

# Mercer County Community College/Rowan University

## Connection Agreement

### *A.S. in Engineering Science/B.S. in Engineering*

This agreement between Mercer County Community College (MCCC) and Rowan University connects students in MCCC Assoc. Degree Program in Engineering Science to various BS Programs at Rowan University's School of Engineering. These connected degree programs enable students to complete their associate degrees and then transfer to a four-year program.

This agreement is in full compliance with the State of New Jersey's Transfer Policy of September 2007, and the Comprehensive Statewide Transfer Agreement.

The successful implementation of the agreement depends upon communication of its contents to all involved participants, and assumptions of responsibility by both institutions for such communication. Periodic reviews and updates are essential.

### **The Connected Curriculum**

MCCC's A.S. degree program in Engineering Science prepares students to transfer to a baccalaureate degree in Engineering. Students develop a strong foundation in mathematics, physics, and chemistry, with emphasis on engineering applications and use of the computer as a problem-solving tool. A strong general education curriculum helps students develop communication and analytical skills.

Rowan University's Engineering Bachelor of Science degrees prepare graduates to enter the profession of modern engineering. Students are prepared to apply a broad knowledge of mathematics, science, analysis, and design to engineering problems. They are given an opportunity to experience real-world laboratory research and design problems. Graduates may be employed in industry, government, or academia. Additionally, graduates will be prepared to pursue graduate studies, should they choose to do so.

The attached guide sheets provide course equivalencies.

Summary transfer credits from Mercer County Community College into Rowan University's Engineering program:

a. Chemical Engineering Program	53
b. Civil and Environmental Engineering Program	53
c. Electrical Engineering Program	55
d. Mechanical Engineering Program	55

## Signatures



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Linda Head, Ph.D.  
Associate Dean of Engineering  
Rowan University



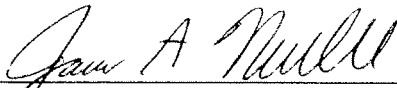
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Dr. Guy Generals  
Vice President for Academic Affairs  
Mercer County Community College



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Steven Chin, Ph.D.  
Dean of Engineering  
Rowan University



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James A. Newell, Ph.D.  
Provost  
Rowan University

**Table A.1: Course Equivalency for Chemical Engineering**

Mercer County Community College			Rowan University		
Course #	Title	C.H.	Course #	Title	C.H.
ENG 101	ENGLISH COMPOSITION I	3	COMP 01.111	Composition I	3
MAT 151	CALCULUS I	4	MATH 01.130	Calculus I	4
CHE 101	GENERAL CHEMISTRY I	4	CHEM 06.105	Advanced College Chemistry I *	4
CHE 102	GENERAL CHEMISTRY II	4			
-	-	-	ENGR 01.101	Fresh. Engineering Clinic I	2
COS 102	COMPUTER SCIENCE I -- ALGORITHMS AND PROGRAMMING	4	CS 04.103	Computer Sci. & Programming	4
-	4 GENERAL EDUCATION ELECTIVES	12	-	4 General Education Electives	12
MAT 152	CALCULUS II	4	MATH 01.131	Calculus II	4
-	-	-	CHEM 06.106	Advanced College Chemistry II	4
-	-	-	ENGR 01.102	Fresh. Engineering Clinic II	2
PHY 115	UNIVERSITY PHYSICS I	4	PHYS 02.200	Introductory Mechanics	4
-	-	-	CHEM 06.201	Principles of Chemical Processes I	2
MAT 251	CALCULUS III	4	MATH 01.230	Calculus III	4
-	-	-	BIOL 01.210	Biological Systems & Applications	4
CHE 201	ORGANIC CHEMISTRY I	5	CHEM 07.200	Organic Chemistry I	4
-	-	-	ENGR 01.201	Soph. Engineering Clinic I	4
-	-	-	CHEM 06.302	Principles of Chemical Processes II	2
MAT 252	DIFFERENTIAL EQUATIONS	4	MATH 01.231	Ordinary Differential Equations	4
-	-	-	ENGR 01.341	Fluid Mechanics I	2
	CHEMISTRY ELECTIVE	3	-	Chemistry Elective	3
-	-	-	ENGR 01.202	Soph. Engineering Clinic II	4
ECO 112	MICROECONOMICS	3	ECON 04.102	Microeconomics	3

**Total Transfer Credits 53**

\*Course equivalency evaluated on an individual basis.

**Table A.2: Course Equivalency for Civil and Environmental Engineering**

Mercer County Community College			Rowan University		
Course #	Title	C.H.	Course #	Title	C.H.
-	-	-	ENGR 01.101	Fresh. Engineering Clinic I	2
ENG 101	ENGLISH COMPOSITION I	3	COMP 01.111	Composition I	3
MAT 151	CALCULUS I	4	MATH 01.130	Calculus I	4
-	4 GENERAL EDUCATION ELECTIVES	12	-	4 General Education Electives	12
CHE 101 CHE 102	GENERAL CHEMISTRY I GENERAL CHEMISTRY II	4 4	CHEM 06.105	Advanced College Chemistry I	4
-	-	-	ENGR 01.102	Fresh. Engineering Clinic II	2
COS 102	COMPUTER SCIENCE I – ALGORITHMS & PROGRAMMING	4	CS 04.103	Computer Science & Programming	3
MAT 152	CALCULUS II	4	MATH 01.131	Calculus II	4
PHY 115	UNIVERSITY PHYSICS I	4	PHYS 02.200	Introductory Mechanics	4
-	-	-	ENGR 01.201	Soph. Engineering Clinic I	4
MAT 251	CALCULUS III	4	MATH 01.230	Calculus III	4
-	-	-	CHEM 06.106	Advanced College Chemistry II	4
CIV 103	STATICS	3	ENGR 01.271	Statics	2
-	-	-	CEE 08.305	Civil Engineering Systems	3
-	-	-	ENGR 01.202	Soph. Engineering Clinic II	4
MAT 252	DIFFERENTIAL EQUATIONS	4	MATH 01.231	Ordinary Differential Equations	4
CIV 101	SURVEYING I	3	CEE 08.103	Field Surveying	2
ENT 116	ENGINEERING GRAPHICS	2	CEE 08.102	Engineering Graphics	2
-	-	-	ENGR 01.291	Dynamics	2
CIV 230	MECHANICS OF SOLIDS	4	ENGR 01.272	Solid Mechanics	2
-	-	-	ENGR 01.341	Fluid Mechanics I	2
ECO 112	MICROECONOMICS	3	ECON 04.102	Microeconomics	3

**Total Transfer Credits 53**

**Table A.3: Course Equivalency for Electrical Engineering**

Mercer County Community College			Rowan University		
Course #	Title	C.H.	Course #	Title	C.H.
-	-	-	ENGR 01.101	Fresh. Engineering Clinic I	2
ENG 101	ENGLISH COMPOSITION I	3	COMP 01.111	Composition I	3
MAT 151	CALCULUS I	4	MATH 01.130	Calculus I	4
CHE 101 CHE 102	GENERAL CHEMISTRY I GENERAL CHEMISTRY II	4 4	CHEM 06.105	Advanced College Chemistry I	4
COS 231	FUNDAMENTALS OF COMPUTER ARCHITECTURE	4	ECE 09.241	Digital I	3
-	-	-	ENGR 01.102	Fresh. Engineering Clinic II	2
COS 102	COMPUTER SCIENCE I – ALGORITHMS AND PROGRAMMING	4	CS 04.103	Computer Sci. & Programming	4
MAT 152	CALCULUS II	4	MATH 01.131	Calculus II	4
PHY 115	UNIVERSITY PHYSICS I	4	PHYS 02.200	Introductory Mechanics	4
-	4 GENERAL EDUCATION ELECTIVES	12	-	4 General Education Electives	12
-	-	-	ENGR 01.201	Soph. Engineering Clinic I	4
MAT 251	CALCULUS III	4	MATH 01.230	Calculus III	4
PHY 215	UNIVERSITY PHYSICS II	4	PHYS 02.201	Intro. Electricity & Magnetism	4
-	-	-	ECE 09.203	Principles of Circuit Analysis	4
-	-	-	ENGR 01.202	Soph. Engineering Clinic II	4
MAT 252	DIFFERENTIAL EQUATIONS	4	MATH 01.231	Ordinary Differential Equations	4
CIV 103	STATICS	3	ENGR 01.271	Statics	2
-	-	-	ENGR 01.291	Dynamics	2
-	-	-	ECE 09.311	Electronics I	3
-	-	-	ECE 09.433	Computer Architecture	2
ECO 112	MICROECONOMICS	3	ECON 04.102	Microeconomics	3

**Total Transfer Credits 55**

**Table A.4: Course Equivalency for Mechanical Engineering**

Mercer County Community College			Rowan University		
Course #	Title	C.H.	Course #	Title	C.H.
-	-	-	ENGR 01.101	Fresh. Engineering Clinic I	2
MAT 151	CALCULUS I	4	MATH 01.130	Calculus I	4
CHE 101 CHE 102	GENERAL CHEMISTRY I GENERAL CHEMISTRY II	4 4	CHEM 06.105	Advanced College Chemistry I	4
ENG 101	ENGLISH COMPOSITION I	3	COMP 01.111	Composition I	3
-	-	-	ME 10.101	Intro. To Mechanical Design	3
-	-	-	ENGR 01.102	Fresh. Engineering Clinic II	2
MAT 152	CALCULUS II	4	MATH 01.131	Calculus II	4
PHY 115	UNIVERSITY PHYSICS I	4	PHYS 02.200	Introductory Mechanics	4
COS 102	COMPUTER SCIENCE I – ALGORITHMS AND PROGRAMMING	4	CS 04.103	Computer Sci. & Programming	4
-	-	-	ENGR 01.283	Mat. Sci. & Manuf.	3
-	-	-	ENGR 01.201	Soph. Engineering Clinic I	4
MAT 251	CALCULUS III	4	MATH 01.230	Calculus III	4
PHY 215	UNIVERSITY PHYSICS II	4	PHYS 02.201	Intro. Electricity & Magnetism	4
CIV 103	STATICS	3	ENGR 01.271	Statics	2
-	-	-	ENGR 01.291	Dynamics	2
-	-	-	ENGR 01.202	Soph. Engineering Clinic II	4
MAT 252	DIFFERENTIAL EQUATIONS	4	MATH 01.231	Ordinary Differential Equations	4
CIV 230	MECHANICS OF SOLIDS	4	ENGR 01.273	Strength of Materials	3
-	-	-	ME 10.211	ME Lab	2
-	-	-	ECE 09.3xx	Mechatronics	3
-	4 GENERAL EDUCATION ELECTIVES	12	-	4 General Education Electives	12
BUS 239	ENTREPRENEURSHIP	3	ENT 06.240	Entrepreneurship & Innov.	3

**Total Transfer Credits 55**