STATE OF SOUTH CAROLINA	)	
COUNTY OF RICHLAND	)	AGREEMENT
		21
Angust, 2018, by and between the institution and an agency of the State of University, and Midlands Technical College	he Universi South Car	
WITNE	SSETH:	
In consideration of the relationship between the parties and the mutual covenants and conditions contained herein, the parties hereto agree as follows:		
1. <u>Purpose</u> .		
1.01: The purpose of this Agreement is to	provide fo	r the offering of courses at Midlands

1.01: The purpose of this Agreement is to provide for the offering of courses at Midlands Technical College to promote access to and facilitate the transfer of Midlands Technical College students into the University's engineering and computing programs. This agreement describes processes for establishing and maintaining equivalencies between courses offered at Midlands Technical College and the University of South Carolina's College of Engineering and Computing.

1.02: The goal is to maintain viable 2 + 2 pathways where students can spend 2 years at Midlands Technical College and 2 years at the University of South Carolina and earn a Bachelor's degree from the College of Engineering and Computing.

#### 2. Term.

2.01: This Agreement shall be effective as of 24 August, 2018, and shall be reviewed annually by representatives of the University and Midlands Technical College prior to the anniversary date hereof.

2.02: This Agreement shall remain in full force and effect until such time as either party gives notice of termination in accordance with the provisions of Paragraph 4 herein.

#### 3. Duties and Responsibilities.

3.01: The University's College of Engineering and Computing shall accept for transfer the University approved courses taught at Midlands Technical College in its Engineering Science and in its Engineering and Computing Fundamentals academic programs. To the extent feasible, the courses shall be equivalent to the first two (2) years of the University's curriculum in the Bachelor's degrees in the College of Engineering and

Computing. Courses and curriculum covered by this agreement shall be affixed to this agreement as addenda.

- 3.02: The engineering and computing courses offered at Midlands Technical College and covered by this agreement shall be taught by faculty having credentials approved by the Dean of the University's College of Engineering and Computing or his designee.
- 3.03: Midlands Technical College students may apply for admission to the College of Engineering and Computing, through the University's Office of Admissions. Students must meet transfer admission requirements for the University of South Carolina and the College of Engineering and Computing.
- 3.04: Midlands Technical College students accepted by the University for enrollment in the College of Engineering and Computing shall receive transfer credit for courses taken at Midlands Technical College in accordance with the University's transfer policies.
- 3.05: Upon successful completion of an approved engineering or computing curriculum at the University, the transfer student shall be awarded a Bachelor's degree from the University.
- 3.06: Midlands Technical College shall designate appropriate members of its faculty as Engineering and Computing Advisors to counsel and assist students desiring to transfer to the University's engineering and computing programs. The Dean of the University College of Engineering and Computing, or his/her designee, shall assist with the advisement process by informing Midlands Technical College of curriculum changes and providing current major maps.
- 3.07: All engineering and computing courses offered at Midlands Technical College for this program shall be annually reviewed and approved by the Dean of the College of Engineering and Computing or his/her designee.

#### 4. Termination.

This Agreement may be terminated by either party at any time upon three (3) months written notice; provided, however, that such termination shall not be effective until the end of the academic term (semester) then in progress at Midlands Technical College.

#### 5. Amendments to This Agreement.

The parties hereto agree to the full and complete performance of the mutual

covenants contained herein and that this Agreement constitutes the sole, full and complete agreement between the parties, save for the addenda noted in 3.01. No amendments, changes, additions, deletions or modifications to or of this Agreement shall be valid unless reduced to writing, signed by the parties and attached hereto.

#### 6. Governing Law.

This Agreement is entered into in the County of Richland, state of South Carolina, and is governed by and construed in accordance with the laws of South Carolina.

IN TESTIMONY WHEREOF, the hands and seals of the parties are affixed hereto.

UNIVERSITY OF SOUTH CAROLINA	MIDLANDS TECHNICAL COLLEGE
By: J. Cantey Heath, Jr.	By: Ronald L. Rhames
Title: Secretary, Board of Trustees	Title: President
And: Joan T.A. Gabel Title: Provost	Date: 8/24/2018  And: Diane Carr  Title: Vice President for Academic Affairs
Date:8/24/18	Date: 8/24/2018
And: Hossein Haj-Hariri	
Title: Dean, College of Engineering and Co	omputing
Date: 08/24/18	





# **B.S.** in Chemical Engineering

FIRS	ΓYEAR
Fall Semester	
Midlands Technical College Course	USC Chemical Engineering Course
EGR 270 Intro. To Engineering	ECHE 101 Intro. To Chemical Engineering (Fall only)
ENG 101 English Comp. I	ENGL 101 Critical Reading and Composition
CHM 110 College Chemistry I	CHEM 111/111L General Chemistry I
MAT 140 Analytical Geometry and Calculus I	MATH 141 Calculus I
AIU Transfer Course (e.g. ART 101, MUS 105 or other)	Carolina Core AIU Elective
Spring Semester	,
Midlands Technical College Course	USC Chemical Engineering Course
EGR 280 Chemical Process Principles	ECHE 300 Chemical Process Principles
ENG 102 English Comp II	ENGL 102 Rhetoric and Composition
CHM 111 College Chemistry II	CHEM 112/ 112L General Chemistry II
MAT 141 Analytical Geometry and Calculus II	MATH 142 Calculus II
PHY 221 University Physics I	PHYS 211/211L Essentials of Physics I
	ID YEAR
Fall Semester	The state of the s
Midlands Technical College Course	USC Chemical Engineering Course
EGR 266 Engineering Thermodynamics Fundamentals	ECHE 310 Intro. To Chem. Engr. Thermodynamics
CHM 211 Organic Chemistry I	CHEM 333 Organic Chemistry I
CHM 211 lab Elective	CHEM Lab Elective
MAT 240 Analytical Geometry and Calculus III	MATH 241 Vector Calculus
PHY 222 University Physics II	PHYS 212/212L Essentials of Physics II
PSC 201 American Govt GSS +VSR Transfer Course	Carolina Core GSS+VSR elective (overlay)
Technical Elective (e.g. e.g. BIO 105, BIO 101, BIO 102, BIO 225, EGR 281, EGR 283, other)	Technical Elective
Spring Semester	
Midlands Technical College Course	USC Chemical Engineering Course
EGR 266 Engineering Thermodynamics Fundamentals	ECHE 311 Chem. Engr. Thermodynamics
EGR 268 Engineering Fluid Mechanics	ECHE 320 Chem. Engr. Fluid Mechanics
CHM 212 Organic Chemistry II	CHEM 334 Organic Chemistry II
CHM 212 lab Elective	CHEM Lab Elective
MAT 242 Differential Equations	MATH 242 Elem. Differential Equations
GHS Transfer Course (e.g. HIS 101, 102, 201, 202 or other)	Carolina Core GHS Elective
THIR	D YEAR
Fall Semester	A STATE OF THE STA
Midlands Technical College Course	USC Chemical Engineering Course
	ECHE 321 Heat-Flow Analysis
	ECHE 440 Separation Process Design (Fall only)
	ECHE 550 ChemProc. Dynamics and Control (Fall only)
Technical elective (e.g. e.g. BIO 105, BIO 101, BIO 102, BIO 225, EGR 281, EGR 283, other)	Technical Elective
	Chamistry Flactive

SPC 205 Public Speaking CMS Transfer Course	Carolina Core CMS Elective
Spring Semester	
Midlands Technical College Course	USC Chemical Engineering Course
	ECHE 322 Mass Transfer (Spring only)
	ECHE 460 Chemical Engineering Lab I (Spring only)
Engineering Elective (e.g. EGR 260, EGR 274, EGR 262, ECE 211, ECE 212, or other)	Engineering Elective
Technical elective (e.g. e.g. BIO 105, BIO 101, BIO 102, BIO 225, EGR 281, EGR 283, other)	Technical Elective
Any AIU, GHS, GSS Transfer Course *300 level in same discipline as Carolina Core	Liberal Arts Elective
	TH YEAR
Fall Semester	The same and the same are the same and the s
Midlands Technical College Course	USC Chemical Engineering Course
	ECHE 430 Chemical Engineering Kinetics (Fall only)
	ECHE 461 Chemical Engineering Lab II (Fall only)
	ECHE 465 Chemical Process Analysis and Design I (Fall only)
	Chemistry Elective
	Professional Development Elective (Fall only)
Spring Semester	
Midlands Technical College Course	USC Chemical Engineering Course
	ECHE 466 Chemical Process Analysis and Design II (Spring only)
	ECHE 567 Process Safety, Health and Loss Prev. (Spring only)
Engineering Elective (e.g. EGR 260, EGR 274, EGR 262, ECE 211, ECE 212, or other)	Engineering Elective
Technical elective (e.g. e.g. BIO 105, BIO 101, BIO 102, BIO 225, EGR 281, EGR 283, other)	Technical Elective
Take during any semester	
GFL Transfer course (e.g. FRE 101+102 or SPA 101+102)	Carolina Core GFL* can also be satisfied by placement score





# **B.S.E.** in Electrical Engineering

FIRST	T YEAR
Fall Semester	Annual English and Control of the Co
Midlands Technical College Course	USC Electrical Engineering Course
ECE 101 Electrical and Electronic Engineering	ELCT 101 Electrical and Electronics Engineering (Fall only)
ENG 101 English Comp I	ENGL 101 Critical Reading and Composition
CHM 110 College Chemistry I	CHEM 111/111L General Chemistry I
MAT 140 Analytical Geometry and Calculus I	MATH 141 Calculus I
AIU Transfer Course (e.g. ART 101, MUS 105 or other)	Carolina Core AIU Elective
Spring Semester	-
Midlands Technical College Course	USC Electrical Engineering Course
EGR 281 Introduction to Algorithmic Design I	CSCE 145 Algorithmic Design I
ENG 102 English Comp II	ENGL 102 Rhetoric and Composition
ECE 102 Instrument Control	ELCT 102 Electrical Science
MAT 141 Analytical Geometry and Calculus II	MATH 142 Calculus II
PHY 221 University Physics I	PHYS 211/211L Essentials of Physics I
	D YEAR
Fall Semester	
Midlands Technical College Course	USC Electrical Engineering Course
EGR 283 Intro to Algorithmic Design II	CSCE 146 Algorithmic Design II
ECE 211 Intro to Computer Engineering I	CSCE 211 Digital Logic Design
MAT 242 Differential Equations	MATH 242 Elementary Differential Equations
PHY 222 University Physics II	PHYS 212/212L Essentials of Physics II
ECE 221 Intro to Electrical Engineering I	ELCT 221 Circuits
Spring Semester	
Midlands Technical College Course	USC Electrical Engineering Course
ECE 212 Intro to Computer Engineering II	CSCE 212 Intro to Computer Architecture
ECE 222 Intro to Electrical Engineering II	ELCT 222 Signals and Systems
PSC 201 American Govt GSS +VSR Transfer Course	Carolina Core VSR+GSS Elective (overlay)
EGR 209 Statistics for Engineers	STAT 509 Statistics for Engineers
MAT 240 Analytical Geometry and Calculus III	MATH 241 Vector Calculus
ECE 205 Electrical and Computer Lab I	ELCT 201 Intro. Electrical Engineering Lab.
THIR	YEAR
Fall Semester	
Midlands Technical College Course	USC Electrical Engineering Course
	ELCT 301 Electronics Laboratory
	ELCT 321 Digital Signal Processing
	ELCT 363 Intro. To Microelectronics
	ELCT 371 Electronics
	ECON 421 Engineering Economics
	EMCH 220 Mechanical Engr. Fund for Non-Majors
Spring Semester	
Midlands Technical College Course	USC Electrical Engineering Course
	ELCT 302 Real-Time Systems Laboratory
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	ELCT 350 Computer Modeling of Elect. Sys.
	ELCT 361 Electromagnetics
FOUR	RTH YEAR
Fall Semester	
Midlands Technical College Course	USC Electrical Engineering Course
	ELCT 403 Capstone Design Project I
	Career Plan Elective
	Career Plan Elective
GHS Transfer Course (e.g. HIST 101, 102, 201, or other)	Carolina Core GHS Elective
Spring Semester	
Midlands Technical College Course	USC Electrical Engineering Course
	ELCT 403 Capstone Design Project I
	Career Plan Elective
	Career Plan Elective
	Career Plan Elective
Take during any semester	
SPC 205 Public Speaking CMS Transfer Course	Carolina Core CMS Elective
GFL Transfer Course (e.g. FRE 101+102 or SPA 101+102)	Carolina Core GFL*can also be satisfied by placement score





## **B.S.E.** in Civil Engineering

FIRS	T YEAR
Fall Semester	
Midlands Technical College Course	USC Civil Engineering Course
EGR 270 Introduction to Engineering	ECIV 101 Intro to Civil Engineering (Fall only)
ENG 101 English Comp I	ENGL 101 Critical Reading and Composition
CHM 110 College Chemistry I	CHEM 111/111L General Chemistry I
MAT 140 Analytical Geometry and Calculus I	MATH 141 Calculus I
AIU Transfer Course (e.g. ART 101, MUS 105 or other)	Carolina Core AIU Elective
Spring Semester	•
Midlands Technical College Course	USC Civil Engineering Course
EGR 260 Engineering Statics	ECIV 200 Statics
ENG 102 English Comp II	ENGL 102 Rhetoric and Composition
CHM 111 College Chemistry II	CHEM 112/112L General Chemistry II
MAT 141 Analytical Geometry and Calculus II	MATH 142 Calculus II
PHY 221 University Physics I	PHYS 211/211L Essentials of Physics I
	ND YEAR
Fall Semester	ID IEAK
	LICO Civil Fundamentos Courses
Midlands Technical College Course	USC Civil Engineering Course
EGR 274 Engineering App of Numerical Methods	ECIV 201 Computational Methods for Civil Engineering
EGR 262 Engineering Dynamics	ECIV 210 Dynamics
MAT 240 Analytical Geometry and Calculus III	MATH 241 Vector Calculus
PHY 222 University Physics II	PHYS 212/212L Essentials of Physics II
GHS Transfer Course (e.g. HIS 101, 102, 201, 202 or other)	Carolina Core GHS Elective
Spring Semester	Tugo of the state
Midlands Technical College Course	USC Civil Engineering Course
EGR 275 Intro to Engineering/Computer Graphics	ECIV 111 Intro. To Engr. Graphics and Visualization
EGR 264 Intro to Engineering Mechanics of Solids	ECIV 220 Mechanics of Solids
EGR 268 Engineering Fluid Mechanics	ECIV 360 Fluid Mechanics
MAT 242 Differential Equations	MATH 242 Elem. Differential Equations
EGR 209 Statistics for Engineers	STAT 509 Statistics for Engineers
PSC 201 American Govt GSS +VSR Transfer Course	Carolina Core GSS+ VSR Elective (overlay)
THIR	D YEAR
Fall Semester	
Midlands Technical College Course	USC Civil Engineering Course
	ECIV 303 Civil Engineering Materials (Fall only)
	ECIV 320 Structural Analysis I
	ECIV 340 Intro. To Transportation Engineering (Fall
	only)
	ECIV 350 Intro. To Environmental Engineering
	ECIV Laboratory Elective
Spring Semester	
Midlands Technical College Course	USC Civil Engineering Course
	ECIV 330 Intro. To Geotechnical Engineering (Spring

	ECIV Distribution Elective
	ECIV Elective
	ECIV Laboratory Elective
Science Elective (e.g BIO 101, BIO 102)	Science Elective
	TH YEAR
Fall Semester	
Midlands Technical College Course	USC Civil Engineering Course
	ECIV 405 Systems Applications in Civil Engineering (Fall only)
	ECIV 470 Civil Engineering Design
	ECIV Distribution Elective
	ECIV Distribution Elective
	ECIV Elective
Spring Semester	
Midlands Technical College Course	USC Civil Engineering Course
	ECIV Distribution Elective
	ECIV Elective
	ECIV Elective
ESM Elective (e.g. BIO 105, BIO 101, BIO 102, BIO 225 ECE 221 or other)	ESM Elective
ESM Elective (e.g. BIO 105, BIO 101, BIO 102, BIO 225, ECE 221 or other)	ESM Elective
Take during any semester	
GFL Transfer course (e.g. FRE 101+102 or SPA 101+102)	Carolina Core GFL*can also be satisfied by placement score
SPC 205 Public Speaking CMS Transfer Course	Carolina Core CMS Elective





# **B.S.E.** in Mechanical Engineering

FIRST	YEAR
Fall Semester	
Midlands Technical College Course	USC Mechanical Engineering Course
EGR 270 Introduction to Engineering	EMCH 101 Intro to Engineering I
ENG 101 English Comp I	ENGL 101 Critical Reading and Composition
CHM 110 College Chemistry I	CHEM 111/111L General Chemistry I
MAT 140 Analytical Geometry and Calculus I	MATH 141 Calculus I
AIU Transfer Course (e.g. ART 101, MUS 105 or other)	Carolina Core AIU Elective
Spring Semester	•
Midlands Technical College Course	USC Mechanical Engineering Course
EGR 275 Intro to Engineering/Computer Graphics	EMCH 111 Intro to Engr. Graphics and Visualization
ENG 102 English Comp II	ENGL 102 Rhetoric and Composition
CHM 111 College Chemistry II	CHEM 112/112L General Chemistry II
MAT 141 Analytical Geometry and Calculus II	MATH 142 Calculus II
PHY 221 University Physics I	PHYS 211/211L Essentials of Physics I
SECON	D YEAR
Fall Semester	
Midlands Technical College Course	USC Mechanical Engineering Course
EGR 274 Engineering App of Numerical Methods	EMCH 201 Intro to Applied Numerical Methods
EGR 260 Engineering Statics	EMCH 200 Statics
MAT 240 Analytical Geometry and Calculus III	MATH 241 Vector Calculus
PHY 222 University Physics II	PHYS 212/212L Essentials of Physics II
EGR 209 Statistics for Engineers	STAT 509 Statistics for Engineers
Spring Semester	
Midlands Technical College Course	USC Mechanical Engineering Course
EGR 264 Intro to Engineering Mechanics of Solids	EMCH 260 Intro to the Mechanics of Solids
EGR 266 Engineering Thermodynamics Fundamentals	EMCH 290 Thermodynamic Fundamentals
EGR 262 Dynamics	EMCH 310 Dynamics
EGR 261 Mechanical Engineering Lab I	EMCH 361 Mechanical Engineering Lab I
MAT 242 Differential Equations	MATH 242 Elem. Differential Equations
THIR	YEAR
Fall Semester	
Midlands Technical College Course	USC Mechanical Engineering Course
ECE 221 Intro to Electrical Engineering I	ELCT 220 Electrical Engineering for Non-Majors
	EMCH 327 Design of Mechanical Elements
EGR 268 Fluid Mechanics	EMCH 360 Fluid Mechanics
	EMCH 362 Mechanical Engineering Lab. II
	EMCH 394 Thermodynamic Sys. Design & Analysis
Spring Semester	
Midlands Technical College Course	USC Mechanical Engineering Course
	EMCH 330 Mechanical Vibrations
	EMCH 332 Kinematics & Dynamics of Machines
	EMCH 354 Heat Transfer
	EMCH 363 Mechanical Engineering Lab. III

FOURTH YEAR		
Fall Semester		
Midlands Technical College Course	USC Mechanical Engineering Course	
	EMCH 377 Manufacturing Process	
	EMCH 427 Mechanical Design I	
	EMCH Elective	
Any AIU, GHS, GSS Transfer Course	Free Elective	
PSC 201 American Govt GSS+VSR Transfer Course	Carolina Core GSS+ VSR Elective (overlay)	
Spring Semester		
Midlands Technical College Course	USC Mechanical Engineering Course	
	EMCH 428 Mechanical Design II	
	EMCH Elective	
	EMCH Elective	
GHS Transfer Course (e.g. HIS 101, 102, 201, 202 or other)	Carolina Core GHS Elective	
Take during any semester		
SPC 205 Public Speaking CMS Transfer Course	Carolina Core CMS Elective	
GFL Transfer Course (e.g. FRE 101+102 or SPA 101+102)	Carolina Core GFL*can also be satisfied by placement score	