

## Associate in Arts

## PHYSICS/ENGINEERING

### Program Information

The Physics/Engineering program prepares students for further study in physics and/or engineering. The program provides students with a solid foundation in basic mathematical and scientific principles. Students in this program will develop a strong mathematical foundation that will enable them to pursue advanced studies in mathematics or related disciplines such as physics or engineering.

Upon successfully completing this program, students should be able to:

- demonstrate an understanding of scientific inquiry and application;
- demonstrate skill in performing advanced mathematics;
- demonstrate the ability to use mathematics for physics applications;
- perform force analysis of simple beams, structures and trusses; and
- perform stress analysis on beams, columns and structural members.

### Transfer of Credits

Physics/Engineering graduates may transfer credits to a bachelor's degree program at a four-year college or university. Please direct specific questions to a Student Affairs advisor.

### CREDITS

#### FIRST SEMESTER

<input type="checkbox"/>	ENG 101	English Composition I	3
<input type="checkbox"/>	HIS 101	Western Civilization I	3
<input type="checkbox"/>	MAT 231	Calculus I	4
<input type="checkbox"/>	PHY 221	Calculus-Based Physics I	4
<input type="checkbox"/>		Social Science Elective	<u>3</u>
			17

#### SECOND SEMESTER

<input type="checkbox"/>	ENG 102	English Composition II	3
<input type="checkbox"/>	HIS 102	Western Civilization II	3
<input type="checkbox"/>	MAT 232	Calculus II	4
<input type="checkbox"/>	PHY 222	Calculus-Based Physics II	4
<input type="checkbox"/>		Humanities Elective	<u>3</u>
			17

#### THIRD SEMESTER

<input type="checkbox"/>	PHY 223	Calculus-Based Physics III	4
<input type="checkbox"/>	SOC 101	Introduction to Sociology	3
<input type="checkbox"/>		English Elective	3
<input type="checkbox"/>		Humanities Elective	3
<input type="checkbox"/>		Science Elective (200 level)	<u>4</u>
			17

#### FOURTH SEMESTER

<input type="checkbox"/>	ENG 202	Introduction to Speech Communication	3
<input type="checkbox"/>		Humanities Elective	3
<input type="checkbox"/>		Science Elective (200 level)	3/4
<input type="checkbox"/>		Open Elective	3
<input type="checkbox"/>		Social Science Elective	<u>3</u>
			15/16

TOTAL CREDITS: **66/67**

### N.J. GENERAL EDUCATION COMPONENT FOR PHYSICS/ENGINEERING

<b>Communication:</b>	ENG 101, ENG 102, ENG 202
<b>Math/Science/Technological Competency:</b>	MAT 231, PHY 221, PHY 222
<b>Social Science:</b>	2 Social Science Electives
<b>Humanities:</b>	3 Humanities Electives
<b>History:</b>	HIS 101, HIS 102
<b>Cultural/Global Awareness:</b>	SOC 101