



**Direct Transfer Track: Associate of Applied Science in Engineering Fundamentals concentration in Aerospace Engineering
to Bachelor of Science in Engineering in Aerospace Engineering**
Bulletin Year: 2023-2024

This course plan is a recommended sequence for this major. Please see the University of South Carolina Bulletin for detailed degree requirements and contact your academic advisor for assistance in the application of specific coursework to a program of study and course selection and planning for upcoming semesters.

Course Subject and Title	Credit Hours	Min. Grade	USC Equivalent Course	USC Degree Applicability
Semester One (15 Credit Hours)				
EGR 270 Introduction to Engineering	3	C	ENCP 101 Intro to Engineering	PR/ Supporting Course
ENG 101 English Composition I	3	C	ENGL 101 Critical Reading & Composition	CC-CMW
CHM 110 College Chemistry	4	C	CHEM 111 General Chemistry I & CHEM 111L General Chemistry I Lab	CC-SCI
MAT 110 College Algebra (7 week course)*	3	C	MATH 111 Basic College Mathematics	Pre-Req
MAT 111 College Trigonometry (7 week course)*	3	C	MATH 112 Trigonometry	Pre-Req
COL 101 College Orientation	1		Non-Transferable	
Semester Two (14 Credit Hours)				
MAT 140 Analytical Geometry & Calculus I	4	C	MATH 141 Calculus I	CC-ARP
ENG 102 English Composition II	3	C	ENGL 102 Rhetoric & Composition	CC-CMW/INF
CHEM 111 College Chemistry II	4	C	CHEM 112 General Chemistry II & CHEM 112 General Chemistry II Lab	PR
EGR 275 Intro to Engineering/Computer Graphics	3	C	ENCP 102 Intro to Engineering II	PR-Supporting Course
Summer (14 Credit Hours)				
PSC 201 American Government	3	C	POLI 201 American National Government	CC-GSS/VSR Founding Documents
MAT 141 Analytical Geometry and Calculus II	4	C	MATH 142 Calculus II	CC_ ARP
PHY 221 University Physics I	4	C	PHYS 211 Essential of Physics I and PHYS 211 Essential of Physics I Lab	CC-SCI
HIS 101 Western Civilization to 1689	3	C	HIST 101 European Civilization from Ancient Times to the Mid-17 th Century	CC-GHS
Semester Three (17 Credit Hours)				
EGR 274 Engineering App of Numerical Methods	3	C	ENCP 201 Intro to Applied Numerical Methods	PR-Supporting Course
EGR 260 Engineering Statistics	3	C	ENCP 200 Statistics	PR-Supporting Course
MAT 240 Analytical Geometry and Calculus III	3	C	MATH 241 Vector Calculus	PR-Supporting Course
PHY 222 University Physics II	4	C	PHYS 212 Essentials of Physics II & PHYS 212 Essentials of Physics II Lab	Not Required/Not Degree Applicable
MUS 105 Music Appreciation or ART 101 Art History & Appreciation or THE 101 Introduction to Theatre	3	C	MUSC 110 Introduction to Music or ARTE 101 Introduction to Art or THEA 200 Understanding & Appreciation Theatre	CC-AIU
Semester Four (15 Credit Hours)				
MAT 242 Differential Equations	4	C	MATH 242 Elem. Differential Equations	PR-Supporting Course
EGR 264 Intro to Engineering Mechanics of Solids	3	C	ENCP 260 Intro to Mechanics of Solids	PR
EGR 266 Eng. Thermodynamics Fundamentals	3	C	ENCP 290 Thermodynamics Fundamentals	PR
EGR 262 Dynamics	3	C	ENCP 210 Dynamics	MR
EGR 209 Statistics for Engineers	3	C	STAT 509 Statistics for Engineers	MR
Semester Five (15 Credit Hours)				
AESP 265 Aerodynamics I Incompressible Flow (fall only)	3			MR
Carolina Core CMS	3			CC_CMS
EMCH 371 Materials	3			MR
EMCH 308 Intro to Finite Element Stress Analysis	3			MR
MATH 344 Applied Linear Algebra	3			PR
Semester Six (15 Credit Hours)				
AESP 361 Aerospace Laboratory I (spring only)	3			MR
AESP 365 Aerodynamics II Compressible Flow	3			MR
AESP 350 Aerospace Systems (spring only)	3			MR
EMCH 330 Mechanical Vibrations (or ENCP 330)	3			MR
EMCH 577 Aerospace Structures I	3			MR
Semester Seven (15 Credit Hours)				
AESP 314 Energy Power & Propulsion (fall only)	3			MR
AESP 362 Aerospace Laboratory II (fall only)	3			MR
AESP 415 Aircraft Design	3			MR
AESP 420 Flight & Orbital Mechanics	3			MR
Aerospace Engineering Elective	3			PR

Semester Eight (15 Credit Hours)				
AESP 428 Design I (spring only)	3			MR
AESP 466 Flight Dynamics & Control (spring only)	3			MR
Aerospace Engineering Elective	3			PR
Aerospace Engineering Elective	3			PR
ELCT 220 Electrical Engineering for Non-Majors or ELCT 221 Circuits	3			PR
Take During any Semester				
Foreign Language	0-6			CC-GFL

*Students may place into and begin with MAT 140.

University Requirements: Bachelor's degree-seeking students must meet Carolina Core (general education) requirements. For more information regarding these requirements, please visit the [Carolina Core](#) page on the University website.

Codes:			
CC	Carolina Core	CC-INF	Carolina Core – Information Literacy
CC-AIU	Carolina Core-Aesthetic and Interpretive Understanding	CC-INT	Carolina Core – Integrative Course
CC-ARP	Carolina Core-Analytical Reasoning and Problem-Solving	CC-SCI	Carolina Core – Scientific Literacy
CC-CMS	Carolina Core-Effective, Engaged, and Persuasive Communication: Spoken Component	CC-VSR	Carolina Core – Values, Ethics, and Social Responsibility
CC-CMW	Effective, Engaged, and Persuasive Communication: Written Component	CR	College Requirement
CC-GFL	Carolina Core-Global Citizenship and Multicultural Understanding: Foreign Language	MR	Major Requirement
CC-GHS	Carolina Core – Historical Thinking	PR	Program Requirement
CC-GSS	Carolina Core – Social Sciences		