

**Transfer Pathway: Associate of Applied Science in Engineering Fundamentals Concentration in Mechanical Engineering
to Bachelor of Science in Engineering in Mechanical Engineering**

Bulletin Year: 2021-2022

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	UofSC Equivalent Course	UofSC Degree Applicability
Semester One (17 Credit Hours)				
EGR 270 Introduction to Engineering	3	C	ENCP 101 Intro to Engineering I (counts toward EMCH 101 Intro to Engineering)	PR-Supporting Course
ENG 101 English Composition I	3	C	ENGL 101 Critical Reading and Composition	CC-CMW
CHM 110 College Chemistry 1	4	C	CHEM 111 General Chemistry I and 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	C	Non-transferable	
Semester Two (13 Credit Hours)				
MAT 140 Analytical Geometry and Calculus I	4	C	MATH 141 Calculus 1	CC-SCI
ENG 102 English Composition II	3	C	ENGL 102 Rhetoric and Composition	CC-CMW/INF
Transfer Course (ex: CHM 111, BIO 101, or EGR 209)	3	C	Math/Science Elective	PR-Supporting Course (Math/Science Elective)
EGR 275 Intro to Engineering/Computer Graphics	3	C	ENCP 102 Intro to Engineering II (counts toward EMCH 111 Intro to Engineering Graphics and Visualizations)	PR-Supporting Course
Semester Three - 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
HIS 101 Western Civilization to 1689	3	C	Carolina Core GHS	CC-GHS
PHY 221 University Physics II	4	C	PHYS 211 Essentials of Physics I and PHYS 211L Essentials of Physics I Lab	CC-SCI
Semester Four (16 Credit Hours)				
EGR 274 Engineering App of Numerical Methods	3	C	ENCP 201 Intro to Appl Numerical Method (counts toward EMCH 201 Intro to Applied Numerical Methods)	PR-Supporting Course
EGR 260 Engineering Statics	3	C	ENCP 200 Statics (counts toward EMCH 200 Statics)	PR-Supporting Course
MAT 240 Analytical Geometry and Calculus III	4	C	MATH 241 Vector Calculus	PR-Supporting Course
ECE 221 Introduction to Electrical Engineering I	3	C	ELCT 221 Circuits	PR-Supporting Course
AIU Transfer Course (ex: MUS 105 Music Appreciation, ART 101 Art History and Appreciation, etc.)	3	C	Carolina Core AIU	CC-AIU
Semester Five (16 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	EMCH 260 Intro to the Mechanics of Solids	PR-Supporting Course
EGR 266 Engineering Thermodynamics Fundamentals	3	C	EMCH 290 Thermodynamic Fundamentals	PR-Supporting Course
EGR 262 Dynamics	3	C	ENCP 210 Dynamics (counts toward EMCH 310 Dynamics)	MR
EGR 268 Engineering Fluid Mechanics	3	C	ENCP 360 Fluid Mechanics (counts toward EMCH 360 Fluid Mechanics)	MR
			MTC Equivalent Course Option to take during summer or as transient student	UofSC Degree Applicability
Semester Six (16 Credit Hours)				
EMCH 361 Mechanical Engineering Lab I	3		EGR 261 Mechanical Engineering Lab I	MR
EMCH 327 Machine Design or EMCH 394 Applied Thermodynamics	3			MR
CSCE 206 Scientific Applications Programming	3			PR-Supporting Course
Elective	3		Any Transfer Course	Elective
EMCH 368 Mechatronics	4			MR
Semester Seven (15 Credit Hours)				
EMCH 367 Controls	3			MR
EMCH 332 Kinematics	3			MR
EMCH 354 Heat Transfer	3			MR
EMCH 362 Mechanical Engineering Lab. II	3			MR
EMCH 371 Materials ^o	3			MR
Semester Eight (15 Credit Hours)				
EMCH 377 Manufacturing	3			MR

EMCH 427 Mechanical Design I	3			MR
EMCH Elective	3			PR-Supporting Course
Math/Science Elective	3		Transfer Course (ex: CHM 111, BIO 101, or EGR 209)	PR-Supporting Course
EMCH 380 Project Management	3			MR
Semester Nine (15 Credit Hours)				
EMCH 428 Design II	3			MR
EMCH Elective	3			PR-Supporting Course
Elective	3			PR
Carolina Core GHS +Founding Documents course	3		GHS Transfer Course (ex: HIS 201)	CC-GHS
Carolina Core CMS	3		SPC 205 Public Speaking	CC-CMS
Take during any semester (0-6 Credit Hours)				
Carolina Core GFL	0-6			CC-GFL

* Students may place into and begin with MAT 140.

Approved December 2021