

Table of Curriculum

Classification	Course No.	Computer Code	Course Name	Lecture; Lab.; Credit (Assignment)	Semester	Note
Mandatory General Courses	CC 010	11.010	Special Lecture on Leadership	1:0:0(0)	Spring·Fall	
	CC 020	11.020	Ethics and Safety I	1:0:0	Spring·Fall	
	CC 500	11.500	Scientific Writing	3:0:3(4)	Spring·Fall	
	CC 510	11.510	Introduction to Computer Application	2:3:3(10)	Spring·Fall	
	CC 511	11.511	Probability and Statistics	2:3:3(6)	Spring·Fall	
	CC 512	11.512	Introduction to Materials and Engineering	3:0:3(3)	Spring·Fall	
	CC 513	11.513	Engineering Economy and Cost Analysis	3:0:3(6)	Fall	
	CC 522	11.522	Introduction to Instruments	2:3:3(8)	Fall	
	CC 530	11.530	Entrepreneurship and Business Strategies	3:0:3(6)	Fall	
CC 532	11.532	Space Mission and Orbit Analysis	3:0:3(6)	Spring		
Mandatory Major Courses	SPE510	84.510	Introduction to Spacecraft Engineering	3:0:3(6)	Spring	
	SPE520	84.520	Spacecraft Mechanical Systems	3:0:3(3)	Fall	
Elective Courses (Essential)	SPE530	84.530	Spacecraft Thermal Control	3:0:3(6)	Spring	planning to open
	SPE532	84.543	Spacecraft Power System Design	3:0:3(6)	Fall	"
	SPE536	84.536	Spacecraft Onboard Computer System	3:0:3(6)	Spring	"
	SPE538	84.538	Spacecraft Communication System	3:0:3(6)	Fall	"
	SPE540	84.540	Spacecraft Control System	3:0:3(6)	Spring	"
	SPE542	84.542	Spacecraft Propulsion System	3:0:3(6)	Fall	"
	SPE546	84.546	Space Observation Payloads and Applications I	3:1:3(6)	Spring	"
	SPE560	84.560	Space Observation Payloads and Applications II	3:0:3(6)	Fall	"
	SPE562	84.562	Spacecraft Optical Systems	3:0:3(6)	Spring	"
	SPE564	84.564	Space Remote Sensing I	3:0:3(6)	Spring	"
	SPE566	84.566	Space Remote Sensing II	3:1:3(6)	Fall	"
	SPE568	84.568	Operating System	3:0:3(6)	Spring·Fall	
Elective Courses (Elective)	CS530	36.530	Networking Design and Programming	3:1:3(6)	Spring	**
	EE413	35.413	Wireless Communication Systems	3:0:3(6)	Spring	**
	EE421	35.421	Digital Signal Processing	3:0:3(6)	Fall	**
	EE432	35.432	Electronics design Lab.	1:6:3(6)	Spring	
	EE505	35.505	Engineering Random Processes	3:0:3(6)	Spring·Fall	
	EE528	35.528	Microwave Engineering	3:1:3(6)	Fall	
	EE535	35.535	Photovoltaic Power Generation	3:0:3(6)	Spring	
	EE542	35.542	Advanced Electronic Circuits	3:0:3(6)	Fall	
	EE567	35.567	Linear Systems	3:0:3(6)	Spring	
	EE571	35.571	Power Electronics Systems	3:0:3(6)	Fall	
	EE581	35.581	Applied Detection and Estimation	3:0:3(6)	Spring	
	EE594	35.594	Nonlinear Control	3:0:3(6)	Fall	
	EE625	35.625	Project Management	3:1:3(4)	Spring	
	EE681	35.681	Simulation and System Modeling	3:1:3(6)	Spring	
	EE827	35.827	Convex Optimization	3:1:3(6)	Fall	
	IE525	31.525	Stochastic Modeling I	3:1:3(5)	Fall	
	IE532	31.532	Reliability and Maintenance Engineering	3:0:3(3)	Spring	⊙
	IE539	31.539	Satellite Systems	3:0:3(6)	Fall	⊙
	IE632	31.632	Global Positioning System	2:3:3(6)	Fall	
	IE634	31.634	Multidisciplinary Design Optimization for Aerospace Systems	3:0:3(6)	Spring	
AE405	B8.405	Appraisal of Engineering Projects under Uncertainty	3:0:3(6)	Spring	⊙	
AE455	B8.455	Rocket System Engineering	3:0:3(6)	Fall	⊙	

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	AE501	B8.501	Mechanics of Composite Materials	3:0:3(6)	Fall	⊙
	AE505	B8.505	Spacecraft Attitude Dynamics and Control	3:0:3(6)	Spring	⊙
	AE516	B8.516	Introduction to Optimal Control	3:0:3(6)	Spring	
	AE532	B8.532	Spacecraft Trajectory Guidance and Control	3:0:3(6)	Spring	
	AE550	B8.550	Hypersonics Aerodynamics	3:0:3(6)	Spring	
	AE551	B8.551	Navigation and Guidance	3:0:3(6)	Spring	
	AE555	B8.555	Special Topics in Propulsion and Combustion	3:0:3(6)	Fall	
	AE621	B8.621	Special Topics in Aerospace Engineering	3:0:3(6)	Spring Fall	
	AE650	B8.650	Introduction to Electromagnetism & Optics	3:1:3(6)	Spring	
	AE810	B8.810	Mathematical Methods in Mechanical Engineering	3:0:3(6)	Spring	
	AE890	B8.890	Introduction to Finite Element Method	3:0:3(6)	Spring	
	ME481	B7.481	Measurement Instrumentation	3:0:3(6)	Fall	
	ME500	B7.500	Introduction to Finite Element Method	3:0:3(6)	Spring	
	ME502	B7.502	Measurement Instrumentation	3:0:3(6)	Fall	
	ME505	B7.505	Linear Vibration	3:0:3(6)	Spring	
	ME512	B7.512	Robot Dynamics	3:0:3(6)	Spring, Fall	
	ME550	B7.550	Linear System Control	3:0:3(6)	Spring	
	ME551	B7.551	Nonlinear System Control	3:0:3(6)	Spring	
	ME553	B7.553	Special Topics in Mechanical Engineering	3:0:3(6)	Spring, Fall	
	ME561	B7.561	Applied Matrix Computation	3:0:3(6)		
	ME761	B7.761	Laser Optics	3:0:3(4.5)	spring/fall	**
	ME800	B7.800	Astrophysics	3:0:3(4.5)	Fall	**
	MAS504	25.504	Introduction to Plasma Physics	3:0:3(4.5)	Fall	**
	PH402	20.402	Quantum Mechanics I	3:0:3(4.5)	spring	**
	PH481	20.481	Advanced Electrodynamics I	3:0:3(4.5)	fall	**
	PH441	20.441	Applied Physics Laboratory I	0:9:3(4.5)	spring	
	PH503	20.503	Geometrical Optics	3:0:3(4.5)	Spring · Fall	
	PH507	20.507	Quantum Optics	3:0:3(4.5)	spring/fall	
	PH601	20.601	Thesis (Master Student)			
	PH622	20.622	Thesis (Ph.D. Student)			planning to open
	PH624	20.624	Seminar (Master Student)	1:0:1		
Research	SPE960	84.960	Thesis (Master Student)			
	SPE980	84.980	Thesis (Ph.D. Student)			planning to open
	SPE966	84.966	Seminar (Master Student)	1:0:1		"
	SPE986	84.986	Seminar (Ph.D. Student)	1:0:1		"

Substitute Course List

학과 내 대체교과목					
구분	운영 교과목		미운영 교과목		
	과목번호	교 과 목 명	과목번호	교 과 목 명	비 고
대학원과정	AE455	위성항법시스템	MAE463	위성항법시스템	
대학원과정	AE405	인공위성시스템	MAE466	인공위성시스템	
대학원과정	ME481	전자기 및 광학개론	MAE481	전자기 및 광학개론	
대학원과정	ME500	기계공학에서의 응용수학	MAE500	기계공학에서의 응용수학	
대학원과정	ME502	유한요소법 개론	MAE502	유한요소법 개론	
대학원과정	ME505	계측공학	MAE505	계측공학	
대학원과정	ME512	고등열전달	MAE512	고등열전달	
대학원과정	AE516	로켓시스템 공학	MAE518	로켓시스템 공학	
대학원과정	AE532	복합재료역학	MAE542	복합재료역학	
대학원과정	ME550	고등동역학	MAE550	고등동역학	
대학원과정	ME551	선형진동공학	MAE551	선형진동공학	
대학원과정	AE505	불확실성하의 공학프로젝트 평가론	MAE557	불확실성하의 공학프로젝트 평가론	
대학원과정	AE501	항공우주시스템의 다분야 최적설계	MAE558	항공우주시스템의 다분야 최적설계	
대학원과정	ME553	로봇동역학	MAE553	로봇동역학	
대학원과정	ME561	선형시스템 제어	MAE561	선형시스템 제어	
대학원과정	AE555	인공위성 유도 및 제어	MAE566	인공위성 유도 및 제어	
대학원과정	AE551	비행체 최적제어 개론	MAE595	비행체 최적제어 개론	
대학원과정	AE550	우주비행체 동역학	MAE597	우주비행체 동역학	
대학원과정	AE650	항법 및 유도	MAE664	항법 및 유도	
대학원과정	AE621	극음속 유동	MAE726	평형극음속공기열역학	
대학원과정	AE621	극음속 유동	MAE728	재진입공기열역학	
대학원과정	ME761	비선형시스템 제어	MAE761	비선형시스템 제어	
대학원과정	ME800	기계공학특론	MAE800	기계공학특론	
대학원과정	AE810	추진 및 연소 특론	MAE860	추진 및 연소 특론	
대학원과정	AE890	항공우주공학 특론	MAE890	항공우주공학 특론	