

**5-Year Course Plan: Schedule can change based on instructor availability and registration demands.**  
**For the most accurate list of course offerings for the present and next semester, use [oscar.gatech.edu](http://oscar.gatech.edu)**

Subject	Course	Title	Curriculum Type	2022-2023			2023-2024			2024-2025			2025-2026			2026-2027		
				Fall	Spr.	Sum.	Fall	Spr.	Sum.	Fall	Spr.	Sum.	Fall	Spr.	Sum.	Fall	Spr.	Sum.
COE	2001	Introduction to Mechanics (Statics)	Required	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
COE	3001	Deformable Bodies	Required	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AE	1355	Design Competition I	Elective	X	X		X	X		X	X		X	X		X	X	
AE	1601	Introduction to AE	Required	X	X		X	X		X	X		X	X		X	X	
AE	2010	Thermodynamics and Fluids Fundamentals	Required	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AE	2011	Compressible Flow/Fluid Fundamentals	Required (bridge)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AE	2220	Dynamics	Required	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AE	2221	3D Dynamics	Required (bridge)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AE	2355	Aerospace Systems Design Competition II	Elective	X	X		X	X		X	X		X	X		X	X	
AE	2610	Intro. to Experimental Methods in Aerospace	Required	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AE	2611	Tech Communications for Aerospace Eng	Required	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AE	3030	Aerodynamics	Required	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AE	3140	Structural Analysis	Required	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AE	3330	Intro. to Aerospace Vehicle Performance	Required	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AE	3340	Design and Systems Engineering Methods	Required	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AE	3355	Aerospace Systems Design Competition III	Elective	X	X		X	X		X	X		X	X		X	X	
AE	3530	System Dynamics & Vibration	Required	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AE	3531	Control System Analysis and Design	Required	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AE	3610	Experiments in Fluid and Solid Mechanics	Required	X	X		X	X		X	X		X	X		X	X	
AE	4040	Computational Fluid Dynamics	AE Option	X			X			X			X			X		
AE	4071	Rotorcraft Aeromechanics	AE Option	X			X			X			X			X		
AE	4080	Aerothermodynamics	AE Option	X			X			X			X			X		
AE	4132	Finite Element Analysis	AE Option		X			X			X			X			X	
AE	4220	Structural Dynamics & Aeroelasticity	AE Option		X						X						X	
AE	4341	Aircraft Design	Required (FW)	X	X		X	X		X	X		X	X		X	X	
AE	4342	Space System Design	Required (Space)	X	X		X	X		X	X		X	X		X	X	
AE	4343	Rotorcraft Design	Required (Rotor)	X	X		X	X		X	X		X	X		X	X	
AE	4355	Aerospace Systems Design Competition IV	Elective	X	X		X	X		X	X		X	X		X	X	
AE	4361	Space Flight Operations	AE Option	X				X						X				
AE	4451	Jet & Rocket Propulsion	Required	X	X		X	X		X	X		X	X		X	X	
AE	4453	Advanced Aircraft Propulsion	AE Option	X			X			X			X			X		
AE	4531	Aircraft Flight Dynamics	Required (FW)	X	X		X	X		X	X		X	X		X	X	
AE	4532	Spacecraft Flight Dynamics	Required (Space)	X	X		X	X		X	X		X	X		X	X	
AE	4580	Introduction to Avionics Integration	AE Option				X						X					
AE	4610	Dynamics and Control Laboratory	Required	X	X		X	X		X	X		X	X		X	X	
AE	4760	Engineering Acoustics and Noise Control	AE Option		X						X						X	
AE	4791	Mechanical Behavior of Composites	AE Option	X			X			X			X			X		
AE	4793	Composite Materials & Processes	AE Option		X			X			X			X			X	
AE	4802	Configuration Aerodynamics and Flight Performance	AE Option		X			X			X			X			X	
AE	4803	Intro to Safety by Design / Accident Causation	AE Option	X			X			X			X			X		
AE	4803	Planetary Spacecraft Development	AE Option				X						X					

AE	4803	Robotics and Autonomy	AE Option	X			X			X			X			X		
AE	4803	Flight Test Engineering	AE Option		X					X	X						X	
AE	4803	TD1: Team Design - Fixed Wing Aircraft	AE Option		X			X		X			X				X	
AE	4803	TD2: Team Design - Aircraft Competition	AE Option		X			X		X			X				X	
AE	4701 / 6701	Wind Engineering	AE Option					X-DL					X-DL					
AE	4803 / 8803	Space Instrumentation for Life Detection	AE Option	X						X							X	
AE	4803 / 8803	Numerical Analysis and Algorithms	AE Option		X-DL					X-DL							X-DL	
AE	6009	Viscous Fluid Flow	PhD Quals	X-DL			X-DL			X-DL			X-DL			X-DL		
AE	6012	Turbulent Flows	PhD Quals		X-DL			X-DL		X-DL			X-DL			X-DL		
AE	6015	Advanced Aerodynamics	PhD Quals		X-DL			X-DL		X-DL			X-DL			X-DL		
AE	6030	Unsteady Aerodynamics	Elective				X					X						
AE	6042	Computational Fluid Dynamics	Elective		X-DL			X-DL		X-DL			X-DL				X-DL	
AE	6050	Gas Dynamics	PhD Quals			X-DL			X-DL			X-DL			X-DL			X-DL
AE	6060	Aeroacoustics	Elective							X-DL							X-DL	
AE	6070	Rotary Wing Aerodynamics	Elective		X-DL					X-DL							X-DL	
AE	6080	Dynamics of Turbulence	Elective							X								
AE	6100	Structural Stability I	Elective				X					X						
AE	6114	Fundamentals of Solid Mechanics	PhD Quals	X-DL			X-DL			X-DL			X-DL			X-DL		
AE	6115	Fundamentals of Aero Structural Analysis	PhD Quals		X-DL			X-DL		X-DL			X-DL			X-DL		
AE	6170	Structural Optimization	Elective				X					X						
AE	6200	Advanced Aeroelasticity I	Elective		X					X							X	
AE	6210	Advanced Dynamics I	PhD Quals		X-DL			X-DL		X-DL			X-DL			X-DL		
AE	6220	Rotorcraft Structural Dynamics and Aeroelasticity	Elective					X					X					
AE	6230	Structural Dynamics	PhD Quals	X-DL			X-DL			X-DL			X-DL			X-DL		
AE	6310	Optimization for the Design of Engineered Systems	PhD Quals		X-DL			X-DL		X-DL			X-DL			X-DL		
AE	6333	Rotorcraft Design I	PhD Quals	X-DL			X-DL			X-DL			X-DL			X-DL		
AE	6334	Rotorcraft Design II	Elective		X-DL					X-DL							X-DL	
AE	6343	Aircraft Design I	PhD Quals	X-DL			X-DL			X-DL			X-DL			X-DL		
AE	6344	Aircraft Design II	Elective		X-DL			X-DL		X-DL			X-DL			X-DL		
AE	6353	Orbital Mechanics	PhD Quals	X-DL			X-DL			X-DL			X-DL			X-DL		
AE	6355	Planetary Entry, Descent and Landing	Elective					X-DL						X-DL				
AE	6361	Air Breathing Propulsion System Design I	Elective		X-DL			X-DL		X-DL			X-DL				X-DL	
AE	6362	Safety by Design	Elective			X-DL			X-DL					X-DL				
AE	6372	Aerospace Systems Engineering	Elective	X-DL			X-DL			X-DL			X-DL			X-DL		
AE	6373	Advanced Design Methods I	Elective	X-DL			X-DL			X-DL			X-DL			X-DL		
AE	6383	Applied Design Laboratory (FW)	Elective	X-DL			X-DL			X-DL			X-DL			X-DL		
AE	6383	Applied Design Laboratory (Rotorcraft)	Elective															
AE	6393	Introduction to System of Systems Engineering Principles	Elective	X-DL			X-DL			X-DL			X-DL			X-DL		
AE	6394	System of Systems Engineering Applications	Elective		X-DL			X-DL		X-DL			X-DL			X-DL		
AE	6410	Combustion Dynamics	Elective		X-DL					X-DL							X-DL	
AE	6412	Turbulent Combustion	Elective					X					X					
AE	6450	Rocket Propulsion	Elective		X-DL					X-DL							X-DL	
AE	6451	Electric Propulsion	Elective				X					X						
AE	6503	Helicopter Stability and Control	Elective	X-DL						X-DL						X-DL		
AE	6505	Random Processes and Kalman Filtering	Elective					X					X					

AE	6511	Optimal Guidance & Control	Elective				X					X					
AE	6520	Advanced Flight Dynamics	PhD Quals		X-DL			X-DL			X-DL		X-DL			X-DL	
AE	6530	Multivariable Linear Systems and Control	PhD Quals	X-DL			X-DL			X-DL		X-DL			X-DL		
AE	6531	Aerospace Robust Control I	Elective				X						X				
AE	6551	Cognitive Engineering	Elective	X-DL						X-DL						X-DL	
AE	6580	Nonlinear Control	PhD Quals		X-DL			X-DL			X-DL			X-DL			X-DL
AE	6705	Introduction to Mechatronics	Elective	X			X					X					
AE	6721	Evaluation of Human Integrated Systems	Elective				X					X					
AE	6760	Acoustics I	Elective	X-DL			X-DL			X-DL		X-DL			X-DL		
AE	6761	Acoustics II	Elective		X			X			X			X			X
AE	6762	Applied Acoustics	Elective														
AE	6765	Kinetics & Thermodynamics of Gases	PhD Quals	X-DL			X-DL			X-DL		X-DL			X-DL		
AE	6766	Combustion	PhD Quals		X-DL			X-DL			X-DL			X-DL			X-DL
AE	6769	Linear Elasticity	Elective				X			X		X			X		
AE	7772	Fund-Fracture Mechanics	Elective	X			X			X		X			X		
AE	7785	Intro Robotics Research	Elective	X			X			X		X			X		
AE	8002	AE Graduate Seminar	Required	X	X		X	X		X	X	X	X		X	X	
AE	8750	Robotics Research Fundamentals I	Elective	X	X		X	X		X	X	X	X		X	X	
AE	8751	Robotics Research Fundamentals II	Elective	X	X		X	X		X	X	X	X		X	X	
AE	8803	Nonlinear Stochastic Optimal Control	Elective		X-DL						X-DL					X-DL	
AE	8803	Vertical Lift Aeromechanics	Elective	X-DL			X-DL			X-DL		X-DL			X-DL		
AE	8803	Satellite Orbit Determination	Elective		X-DL						X-DL					X-DL	
AE	8803	Intelligent Cyber Physical Systems	Elective		X-DL						X-DL					X-DL	
AE	8803	Spacecraft Attitude Estimation and Control	Elective					X-DL					X-DL				
AE	8803	Optimal Transport Theory and Applications	Elective		X-DL						X-DL					X-DL	
AE	8803	Optimization-Based Learning Control and Games	Elective	X-DL						X-DL					X-DL		
AE	8803	Math Principles of Planning and Decision-Making for Autonomy	Elective					X					X				
AE	8813	Aerospace Propulsion Lab (1-0-4-3)	Elective		X						X					X	
AE	8883	Spacecraft Engineering I	Elective	X			X			X		X			X		
AE	8883	Spacecraft Engineering II	Elective		X			X			X		X			X	