECEN 5413)	MAE 5713 or ECEN 5713	AA		AA
	MAE 5433	Robotics, Kinematics, Dynamics & Control	MAE 4053 or ECEN 4413 or consent of instructor		Y	
	MAE 5463	Nonlinear System Analysis and Control	MAE 4053 or ECEN 4413	X		
	MAE 5473	Digital Control Systems	MAE 4053 or ECEN 4413	X		
	MAE 5483	Digital Data Acquisition & Control	Undergraduate course in programming		X	
	MAE 5513	Stochastic Systems (X List ECEN 5513)	MAE 4053 or 4063 or ECEN 3513 & 4503, or STAT 4033	X		
	MAE 5523	Estimation Theory (X List ECEN 5523)	MAE 5513 or ECEN 5513		Z	
	MAE 5703	Optimization (X List CHE 5703)	Graduate standing	X		
	MAE 5713	Linear Systems (X List ECEN 5713)	Graduate standing or consent of instructor		X	
	MAE 5733	Neural Networks (X List ECEN 5733)	Graduate standing		X	
	MAE 5773	Intelligent Systems (X List ECEN 5773)	MAE 5733 or ECEN 5733	Y		
	MAE 6423	System Identification (X List ECEN 6423)	MAE 5473 or 5713 or ECEN 5473 or ECEN 5713	Y		
	MAE 6453	Adaptive Control (X List ECEN 6453)	MAE 5473 or 5713, or ECEN 5473 or ECEN 5713	Z		
	MAE 6463	Advances in Nonlinear Control	MAE 5463 or ECEN 5463	AA	AA	
	MAE 6483	Robust Multivariable Control Systems	MAE 5713 or ECEN 5713		Z	
BIOMECHANICS,	MAE 4623 +,#	Biomechanics	MATH 2163, ENSC 2143, 3233		X	
BIOFLUID &	MAE 5003 #	Advanced Biomaterials Science & Eng.	Graduate standing or consent of instructor		X	
BIOMATERIALS	MAE 5013 #	Physiological System Analysis for Engrs.	Graduate standing or consent of instructor	X		
	MAE 5033 #	Adv. Biomedical Engr. (X List CHE 5293)	Consent of instructor	X		

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