

Department of Aerospace Engineering and Mechanics University of Alabama															
Course Offerings (Fall 2017 through Summer 2021) Course offerings subject to change pending enrollment and instructor availability															
Course Number	Slash / Cross Listed	Description	HRS	2017	2018	2018	2018	2019	2019	2019	2020	2020	2020	2021	2021
				Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer
AEM 120		Aerospace Sciences for Educators	4			X			X			X			X
AEM 121		Intro to Aerospace Engineering	1	X	X		X	X		X	X		X	X	
AEM 201		Statics	3	X	X	X	X	X	X	X	X	X	X	X	X
AEM 249		Algorithms	2	X	X		X	X		X	X		X	X	
AEM 250		Mechanics of Materials	3	X	X	X	X	X	X	X	X	X	X	X	X
AEM 251		Mechanics of Materials Laboratory	1	X	X	X	X	X	X	X	X	X	X	X	X
AEM 264		Dynamics	3	X	X	X	X	X	X	X	X	X	X	X	X
AEM 311		Fluid Mechanics	3	X	X	X	X	X	X	X	X	X	X	X	X
AEM 313		Aerodynamics	3	X	X		X	X		X	X		X	X	
AEM 341		Aerospace Structures	3	X	X		X	X		X	X		X	X	
AEM 349		Applied Numerical Methods	3	X	X		X	X		X	X		X	X	
AEM 351		Aerospace Structures Laboratory	1		X			X			X			X	
AEM 360		Astronautics	3		X	X		X	X		X	X		X	X
AEM 368		Flight Mechanics	3		X	X		X	X		X	X		X	X
AEM 402		Integrated Aerospace Design I	3	X			X			X			X		
AEM 404		Integrated Aerospace Design II	3		X			X			X			X	
AEM 408	AEM 508	Propulsion Systems	3	X			X			X			X		
AEM 413	AEM 513	Compressible Flow	3		X	X		X	X		X	X		X	X
AEM 414	AEM 514	Experimental Aerodynamics	3										X		
AEM 415	AEM 515	Micro-Aerial Vehicles	3				X								
AEM 416	AEM 516	Helicopter Theory	3		X										
AEM 420		CFD	3	X			X			X			X		
AEM 428	AEM 528	Space Propulsion	3		X						X				
AEM 446	AEM 546	Intermediate Solid Mechanics	3								X				
AEM 448	AEM 548	Stochastic Mechanics	3	X											
AEM 451		Aircraft Structural Design	3		X			X			X			X	
AEM 452	AEM 552	Composite Materials	3		X									X	
AEM 453	AEM 553	Multi-Scale Analysis: Composites	3					X							
AEM 455	AEM 555	Non-Destructive Evaluation	3				X								
AEM 461		Comput. Meth. Aerospace Structures	3		X			X			X			X	
AEM 468		Flight Dynamics & Control	3	X			X			X			X		
AEM 469	AEM 569	Orbital Mechanics	3		X						X				
ME/AEM 470	AEM 570	Mechanical Vibration	3	taught by Mechanical Engineering Department											
ME/AEM 471	AEM 571	Fundamentals of Acoustics	3	taught by Mechanical Engineering Department											
AEM 474	AEM 574	Structural Dynamics	3				X							X	
AEM 475	AEM 575	Fund of Aeroelasticity	3					X							X
AEM 481	AEM 581	Complex Engineering Systems	3	X						X					
AEM 482	AEM 582	Space Systems	3				X						X		
AEM 484	AEM 584	Space Environments	3	X						X					
AEM 488	AEM 588	Adv. Space Propulsion & Power	3					X							X
AEM 491/492		Special Problems	-	taught when demand/resources are sufficient											
AEM 492	AEM 592	SP: Remote Sensing	3				X			X			X		
AEM 492	AEM 592	SP: Engineering Modeling & Analytics	3				X			X			X		
AEM 492	AEM 592	SP: Thermal Radiation	3				X			X			X		
AEM 491	AEM 591	SP: Data Visualization	3					X			X			X	
AEM 491	AEM 591	SP: Research Methods	3					X			X			X	
AEM 495		Senior Seminar	3	X			X			X			X		
AEM 500		Intermediate Fluid Mechanics	3		X			X			X			X	
AEM 508	AEM 408	Propulsion	3	X			X			X			X		
AEM 513	AEM 413	Compressible Flow	3		X			X			X			X	X
AEM 514	AEM 414	Experimental Aerodynamics	3										X		
AEM 515	AEM 415	Micro-Aerial Vehicles	3				X								
AEM 516	AEM 416	Helicopter Theory	3		X										
AEM 520		CFD	3		X						X				
AEM 525		GNC	3				X						X		
AEM 528	AEM 428	Space Propulsion	3		X						X				
AEM 530		Continuum Mechanics	3	X						X					
AEM 535		Applied FEM	3											X	
AEM 546	AEM 446	Intermediate Solid Mechanics	3								X				
AEM 548	AEM 448	Stochastic Mechanics	3	X											
AEM 552	AEM 452	Composite Materials	3		X									X	
AEM 553	AEM 453	Multi-Scale Analysis: Composites	3					X							
AEM 555	AEM 455	Non-Destructive Evaluation	3				X						X		

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AEM/ME 562		Intermediate Dynamics (alt w/ ME)	3	ME			AEM				ME			AEM													
AEM 569	AEM 469	Orbital Mechanics	3		X						X																
ME/AEM 570	AEM 470	Mechanical Vibration	3	taught by Mechanical Engineering Department																							
AEM 574	AEM 474	Structural Dynamics	3				X							X													
AEM 575	AEM 475	Fund of Aeroelasticity	3					X							X												
ME/AEM 577		Adv. Linear Controls	3	taught by Mechanical Engineering Department																							
AEM 581	AEM 481	Complex Engineering Systems	3	X							X																
AEM 582	AEM 482	Space Systems	3				X							X													
AEM 584	AEM 484	Space Environments	3	X							X																
AEM 588		Adv. Space Propulsion & Power	3					X							X												
AEM 591/592		Special Problems	3	taught when demand/resources are sufficient																							
AEM 492	AEM 592	SP: Remote Sensing	3				X				X			X													
AEM 492	AEM 592	SP: Engineering Modeling & Analytics	3				X				X			X													
AEM 492	AEM 592	SP: Thermal Radiation	3				X				X			X													
AEM 491	AEM 591	SP: Data Visualization	3					X				X			X												
AEM 491	AEM 591	SP: Research Methods	3					X				X			X												
AEM 594		Special Project	3	taught when demand/resources are sufficient																							
AEM 598		Non-Thesis Research	3	X	X	X	X	X	X	X	X	X	X	X	X	X											
AEM 599		Thesis Research	3	X	X	X	X	X	X	X	X	X	X	X	X	X											
AEM 606		Physical Gas Dynamics	3					X							X												
AEM 614		Airfoil & Wing Theory	3	X							X																
AEM 616		Rotorcraft Aeromechanics	3	taught when demand/resources are sufficient																							
AEM 617		Aircraft Systems	3		X							X															
AEM 621		Viscous Flow	3	X							X																
AEM 622		Turbulent Flow	3					X							X												
AEM 624		Hypersonic Flow	3				X							X													
AEM 625		Adv. CFD	3	taught when demand/resources are sufficient																							
AEM 626		Unsteady Flow	3					X																			
AEM 630		Flow Control	3												X												
AEM 635		FEM	3	X							X																
AEM 637		Theory of Elasticity	3		X							X															
AEM 638		Intro Experimental Mechanics	3				X							X													
AEM 644		Engineering Fracture Mechanics	3								X																
AEM 648		Theory of Plasticity	3	X																							
AEM 649		Fatigue Analysis	3					X																			
AEM 655		Adv. Composite Materials	3		X							X															
AEM 662		Multi-Body Dynamics	3									X															
AEM 668		Adv. Dynamics of Flight	3					X							X												
AEM 685		Engineering Optimization	3								X																
AEM 691		Special Problems	3	taught when demand/resources are sufficient																							
AEM 694		Special Project	3	taught when demand/resources are sufficient																							
AEM 698		Non-Dissertation Research	-	X	X	X	X	X	X	X	X	X	X	X	X	X											
AEM 699		Dissertation Research	-	X	X	X	X	X	X	X	X	X	X	X	X	X											
GES 551		Matrix & Vector Analysis	3			X			X			X			X												
GES 554		PDE	3			X		X	X		X	X		X	X												