

Aerospace Course Offering Schedule

NOTE: The pre-requisites listed assume aerospace coursework was completed as per the prescribed curriculum in the Undergraduate Catalog

Course No.	Course Name	Notes	Fall	Spring	Summer
ENAE 100 (1 Credit)	The Aerospace Engineering Profession	Substitutions: UNIV100, ENES181	✓		
ENAE 200 (1 credit)	The Aerospace Engineering Profession II	Depending on seats available, only open to ENAE majors		✓	
ENAE 202	Aerospace Computing	Substitution: CSMC 106 or 132, credit for only one course		✓	
ENAE 283	Introduction to Aerospace Systems	Prereq: PHYS 161 ENES 102 MATH 141 Co-req: PHYS 260/261	✓		✓
ENAE 301	Dynamics of Aerospace Systems	Prereq: ENAE 283, Linear Algebra, MATH 246, PHYS 270/271	✓		
ENAE 311	Aerodynamics	Prereq: ENAE 283 MATH 246	✓		✓
ENAE 324 (4 credits)	Aerospace Structures	Prereq: ENES 220		✓	
ENAE 362	Aerospace Instrumentation and Experimentation	Prereq: ENAE 283 MATH 246 PHYS 260/261 Coreq:ENAE380	✓		
ENAE 380	Flight Software Systems	Prereq: ENAE 202 ENAE 283	✓		
ENAE 403	Aircraft Flight Dynamics	Prereq: ENAE 414 ENAE 432	✓		
ENAE 404	Space Flight Dynamics	Prereq: ENAE 301		✓	
ENAE 414	Aerodynamics II	Prereq: ENAE 311		✓	
ENAE 423	Vibration and Aeroelasticity	Prereq: ENAE 324	✓		✓
ENAE 432	Control of Aerospace Systems	Prereq: ENAE 283 ENAE 301 MATH 246		✓	

Course No.	Course Name	Notes	Fall	Spring	Summer
ENAE 441	Space Navigation and Guidance	Prereq: ENAE 404, ENAE 432	✓		
ENAE 455	Aircraft Propulsion and Power	Prereq: ENAE 311 ENAE 414 ENME 232/320	✓		
ENAE 457	Space Propulsion and Power	Prereq: ENAE 311 ENME 232/320 PHYS 260/261	✓		
ENAE 464	Aerospace Engr. Lab	Prereq: ENAE 311 ENAE 324 ENAE 362 ENAE 432		✓	
ENAE 471	Introduction to Principles of Aircraft Flight Testing	Prereq: ENAE 414	✓		
ENAE 481	Principles of Aircraft Design	Prereq: ENAE 324 ENAE 362 ENAE 432	✓		
ENAE 482	Aeronautical Systems Design	Prereq: ENAE 403 ENAE 455 ENAE 481		✓	
ENAE 483	Principles of Space Systems Design	Prereq: ENAE 324 ENAE 362 ENAE 404 ENAE 432	✓		
ENAE 484	Space Systems Design	Prereq: ENAE 441 ENAE 457 ENAE 483		✓	
ENAE 398H/499	Independent Research Project	Permission of Department	✓	✓	
NON-AEROSPACE COURSES	PHYS 161, 260/261, 270/271; CHEM 135; MATH 140, 141, 240, 246, 461	See specific course descriptions in catalog	✓	✓	✓
ENES 100	Intro. To Engr. Design	Entrance into Engineering School; Placement into MATH 140 or higher	✓	✓	
ENES 102	Statics	Prereq: MATH 140	✓	✓	✓

Course No.	Course Name	Notes	Fall	Spring	Summer
ENES 220	Mechanics of Materials	Prereq: ENES 102 MATH 141 PHYS 161	✓	✓	✓
ENME 232 or ENME 320	Thermodynamics	Prereq: PHYS 260, MATH 141	✓	✓	✓ Typically offered in Winter
ENGL 393	Technical Writing	Prereq: Junior standing and completion of ENGL 101 or equivalent	✓	✓	✓

Aerospace Electives

Depending on student interest and faculty availability, the following courses are offered as electives for the undergraduate program. Students may also take a course from the other aerospace engineering track or an ENAE graduate level class if approved by department.

COURSE NUMBER	TITLE	CREDITS
ENAE 415	Helicopter Theory	3
ENAE 416	Viscous Flow & Aerodynamic Heating	3
ENAE 420	Computational Structural Mechanics	3
ENAE 424	Design and Manufacture of Composite Prototypes	3
ENAE 425	Mechanics of Composite Structures	3
ENAE 471	Aircraft Flight Testing	3
ENAE 480	Product Design	3
ENAE 488A	Topics in Wind Tunnel Testing	3
ENAE 488B	Introduction to Computational Fluid Dynamics	3
ENAE 488E	Electro-Mechanical System Modeling	3
ENAE 488M	High Speed Aerodynamics	3
ENAE 488L	Special Aircraft Design	3
ENAE 488R	Hybrid Rocket Design	3
ENAE 488T	Engineering Optimization	3
ENAE 488W	Design of Remotely Piloted Vehicles	3
ENAE 398H or 499*	Elective Research	3

*ENAE 499 is repeatable to 6 credits; only 3 credits may count towards degree requirements.

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