UNIVERSITY OF South Carolina

MIDLANDS TECHNICAL COLLEGE

Direct Transfer Track: Associate of Applied Science in Engineering Fundamentals Concentration in Computer Engineering to Bachelor of Science in Engineering in Computer Engineering

Bulletin Year: 2024-2025

This course plan provides a recommended sequence for this major. For detailed degree requirements, please refer to the University of South Carolina Bulletin. Additionally, reach out to your academic advisor at Midlands Technical College for assistance in navigating coursework in your MTC program of study. Your University of South Carolina advisor will help with course selection and planning for upcoming semesters after transfer.

Course Subject and Title	Credit Hours	Min. Grade	USC Equivalent Course	USC Degree Applicability
Semester One (18 Credit Hours)				
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/ Elective
MAT 111 College Trig. (7-week course) *	3	C	MATH 112 Trigonometry	Pre-req/ Elective
COL 101 College Orientation	1		Non-transferable	Not Applicable
EGR 281 Intro to Algorithmic Design	4	C	CSCE 145 Algorithmic Design I (counts toward computer programming elective)	PR
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
CPT 247 UNIX Operating System	3	C	CSCE 215 UNIX/Linux Fundamentals	PR
HIS 101 Western Civilization to 1689 or HIS 102 Western Civilization Post 1689 or HIS 201 American History: Disc to 1877 or HIS 202 American History: 1877 to Present	3	C	HIST 101 Eur Civ: Ancient- Mid 17th Cent or HIST 102 Eur Civ: From Mid-17th Cent. or HIST 111 US History to 1865 or HIST 112 US History since 1865	CC-GHS
EGR 283 Intro to Algorithmic Design II	4	C	CSCE 146 Algorithmic Design II	PR
Summer (13 Credit Hours)				
MAT 141 Analytical Geometry and Calculus II	4	C	MATH 142 Calculus II	CC-ARP
ART 101 Art History & Appreciation or MUS 105 Music Appreciation or THE 101 Introduction to Theatre	3	C	ARTE 101 Introduction to Art or MUSC 110 Introduction to Music or THEA 200 Understanding & Apprec Theatre	CC-AIU
SPC 205 Public Speaking	3	C	SPCH 140 Public Communication	CC-CMS
PSC 201 American Government	3	C	POLI 201 American National Government	CC-GSS, Founding Documents
Semester Three (17 Credit Hours)				
ECE 102 Instrument Control	3	C	ELCT 102 Electrical Science	PR
MAT 240 Analytical Geometry and Calculus III	4	C	MATH 241 Vector Calculus	PR
ECE 211 Intro to Computer Engineering	3	C	CSCE 211 Digital Logic Design	PR
PHY 221 University Physics I	4	C	PHYS 211 Essentials of Physics I and PHYS 211L Essentials of Physics I Lab	CC-SCI
ECE 245 Object-Oriented Program Technology	3	C	CSCE 240 Advanced Programming Techniques	PR
Semester Four (17 Credit Hours)				
ECE 221 Introduction to Electrical Engineering I	3	C	ELCT 221 Circuits	PR
MAT 242 Differential Equations	4	C	MATH 242 Elem. Differential Equations	PR
EGR 209 Statistics for Engineers	3	C	STAT 509 Statistics for Engineers	PR
PHY 222 University Physics II	4	C	PHYS 212 Essentials of Physics II and PHYS 212L Essentials of Physics II Lab	PR
ECE 212 Intro to Computer Engineering	3	C	CSCE 212 Intro to Computer Architecture	PR
Semester Five (15 Credit Hours)				
CSCE 311 Operating Systems	3	C		MR
CSCE 611 Advanced Digital Design (Fall only)	3	C		MR
MATH 374 Discrete Structures	3	C		MR
ELCT 222 Signals and Systems	3	C		PR
ENGL 462 Technical Writing or ENGL 463 Bus. Writing	3	C		PR
Semester Six (14 Credit Hours)				
CSCE 313 Embedded Systems (Spring only)	3	C		MR
CSCE 350 Data Structures and Algorithms	3	C		MR
CSCE 390 Prof. Issues in Computer Science Engr.	1	C		CC-VSR
ELCT 201 Introductory Electrical Engineering Laboratory	3	C		PR
CSCE 274 Robotic Applications and Design (Spring only)	3	C		PR
CSCE 190 Computing in the Modern World	1	C		PR

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Semester Seven (12-15 Credit Hours)				
CSCE 490 Capstone Computing Project I (Fall only)	3	C		MR CC-INT
CSCE 416 Introduction to Computer Networks	3	C		MR
Computer Engineering Major Elective	3	C		MR
Computer Engineering Major Elective	3	C		PR
Carolina Core GFL	0-3			CC-GFL
Semester Eight (13-16 Credit Hours)				
CSCE 492 Capstone Computing Project II (Spring only)	3	C		MR
CSCE 491 Capstone Computer Engineering Project I (Spring only)	3	C		MR
Computer Engineering Major Elective	3	C		MR
MATH 344 Applied Linear Algebra	3	C		PR
MATH 344L Applied Linear Algebra Lab	1	C		PR
Carolina Core GFL	0-3	C		CC-GFL

* Credit hours received for MAT 110 or MAT 111 may reduce additional elective hours needed and 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	**FD**	Founding Documents