Electrical Engineering - Aerospace Concentration

Degree requirements - 126 credits

FIRST YEAR

Fall - 15 credits		Credits	Spring - 15 credits		Credits
ENGR111	Fundamentals of Engineering *(F,S)*	3	ENGR114	Engineering for Grand Challenges *(F,S; ENGR 111 or CBE104A or CIVE101A or CIVE102 or MECH103 or MECH104A)*	3
MATH160	Calculus for Physical Scientists I *(F,S,SU; MATH124 with a B or higher; MATH126 with a B or higher or MATH127 with a B or higher)*	4	MATH161	Calculus for Physical Scientists II *(F,S,SU; MATH124 or MATH127; MATH159 or MATH160)*	4
CHEM111 and CHEM112 Fulfills AUCC Category 3A	General Chemistry I *(F,S,SU; MATH118 or MATH127 or MATH160 or MATH161 or MATH229 or MATH261)* and General Chemistry Lab I *(F,S,SU; CHEM111 or concurrent registration or CHEM120 or concurrent registration)*	5	PH141 Fulfills AUCC Category 3A	Physics for Scientists and Engineers I *(F,S,SU; MATH159 or concurrent registration or MATH160 or concurrent registration)*	5
University Core	AUCC Category 1C, 3B, 3C, 3D *(F,S,SU)* ***Recommend CS150B [1] - Culture and Coding: Python (AUCC 3B)***	3	CO150[2] Fulfills AUCC Category 1A	College Composition *(F,S,SU; CO130 or Placement)*	3

SECOND YEAR

Fall - 16 credits		Credits	Spring - 16 credits		Credits
ECE205	Analog Circuits I *(F,S; ENGR114 or concurrent registration or ENGR123 or concurrent registration; MATH159 with a C or higher or MATH160 with a C or higher)*	2	ECE206	Analog Circuits II *(S,SU; ECE103 with a C or higher or ECE205 with a C or higher; MATH161 with a C or higher)*	3
ECE252	Intro to Digital Circuits *(F,S; ENGR114 or concurrent registration or ENGR123 or concurrent registration)*	3	ECE253	Microcontrollers and C for Internet-of-Things *(F,S; ECE102 with a C or higher or ECE252 with a C or higher)*	3
CS164[1]	CS1 - Computational Thinking with Java *(F,S; CS150B with a B or higher or CS152 with a B or higher or ENGR111 with a B or higher or ENGR123 with a B or higher or CS163)*	4	ECE232	Introduction to Project Practices *(F,S; ECE202 or concurrent registration or ECE206 or concurrent registration or ECE395B or concurrent registration)*	1
MATH261	Calculus for Physical Scientists III *(F,S,SU; MATH161)*	4	MATH340	Intro to Ordinary Differential Equations *(F,S,SU; MATH261)*	4
University Core	AUCC Category 1C, 3B, 3C, 3D *(F,S,SU)*	3	PH142	Physics for Scientists and Engineers II *(F,S,SU; PH141; MATH161 or concurrent registration)*	5

THIRD YEAR

Fall - 16 credits		Credits	Spring - 17 credits		Credits
ECE311	Linear Systems Analysis I *(F; ECE202 with a C or higher or ECE206 with a C or higher ; MATH340 with a C or higher; ECE331 or concurrent registration; ECE341 or concurrent registration)*	3	ECE312	Linear Systems Analysis II *(S; ECE311 with a C or higher)*	3
ECE331	Electronics Principles I *(F; ECE202 with a C or higher or ECE206 with a C or higher; MATH340 with a C or higher; PH142 with a C or higher; ECE311 or concurrent registration; ECE341 or concurrent registration)*	4	ECE332 Fulfills AUCC Category 4	Electronic Principles II *(S; ECE331 with a C or higher)*	4
ECE341	Electromagnetic Fields & Devices I *(F; ECE202 with a C or higher or ECE206 with a C or higher; MATH340 with a C or higher; PH142 with a C or higher; ECE311 or concurrent registration; ECE331 or concurrent registration)*	3	ECE342	Electromagnetic Fields & Devices II *(S; ECE341 with a C or higher)*	3
ECE303	Introduction to Communications Principles *(S; MATH261 with a C or higher; MATH340 or concurrent registration)*	3	CO301B or JTC300 Fulfills AUCC Category 2	Writing in the Disciplines-Sciences *(F,S; CO150 or HONR193)* **or** Strategic Writing and Communication *(F,S,SU; CO150 or HONR193)*	3
SME Electives[3]	Science/Math/Engineering Elective *(F,S,SU)*	3	SME Electives[3]	Science/Math/Engineering Elective *(F,S,SU)*	4

FOURTH YEAR

Fall - 17 credits		Credits	Spring - 14 credits		Credits
ECE401 Fulfills AUCC Category 4	Senior Design Project I *(F,S; ECE232 with a C or higher; ECE311 and ECE312 with a C or higher; ECE331 and ECE332 with a C or higher; ECE341 and ECE342 with a C or higher)*	3	ECE402 Fulfills AUCC Category 4	Senior Design Project II *(F,S; ECE401)*	3
Aerospace Technical Electives[3]	See Approved List *(F,S)*	6	Aerospace Technical Electives[3]	See Approved List *(F,S)*	6
Technical Electives[3]	See Approved List *(F,S)*	2	Technical Electives[3]	See Approved List *(F,S)*	2
University Core	AUCC Category 1C, 3B, 3C, 3D *(F,S,SU)*	6	University Core	AUCC Category 1C, 3B, 3C, 3D *(F,S,SU)*	3

[1] Students may also choose one of the following: 1) CS150B + CS164; or 2) CS152 + CS162; or 3) CS163

[2] College Composition must be completed within the first 60 credits taken (CSU and transfer credits)

[3] See list of approved courses on the ECE website: https://www.engr.colostate.edu/ece/undergraduates/degree-programs/electrical-engineering-undergrad/

ECE prefix courses required for the major at the 100, 200 and 300 level must be passed with a minimum grade of C; grades below a C will require the student to retake the course. ECE courses designated as an elective are exempt from the C or higher minimum grade requirement.