Electrical Engineering: Aerospace Concentration
Aerospace Technical Electives
Degree Total: 12 credits

Course Number	Course Title	Credits	Noted Prerequisites	Terms
ATS 550	Atmospheric Radiation and Remote Sensing	3	MATH261; PH142	F
ECE 404	Experiments in Optical Electronics	2	Concurrent registration in ECE441	S
ECE 411	Control Systems	3	ECE312 with a C or higher	F
ECE 412	Digital Control and Digital Filters	3	ECE411	S
ECE 415	Semiconductor Physics and Junctions	2	MATH 340 with a C or higher; PH 142 with a C or higher	S
ECE 421	Telecommunications	3	ECE303 with a C or higher; ECE312 with a C or higher	F
ECE 441	Optical Electronics	3	ECE340 with a C or higher or ECE342 with a C or higher	F
ECE 444	Antennas and Radiation	3	ECE340 with a C or higher or ECE342 with a C or higher	F
ECE 452	Computer Organization and Architecture	3	ECE251 with a C or higher	S
ECE 455	Introduction to Robot Programming/Simulation	3	CS152 with a C or higher or CS162 with a C or higher or CS163 with a C or higher or CS164 with a C or higher	F
ECE 456	Computer Networks	4	CS152 with a C or higher or CS162 with a C or higher or CS163 with a C or higher or CS164 with a C or higher; ECE251 with a C or higher; ECE/STAT303 with a C or higher; ECE311 with a C or higher	S
ECE 461	Power Systems	4	ECE332 with a C or higher; ECE462 with a C or higher, may be enrolled concurrently	F, Odd
ECE 512	Digital Signal Processing	3	ECE312 with a C or higher	F
ECE 514	Applications of Random Processes	3	ECE303 with a C or higher; ECE312 with a C or higher	F
ECE 516	Information Theory	3	ECE303; ECE421	F
ECE 520	Optimization Methds-Control & Communication	3	MATH229 or MATH369; MATH317	S
ECE 521	Satellite Communication	3	ECE421	S
ECE/CS 528	Embedded Systems and Machine Learning	4	ECE251 with a C or higher	F
ECE 536	RF Integrated Circuit Design	3	ECE332	F, Even
ECE 540	Computational Electromagnetics	3	ECE340 with a C or higher or ECE342 with a C or higher	F, Odd
ECE 541	Applied Electromagnetics	3	ECE340 with a C or higher or ECE342 with a C or higher	F, Even
ECE 545	FPGA Signal Processing/Software-Definted Radio	3	ECE312 with a C or higher; ECE451 with a C or higher	S, Odd
ECE 548	Microwave Theory and Component Design	3	ECE342 with a C or higher	S, Odd
ECE 549	Radar Systems and Design	3	ECE340 with a C or higher or ECE342 with a C or higher	S, Odd
ECE 554	Computer Architecture	3	ECE452	S, Even
ECE 556	AI for Radar and Remote Sensing	3	CS152 with a C or higher CS162 with a C or higher or CS163 with a C or higher or CS164 with a C or higher; ECE/STAT303 with a C or higher; DSCI369 with a C or higher or MATH369 with a C or higher	S
ECE/CS 561	Hardware/Software Design of Embedded Systems	4	ECE251 with a C or higher or ECE452	S, Odd
ECE 562	Power Electronics	3	ECE332 with a C or higher	S, Even

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Course Number	Course Title	Credits	Noted Prerequisites	Terms
ECE 565	Electrical Power Engineering	3	ECE332 with a C or higher; ECE342 with a C or higher	F, Odd
ECE 572	Semiconductor Transistors	1	ECE331 with a C or higher; ECE415, may be enrolled concurrently	S
ECE 578	Satellite Data Analysis	3	ECE/STAT303 with a C or higher; ECE311 with a C or higher	F
ECE 579	Global Navigation Satellite Systems	3	ECE311 with a C or higher; MATH261 with a C or higher; PH142 with a C or higher; CS152 with a C or higher or CS162 with a C or higher or CS163 with a C or higher or CS164 with a C or higher	S
ENGR 570	Coupled Electromechanical Systems	3	ECE202 with a C or higher; MATH340 with a C or higher	F
MECH 518[2]	Orbital Mechanics	3	MATH340; PH142	F
MECH 519[2]	Aerospace Vehicles Trajectory and Performance	3	MATH340; PH142	S

[1] A maximum of 6 credits of Independent Study may apply towards total degree requirements. This includes credits awarded for ECE395 and ECE495 combined.

[2] Override rquired for registration - Must have a minimum 3.0 gpa or higher or consent of instructor.