

## Engineering

### A.S. Degree Program – Catalog Year 2017-2018

The Associate in Science Engineering program is designed to prepare beginning engineering students to successfully transfer to baccalaureate engineering programs. Participants in the associate program will enroll in science, mathematics, and engineering courses that provide serious students with the knowledge and background necessary to take upper level courses in their chosen field of study.

### Faculty Contacts/Program Chairs

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### Transfer Information

Students pursuing the Engineering degree can transfer into majors such as Civil/Environmental, Bioenvironmental, Mechanical, Electrical & Computing, Chemical, Biomedical, Industrial, and Materials Sciences Engineering. Many colleges offer opportunities for transfer both in and out of state. Admission is competitive and may require specific coursework to be completed prior to applying. Students are encouraged to work closely with Faculty and Advising Transfer Services. Students planning to transfer to a four-year institution in NJ can explore the “Transfer Programs” feature on NJ Transfer [www.njtransfer.org](http://www.njtransfer.org).

### Career Information

The Associate of Arts and the Associate of Science Degrees are designed to transfer to a four-year institution, where students will pursue a Bachelor’s Degree. Some students pursue the Associate Degree for personal enrichment, and/or for employment purposes, helping to improve qualifications for jobs requiring a credential beyond the high school degree. Students are strongly encouraged to consult with Faculty and Career Services as they begin to explore career options. Students can also utilize Career Coach, a resource provided by OCC to help students explore degree programs and corresponding careers [ocean.emsicareercoach.com](http://ocean.emsicareercoach.com)

### Fundamental Coursework

ENGR 181, 124, 221, 222      MATH 265, 266, 267  
PHYS 281, 282                  CHEM 181, 182

**Students are encouraged to keep track of degree requirements by using the “My Progress” screen on Student Planning. Student Planning can be accessed via logging into Ocean Connect.**

## Curriculum

### First Semester

ENGR 101	Introduction to Engineering	2 cr.
MATH 265	Calculus I	4 cr.
CHEM 181	General Chemistry I	4 cr.
ENGL 151	English I	3 cr.
_____	Social Science Gen Ed Requirement	<u>3 cr.</u>
		16 cr.

### Second Semester

ENGR 181	Graphics for Engineers	2 cr.
ENGL 152	English II	3 cr.
MATH 266	Calculus II	4 cr.
CHEM 182	General Chemistry II	4 cr.
PHYS 281	General Physics	<u>4 cr.</u>
		17 cr.

### Third Semester

ENGR 124	Engineering Analysis	3 cr.
ENGR 221	Engineering Statics	3 cr.
MATH 267	Calculus III	4 cr.
PHYS 282	General Physics II	<u>4 cr.</u>
		14 cr.

### Fourth Semester

ENGR 222	Engineering Dynamics	3 cr.
_____	Engineering Elective*	3-4 cr.
CSIT 165	Programming I	4 cr.
_____	Humanities Gen Ed Requirement	3 cr.
_____	Social Science <u>or</u>	3 cr.
_____	Humanities Gen Ed Requirement	
_____	Elective (to meet required 64 cr. If ENGR elective is 3 cr.)	<u>0-1 cr.</u>
		17 cr.

TOTAL CREDITS 64

Courses satisfying General Education Requirements must be selected from the list of Approved General Education Courses

\* Students should select electives relevant to the Engineering Bachelor’s Degree concentration

### Engineering Electives

ENGR 225	Design of Material Structures	3 cr.
ENGR 251	Electrical Engineering I	4 cr.
ENGR 252	Electrical Engineering II	4 cr.
ENGR 290	Engineering Internship	3 cr.

Substitution courses for engineering electives may be granted with permission from the Program Chair.