

Mercer County Community College
The College of New Jersey
Connection Agreement

***A.S. in Engineering Science/B.S. in Biomedical, Civil, Computer,
Electrical and Mechanical Engineering***

This agreement between Mercer County Community College (MCCC) and The College of New Jersey (TCNJ) connects students in MCCC's Associate Degree Program in Engineering Science to various engineering BS Programs at The College of New Jersey'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.

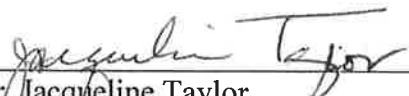
The Connected Curriculum

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.

The College of New Jersey'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.

Signatures



Dr. Jacqueline Taylor
Provost/Vice President for Academic Affairs
The College of New Jersey

Date *Sept 23, 2013*

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

Date

Table A.1: Course Equivalency for Biomedical Engineering

Mercer County Community College			The College of New Jersey		
Course #	Title	Credits	Course #	Title	Course Units
CHE 101	GENERAL CHEMISTRY I	4	CHE 201	GENERAL CHEMISTRY I	1
MAT 151	CALCULUS I	4	MAT 127	CALCULUS A	1
PHY 115	UNIVERSITY PHYSICS I	4	PHY 201	GENERAL PHYSICS I	1
COS 102	COMPUTER SCIENCE I – ALGORITHMS & PROGRAMMING	4	CSC 215	COMPUTER SCIENCE I	1
ENT 116	ENGINEERING GRAPHICS	2	ENG 142	FUNDAMENTALS OF ENGINEERING DESIGN	1
MAT 152	CALCULUS II	4	MAT 128	CALCULUS B	1
PHY 215	UNIVERSITY PHYSICS II	4	PHY 202	GENERAL PHYSICS II	1
CHE 102	GENERAL CHEMISTRY II	4	CHE 202	GENERAL CHEMISTRY II	1
ENG 101	ENGLISH COMPOSITION I	3	WRI 101	FIRST YEAR WRITING	1
ENG 102	ENGLISH COMPOSITION II	3	WRI 102	ACADEMIC WRITING	1
BIO 101	INTRODUCTION TO BIOLOGY	3	BIO 185	THEMES IN BIOLOGY	1
BIO 102	GENERAL BIOLOGY II	3			
-	-	-	ENG 212	CIRCUITS ANALYSIS	1
-	-	-	ENG 214	CIRCUITS ANALYSIS LABORATORY	0.5
CIV 103	STATICS	3	ENG 222	STATICS	1
MAT 252	DIFFERENTIAL EQUATIONS	4	ENG 272	ADVANCED ENGINEERING MATH I	1
MAT 251	CALCULUS III	4	MAT 229	MULTIVARIABLE CALCULUS	1
CIV 230	MECHANICS OF SOLIDS	4	CIV 251	STRENGTH OF MATERIALS	1
-	-	-	MEC 263	MECHANICAL ENGINEERING LAB.	0.5
-	-	-	BME 251	INTRO. TO BIOMEDICAL ENGINEERING	1
ECO 112	MICROECONOMICS	3	ECO 101	MICROECONOMICS	1
CHE 201	ORGANIC CHEMISTRY I	5	CHE 321	ORGANIC CHEMISTRY I	1
PHI 204	ETHICS	3	IDS 252	SOCIETY ETHICS & TECHNOLOGY	1
-	1 GENERAL EDUCATION ELECTIVE	3	-	1 LIBERAL LEARNING ELECTIVE	1

The following TCNJ courses are waived for transfer students with sophomore level status:

FSP 1xx – Freshman Seminar

ENG 091 – Engineering Seminar I

ENG 092 – Engineering Seminar II

ENG 095 – Introduction to Engineering

Table A.2: Course Equivalency for Civil Engineering

Mercer County Community College			The College of New Jersey		
Course #	Title	Credits	Course #	Title	Course Units
CHE 101	GENERAL CHEMISTRY I	4	CHE 201	GENERAL CHEMISTRY I	1
MAT 151	CALCULUS I	4	MAT 127	CALCULUS A	1
PHY 115	UNIVERSITY PHYSICS I	4	PHY 201	GENERAL PHYSICS I	1
ENT 116	ENGINEERING GRAPHICS	2	ENG 142	FUNDAMENTALS OF ENGINEERING DESIGN	1
COS 102	COMPUTER SCIENCE I – ALGORITHMS & PROGRAMMING	4	CSC 215	COMPUTER SCIENCE I	1
MAT 152	CALCULUS II	4	MAT 128	CALCULUS B	1
PHY 215	UNIVERSITY PHYSICS II	4	PHY 202	GENERAL PHYSICS II	1
ENG 101	ENGLISH COMPOSITION I	3	WRI 101	FIRST YEAR WRITING	1
ENG 102	ENGLISH COMPOSITION II	3	WRI 102	ACADEMIC WRITING	1
-	-	-	GEO 120	INTRODUCTION TO GEOLOGY	1
-	-	-	ENG 152	ENGINEERING MATERIALS SCIENCE	1
CIV 103	STATICS	3	ENG 222	STATICS	1
MAT 252	DIFFERENTIAL EQUATIONS	4	ENG 272	ADVANCED ENGINEERING MATH I	1
CIV 101	SURVEYING I	3	CIV 211	SURVEYING	0.5
DRA 190	INTRODUCTION TO CAD	2	CIV 213	CAD LABORATORY	0.5
MAT 251	CALCULUS III	4	MAT 229	MULTIVARIABLE CALCULUS	1
-	-	-	ENG 262	DYNAMICS	1
CIV 230	MECHANICS OF SOLIDS	4	CIV 251	STRENGTH OF MATERIALS	1
-	-	-	CIV 263	ENGINEERING MATERIALS LABORATORY	0.5
ECO 112	MICROECONOMICS	3	ECO 101	MICROECONOMICS	1
PHI 204	ETHICS	3	IDS 252	SOCIETY ETHICS & TECHNOLOGY	1
-	1 GENERAL EDUCATION ELECTIVE	3	-	1 LIBERAL LEARNING ELECTIVE	1

The following TCNJ courses are waived for transfer students with sophomore level status:

- FSP 1xx – Freshman Seminar
- ENG 091 – Engineering Seminar I
- ENG 092 – Engineering Seminar II
- ENG 095 – Introduction to Engineering

Table A.3: Course Equivalency for Electrical Engineering

Mercer County Community College			The College of New Jersey		
Course #	Title	Credits	Course #	Title	Course Units
CHE 101	GENERAL CHEMISTRY I	4	CHE 201	GENERAL CHEMISTRY I	1
COS 102	COMPUTER SCIENCE I – ALGORITHMS & PROGRAMMING	4	CSC 215	COMPUTER SCIENCE I	1
MAT 151	CALCULUS I	4	MAT 127	CALCULUS A	1
PHY 115	UNIVERSITY PHYSICS I	4	PHY 201	GENERAL PHYSICS I	1
ENT 116	ENGINEERING GRAPHICS	2	ENG 142	FUNDAMENTALS OF ENGINEERING DESIGN	1
MAT 152	CALCULUS II	4	MAT 128	CALCULUS B	1
PHY 215	UNIVERSITY PHYSICS II	4	PHY 202	GENERAL PHYSICS II	1
ENG 101	ENGLISH COMPOSITION I	3	WRI 101	FIRST YEAR WRITING	1
ENG 102	ENGLISH COMPOSITION II	3	WRI 102	ACADEMIC WRITING	1
-	-	-	TST 161	CREATIVE DESIGN	1
COS 204	DISCRETE MATHEMATICAL STRUCTURES	4	CSC 310	DISCRETE STRUCTURES OF COMPUTER SCIENCE	1
-	-	-	ENG 212	CIRCUITS ANALYSIS	1
-	-	-	ENG 214	CIRCUITS ANALYSIS LABORATORY	0.5
MAT 252	DIFFERENTIAL EQUATIONS	4	ENG 272	ADVANCED ENGINEERING MATH I	1
EET 251 & ETT 263	DIGITAL CIRCUIT FUNDAMENTALS & DIGITAL TECHNOLOGY-INTRO. TO MICROPROCESSORS AND ASSEMBLY LANGUAGE	4	ENG 312	DIGITAL CIRCUITS & MICROPROCESSORS	1
ECO 112	MICROECONOMICS	3	ECO 101	MICROECONOMICS	1
CIV 103	STATICS	3	ENG 222	STATICS	1
-	-	-	ELC 251	ELECTRONICS	1
-	-	-	ELC 321	SYSTEMS & SIGNALS	1
-	-	-	ELC 333	ELECTRONICS LAB.	0.5
MAT 251	CALCULUS III	4	MAT 229	MULTIVARIABLE CALCULUS	1
PHI 204	ETHICS	3	IDS 252	SOCIETY ETHICS & TECHNOLOGY	1
-	1 GENERAL EDUCATION ELECTIVE	3	-	1 LIBERAL LEARNING ELECTIVE	1

The following TCNJ courses are waived for transfer students with sophomore level status:

- FSP 1xx – Freshman Seminar
- ENG 091 – Engineering Seminar I
- ENG 092 – Engineering Seminar II
- ENG 095 – Introduction to Engineering

Table A.4: Course Equivalency for Mechanical Engineering

Mercer County Community College			The College of New Jersey		
Course #	Title	Credits	Course #	Title	Course Units
CHE 101	GENERAL CHEMISTRY I	4	CHE 201	GENERAL CHEMISTRY I	1
MAT 151	CALCULUS I	4	MAT 127	CALCULUS A	1
PHY 115	UNIVERSITY PHYSICS I	4	PHY 201	GENERAL PHYSICS I	1
ENT 116	ENGINEERING GRAPHICS	2	ENG 142	FUNDAMENTALS OF ENGINEERING DESIGN	1
COS 102	COMPUTER SCIENCE I – ALGORITHMS & PROGRAMMING	4	CSC 215	COMPUTER SCIENCE I	1
MAT 152	CALCULUS II	4	MAT 128	CALCULUS B	1
PHY 215	UNIVERSITY PHYSICS II	4	PHY 202	GENERAL PHYSICS II	1
ENG 101	ENGLISH COMPOSITION I	3	WRI 101	FIRST YEAR WRITING	1
ENG 102	ENGLISH COMPOSITION II	3	WRI 102	ACADEMIC WRITING	1
-	-	-	TST 161	CREATIVE DESIGN	1
-	-	-	ENG 212	CIRCUITS ANALYSIS	1
-	-	-	ENG 214	CIRCUITS ANALYSIS LABORATORY	0.5
CIV 103	STATICS	3	ENG 222	STATICS	1
-	-	-	ENG 232	MANUFACTURING PROCESSES	1
MAT 252	DIFFERENTIAL EQUATIONS	4	ENG 272	ADVANCED ENGINEERING MATH I	1
ECO 112	MICROECONOMICS	3	ECO 101	MICROECONOMICS	1
MAT 251	CALCULUS III	4	MAT 229	MULTIVARIABLE CALCULUS	1
-	-	-	ENG 152	ENGINEERING MATERIAL SCIENCE	1
-	-	-	ENG 262	DYNAMICS	1
-	-	-	CIV 263	ENGINEERING MATERIALS LABORATORY	0.5
CIV 230	MECHANICS OF SOLIDS	4	CIV 251	STRENGTH OF MATERIALS	1
PHI 204	ETHICS	3	IDS 252	SOCIETY ETHICS & TECHNOLOGY	1
-	1 GENERAL EDUCATION ELECTIVE	3	-	1 LIBERAL LEARNING ELECTIVE	1

The following TCNJ courses are waived for transfer students with sophomore level status:

FSP 1xx – Freshman Seminar

ENG 091 – Engineering Seminar I

ENG 092 – Engineering Seminar II

ENG 095 – Introduction to Engineering

Table A.5: Course Equivalency for Computer Engineering

Mercer County Community College			The College of New Jersey		
Course #	Title	Credits	Course #	Title	Course Units
CHE 101	GENERAL CHEMISTRY I	4	CHE 201	GENERAL CHEMISTRY I	1
ENT 116	ENGINEERING GRAPHICS	2	ENG 142	FUNDAMENTALS OF ENGINEERING DESIGN	1
COS 102	COMPUTER SCIENCE I – ALGORITHMS & PROGRAMMING	4	CSC 215	COMPUTER SCIENCE I	1
MAT 151	CALCULUS I	4	MAT 127	CALCULUS A	1
PHY 115	UNIVERSITY PHYSICS I	4	PHY 201	GENERAL PHYSICS I	1
MAT 152	CALCULUS II	4	MAT 128	CALCULUS B	1
PHY 215	UNIVERSITY PHYSICS II	4	PHY 202	GENERAL PHYSICS II	1
ENG 101	ENGLISH COMPOSITION I	3	WRI 101	FIRST YEAR WRITING	1
ENG 102	ENGLISH COMPOSITION II	3	WRI 102	ACADEMIC WRITING	1
COS 204	DISCRETE MATHEMATICAL STRUCTURES	4	CSC 310	DISCRETE STRUCTURES OF COMPUTER SCIENCE	1
-	-	-	CSC 250	ACCELERATED COMPUTER SCIENCE I, II	1
-	-	-	ENG 212	CIRCUITS ANALYSIS	1
-	-	-	ENG 214	CIRCUITS ANALYSIS LABORATORY	0.5
MAT 252	DIFFERENTIAL EQUATIONS	4	ENG 272	ADVANCED ENGINEERING MATH I	1
EET 251 & ETT 263	DIGITAL CIRCUIT FUNDAMENTALS & DIGITAL TECHNOLOGY-INTRO. TO MICROPROCESSORS AND ASSEMBLY LANGUAGE	4	ENG 312	DIGITAL CIRCUITS & MICROPROCESSORS	1
CIV 103	STATICS	3	ENG 222	STATICS	1
EET 219	ELECTRONIC NETWORKS	4	ELC 251	ELECTRONICS	1
-	-	-	ELC 321	SYSTEMS & SIGNALS	1
-	-	-	ELC 333	ELECTRONICS LAB.	0.5
MAT 251	CALCULUS III	4	MAT 229	MULTIVARIABLE CALCULUS	1
ECO 112	MICROECONOMICS	3	ECO 101	MICROECONOMICS	1
PHI 204	ETHICS	3	IDS 252	SOCIETY ETHICS & TECHNOLOGY	1
-	1 GENERAL EDUCATION ELECTIVE	3	-	1 LIBERAL LEARNING ELECTIVE	1

The following TCNJ courses are waived for transfer students with sophomore level status:

- FSP 1xx – Freshman Seminar
- ENG 091 – Engineering Seminar I
- ENG 092 – Engineering Seminar II
- ENG 095 – Introduction to Engineering