

Graduate School of Engineering and Applied Sciences (GSEAS)

Department of Mechanical and Aerospace Engineering Space Systems Academic Group https://nps.edu/web/mae https://nps.edu/web/ssag

Curriculum 591 Space Systems Engineering

Quarter	Course	Course	Course	Course	Course	Course
1 Su	EC2440 (3-2) Introduction to Scientific	MA1115 (4-0) Multi Variable Calculus	MA1116 (3-0) Vector Calculus	PH1121 (4-2) Mechanics	NW3230 (4-2) Strategy & War	SS4000 (0-1) Space Systems Seminars
	Programming					
2 F	MA2121 (4-0)	AE2820 (3-2)	ME2801 (3-2)	PH1322 (4-2)	SS4000 (0-1)	
	Differential Equations		Introduction to	Electromagnetism	Space Systems	
		Spacecraft Structures	Control Systems		Seminars	
3 W	MA3046 (4-1)	SS3500 (4-2)	PH2514 (4-0)	NW3285 (4-0)	SS4000 (0-1)	
	Matrix Analysis	Orbital Mechanics	Introduction to the	Theater Security	Space Systems	
		and Launch Systems	Space Environment	Decision Making	Seminars	
4 Sp	AE3815 (3-2)	EO2525 (4-1)	PH3052 (4-0)	SS4000 (0-1)	Degree Track Elective	
	Spacecraft Rotational	Probabilistic Analysis	Physics of Space and	Space Systems		
	Mechanics	of Signals and Communication Sys	Airborne Sensor Systems	Seminars		
5 Su	EC3230 (3-1)	EO3525 (4-1)	SS3051 (4-0)	SS4000 (0-1)	Degree Track Elective	
	Space Power and	Communications	Military Applications	Space Systems		
	Radiation Effects	Engineering	of DoD & Commercial Space Sys	Seminars		
6 F	AE3818 (3-2)	AE3851 (3-2)	SS3861 (2-4)	SS4000 (0-1)	Degree Track Elective	
	Spacecraft Attitude,	Spacecraft Propulsion	Spacecraft Payload	Space Systems		
	Determination, and Control		Design I	Seminars		
7 W	AE3804 (3-2)	SS3001 (4-1)	SS4861 (2-4)	SS4000 (0-1)	Degree Track Elective	
	Thermal Control of	Military Applications	Spacecraft Payload	Space Systems		
	Spacecraft	of National Space Systems	Design II	Seminars		
8 Sp	AE0810 (0-8)	AE4870 (4-0)	\$\$3101 (3-2)	SS4000 (0-1)	Degree Track Elective	
	Thesis Research	Spacecraft Design and	Ground Systems and	Space Systems		
		Integration I	Mission Operations	Seminars		
9 Su	AE0810 (0-8)	AE4871 (2-4)	EO2701 (4-2)	NW3275 (4-0)	SS4000 (0-1)	
	Thesis Research	Spacecraft Design and	Introduction to Cyber	Joint Maritime	Space Systems	
		Integration II	Systems	Operations - part 1	Seminars	
10 F	AE0810 (0-8)	AE0810 (0-8)	MN3331 (5-1)	NW3276 (2-2)	SS4000 (0-1)	
	Thesis Research	Thesis Research	Principles of	Joint Maritime	Space Systems	
			Acquisition and	Operations - part 2	Seminars	
			Program Mgmt			

MS-AE Degree Track

Track Courses

AE3811 (2-2) Space Systems Laboratory

AE3830 (3-2) Spacecraft Guidance & Control

Electives or other AE/ME 4XXX courses based on thesis research

AE4818 (3-2) Acquisition, Tracking & Pointing of Military Spacecraft

AE4820 (3-2) Robotic Multibody Systems

AE4850 (3-2) Astrodynamic Optimization

AE4860 (2-2) Space Control

AE4881 (2-4) Aerospace Trajectory Planning and Guidance

Legend				
Preparatory Course				
591 Core				
Track Elective				
JPME				