UNIVERSITY OF South Carolina

MIDLANDS TECHNICAL COLLEGE

Transfer Pathway: Associate of Applied Science in Engineering Fundamentals Concentration in Electrical Engineering to Bachelor of Science in Engineering in Electrical 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 (17 Credit Hours)				
ECE 101 Electrical and Electronic Engineering	3	C	ELCT 101 Electrical & Electronics Engineering	PR
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 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		Non-transferable	
Semester Two (17 Credit Hours)				
MAT 140 Analytical Geometry and Calculus I	4	C	MATH 141 Calculus 1	CC-ARP
ENG 102 English Composition II	3	C	ENGL 102 Rhetoric and Composition	CC-CMW/INF
ECE 102 Instrument Control	3	C	ELCT 102 Electrical Science	PR
THE 101 Introduction to Theater	3	C	Carolina Core AIU	CC-AIU
EGR 281 Introduction to Algorithmic Design I	4	C	CSCE 145 Algorithmic Design I	PR
Summer (15 Credit Hours)				
EGR 283 Intro to Algorithmic Design II	4	C	CSCE 146 Algorithmic Design II	PR-General Elective
MAT 141 Analytical Geometry and Calculus II	4	C	MATH 142 Calculus II	CC-ARP
HIST 101 Western Civilization to 1689	3	C	Carolina Core GHS	CC-GHS
PHY 221 University Physics I	4	C	PHYS 211 Essentials of Physics I and PHYS 211L Essentials of Physics I Lab	CC-SCI
Semester Three (17 Credit Hours)				
ECE 211 Intro to Computing Engineering I	3	C	CSCE 211 Digital Logic Design	PR
MAT 242 Differential Equations	4	C	MATH 242 Elem. Differential Equations	PR
PHY 222 University Physics II	4	C	PHYS 212 Essentials of Physics II and PHYS 212L Essentials of Physics II Lab	PR
ECE 221 Intro to Electrical Engineering I	3	C	ELCT 221 Circuits	PR
PSC 201 American Government	3	C	POLI 201 American National Government	CC-GSS/VSR (FD)
Semester Four (16 Credit Hours)				
ECE 212 Intro to Computer Engineering II	3	C	CSCE 212 Intro to Computer Architecture	PR
ECE 222 Intro to Electrical Engineering II	3	C	ELCT 222 Signals and Systems	PR
EGR 209 Statistics for Engineers	3	C	STAT 509 Statistics for Engineers	PR
MAT 240 Analytical Geometry and Calculus III	4	C	MATH 241 Vector Calculus	PR
ECE 205 Electrical and Computer Lab 1	3	C	ELCT 201 Into to Electrical Engineering Lab	PR
Semester Five (15 Credit Hours)				
CSCE 313 Embedded Systems	3	C		PR
ELCT 301 Electronics Laboratory	3			MR
ELCT 321 Digital Signal Processing	3			MR
ELCT 363 Intro. to Microelectronics	3			MR
ELCT 371 Electronics	3			MR
Semester Six (15 Credit Hours)				
ELCT 302 Real-Time Systems Laboratory	3			MR
ELCT 331 Control Systems	3			MR
ELCT 361 Electromagnetics	3			MR
EMCH 220 Mech. Engr. Fund. for Non-Majors	3			PR
General Elective	3			PR
Semester Seven (12 Credit Hours)				
ELCT 403 Capstone Design Project I	3			MR/CC-INT
Career Plan Elective	3	C		PR
Career Plan Elective	3	C		PR
Career Plan Elective	3	C		PR
Semester Eight (12 Credit Hours)				
ELCT 404 Capstone Design Project II	3			MR
Career Plan Elective	3	C		PR
Career Plan Elective	3	C		PR
Career Plan Elective	3	C		PR
Take during any semester (0-9 Credit Hours)				
Carolina Core CMS	0-3			CC-CMS
Carolina Core GFL	0-6			CC-GFL

* Students may place into and begin with MAT 140.

Renewed: June 2023

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	**FD**	Founding Document