

# Engineering

## Type

Associate in Science

Engineering, Associate in Science

The Engineering, A.S. is focused on providing students with the first two years of a baccalaureate degree in engineering. The program is designed to educate students to meet the challenge of engineering in an ever-changing world and to foster understanding of universal topics in engineering. At the baccalaureate degree level, students can choose to specialize in one of the following engineering disciplines:

- Civil Engineering
- Industrial Engineering
- Mechanical Engineering

For additional program information, contact faculty advisor, Al Jou, at (609)343-4966 or [ajou@atlanticcape.edu](mailto:ajou@atlanticcape.edu), or contact area coordinator, Michele Leacott, at (609)343-5044 or [mleacott@atlanticcape.edu](mailto:mleacott@atlanticcape.edu).

## Upon completion of this program students will be able to:

- Define engineering and identify common engineering fields;
- Design engineering graphics;
- Identify the characteristics of forces and couples;
- Explain the concepts of stress and strain;
- Describe kinematics and kinetics of particles and rigid bodies.

(ENGR-Fall 2022)

# General Education Courses

When a course is not specified, refer to the list of approved General Education courses.

## Communication

Course #	Title	Credits
ENGL101	Composition I	3
ENGL102	Composition II	3

## Mathematics-Science-Technology

Course #	Title	Credits
CHEM110	General Chemistry I	4
CISM125	Introduction to Computers	3
MATH155	Calculus I	4
PHYS225	General Physics I	4

## Social Science

Course #	Title	Credits
	Choose: ECON110, PSYC101 or SOCL101 (3 credits)	3

## Humanities

Course #	Title	Credits
ENGL104	Introduction to Literature	3

## General Education Elective

Course #	Title	Credits
	Choose: ARTS103, ARTS115, MUSC100, PSYC101, SOCL101 or THEA110 (3 credits)	3

## Program Courses

Course #	Title	Credits
ENGR101	Introduction to Engineering	2
ENGR200	Engineering Design	3
ENGR201	Statics	3
ENGR204	Dynamics	3
MATH156	Calculus II	4
MATH255	Calculus III	4
MATH256	Differential Equations	4
PHYS226	General Physics II	4
	Choose: ENGR203-Computing for Engineers or ENGR202-Mechanics of Materials (3 credits)	3
	<b>Total Credits</b>	<b>60</b>

### Recommended Sequence of Courses

## First Semester

Course #	Title	Credits
CISM125	Introduction to Computers	3
ENGL101	Composition I	3
ENGR101	Introduction to Engineering	2
MATH155	Calculus I	4
PHYS225	General Physics I	4

## Second Semester

Course #	Title	Credits
ENGL102	Composition II	3
ENGL104	Introduction to Literature	3
ENGR200	Engineering Design	3
MATH156	Calculus II	4
PHYS226	General Physics II	4

## Third Semester

<b>Course #</b>	<b>Title</b>	<b>Credits</b>
CHEM110	General Chemistry I	4
ENGR201	Statics	3
MATH255	Calculus III	4
	Choose: ECON110, PSYC101 or SOCL101 (3 credits)	3

## Fourth Semester

<b>Course #</b>	<b>Title</b>	<b>Credits</b>
ENGR204	Dynamics	3
MATH256	Differential Equations	4
	Choose: ENGR203-Computing for Engineers or ENGR202-Mechanics of Materials (3 credits)	3
	Choose: ARTS103, ARTS115, MUSC100, PSYC101, SOCL101 or THEA110 (3 credits)	3