

ENGINEERING OPTION - N079

A.S. in Engineering Studies

Contact: Ileana Vasu, 413-552-2438; ivasu@hcc.edu

COURSE TITLE	COURSE NUMBER	PREREQUISITES	CREDITS	SEMESTER TAKEN	GRADE
GENERAL EDUCATION REQUIREMENTS			20		
Language and Literature I	ENG 101	Appropriate score on Placement Tests, or C- or better in ENG 097 and ENG 098, or C- or better in ENG 096 or ENG 099	3		
Language and Literature II	ENG 102	ENG 101	3		
Social Science Elective (B) ³			3		
Social Science Elective (B)			3		
Physics for Engineers and Science Majors I (D)	PHS 111	MTH 113 previously or concurrently	4		
Physics for Engineers and Science Majors II (D)	PHS 112	MTH 114 previously or concurrently, and PHS 111	4		
PROGRAM REQUIREMENTS			30-31		
Principles of Chemistry I or Inorganic Chemistry I	CHM 113 CHM 121	High School Algebra I or equivalent. High School Chemistry recommended.	4		
Principles of Chemistry II ¹ or Inorganic Chemistry II ¹ or Any 4-credit BIO course	CHM 114 CHM 124	CHM 113 or equivalent. High School Algebra I or equivalent recommended. CHM 113 or CHM 121	4		
Intro to Digital Electronic Circuits w/Verilog (Fall) ² or Intro to Engineering with Computer Applications(Fall) ²	EGR 109 EGR 117	MTH 104 or adequate score on MPE MTH 104 or adequate score on the Mathematics Placement Examination	4-3		
Mechanics (Statics)	EGR 221	MTH 114 previously or concurrently, and PHS 111	3		
System Analysis (Circuit Analysis I)	EGR 223	MTH 114 previously or concurrently, and PHS 111	4		
Calculus I	MTH 113	MTH 108 or adequate score on the Mathematics Placement Exam	4		
Calculus II	MTH 114	MTH 113	4		
Calculus III	MTH 213	MTH 114	4		
AND all of the courses in any one of the following three groups:					
<u>Mechanical, Civil or Industrial Engineering Requirements</u>					
Differential Equations(Spring)	MTH 214	MTH 212 or MTH 213 previously or concurrently	3		
Mechanics II (Strength of Materials) (Spring)	EGR 222	EGR 221	3		
Thermodynamics (Fall)	EGR 250	MTH 114 previously or concurrently, and PHS 111	3		
<u>Electrical Engngs Requirements</u>					
Linear Algebra (Fall)	MTH 205	MTH 112 or MTH 114, previously or concurrently	3		
Differential Equations (Electrical) (Spring)	MTH 214	MTH 212 or MTH 213 previously or concurrently	3		
Discrete Mathematical Structures (Spring)	MTH 230	MTH 113	3		
Introduction to Engineering with JAVA (Spring)	EGR 118	MTH 104 or adequate score on the Mathematics Placement Examination	4		
System Analysis (Circuit Analysis I)	EGR 223	MTH 114 previously or concurrently, and PHS 111	4		
System Analysis (Circuit Analysis II) (Spring)	EGR 224	EGR 223	4		
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PROGRAM OVERVIEW

Provides the first two years of a traditional engineering program, in which the student chooses a particular engineering field: Mechanical/Civil/Industrial, Electrical, or Computer Systems.

We advise that students start their mathematics courses as soon as they enter the program.

The majority of our students transfer to UMass or WNEC. For students transferring to UMass Amherst the minimum GPA is 2.7.

ENGINEERING SCIENCE OPTION -N082 (Continued)

A.S. in Engineering Studies

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COURSE TITLE	COURSE NUMBER	PREREQUISITES	CREDITS	SEMESTER TAKEN	GRADE
PROGRAM ELECTIVES (Continued)					
Human Anatomy and Physiology II	BIO 218	BIO 217	4		
Genetics	BIO 243	A grade of C or better in one of the following: BIO 100, 103, 110, 112, 120 or 225	4		
Principles of Environmental Science	ENV 120		4		
Principles of Environmental Science	ENV 140		4		
Principles of Environmental Site Assessment	ENV 230	ENV 120, ENV 140, ENV 137 concurrently	3		
Aquatic Ecology and Pollution	ENV 253	One semester of environmental science or biology	4		
Robotics: Explorations in Construction and Design	EGR 110 / SEM 110		4		
Total Credits			62		