

# **ENGINEERING**

Dual-Degree Program

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STOCKTON | SCHOOL OF NATURAL UNIVERSITY | SCIENCES & MATHEMATICS



## Engineering | Dual Degree Program

## ABOUT THE PROGRAM

#### **Building Bridges to Success**

Designed for motivated students who are well prepared through high school courses in mathematics and science, the five year Dual-degree Engineering Program is administered in joint effort with New Jersey Institute of Technology (NJIT), Rowan University and Rutgers University. It is an academically demanding and competitive program. Students generally attend three years at Stockton and conclude their studies with two years at NJIT, Rowan or Rutgers. Students earn a Bachelor of Science degree from Stockton – in either applied physics, chemistry or mathematics – at the end of the fourth year of the program. Upon completion of the program, they are awarded a Bachelor of Science degree in engineering from NJIT, Rowan or Rutgers or a Master of Science degree in Pharmaceutical Engineering from NJIT.

#### Two Degrees - Many Possibilities

- Stockton: Bachelor of Science in Applied Physics, Chemistry, or Mathematics.
- NJIT: Bachelor of Science in Mechanical, or Chemical Engineering or a Master of Science in Pharmaceutical Engineering.
- Rowan: Bachelor of Science in Biomedical, Chemical, Civil and Environmental, Electrical and Computer, or Mechanical Engineering.
- Rutgers: Bioenvironmental, Biomedical, Chemical, Civil, Electrical and Computer, or Mechanical and Aerospace Engineering.

#### Marketability

Because of the increased competition in the job marketplace, many of today's college students are choosing to broaden their educational foundations by pursuing multifaceted career objectives such as minors along with majors, double majors or dual undergraduate degrees. This program provides you with two very marketable college degrees.

## BLUEPRINT FOR EXCELLENCE

This unique opportunity in engineering education offers the best of both worlds. Stockton is a strong liberal arts school whose main emphasis is on excellence in teaching and where all classes – including entry level – are small and taught by faculty members, not graduate students. Stockton prepares you with solid training in mathematics, science and basic engineering. Stockton also provides you with a strong liberal studies component to broaden your intellectual scope, enhance your communication skills and help you acquire leadership qualities. Add to this the in-depth technical courses available at highly ranked engineering school such as N]IT, Rowan or Rutgers and the result is a unique undergraduate curriculum that develops highly qualified engineering professionals who are well equipped to meet the demands of a changing technological world.

#### The Possible Combinations:

#### I - Applied Physics or Mathematics/Engineering Dual-degree:

- . BS in Physics or Mathematics
- BS in Biomedical, Bioenvironmental, Civil and Environmental, Electrical and Computer or Mechanical Engineering

#### II- Chemistry/Engineering Dual-degree:

- BS in Chemistry
- BS in Chemical Engineering or MS in Pharmaceutical Engineering

#### Typical Curriculum at Stockton (first three years)

MATH: Calculus I and Calculus II, Calculus III and Differential Equations PHYSICS: Physics I, Physics II and Problem Solving Using MATLAB

CHEMISTRY: Chemistry I and Chemistry VI

COMPUTER SCIENCE: Programming and Problem Solving I

GENERAL EDUCATION\*: Five General Studies (GAH, GSS, GIS) courses including a Freshman Seminar and a Rhetoric and Composition course, Engineering Graphics, Microeconomics and Introduction to Management

#### Select one of the following groups based on Stockton's degree:

- Physics: Computational Mechanics, Electronics\*\* or Optics, and a 3000 level Physics elective
- Mathematics: Foundation of Mathematics, Linear Algebra, and two 4000 level Mathematics electives
- Chemistry: Chemistry II, Chemistry III, Lab Methods I, Lab Methods II and Physical Chemistry I

#### Select one of the following groups based on the Engineering degree:

- Electrical and Computer Engineering: Electronics, Discrete Mathematics, and Circuits
- Mechanical, Civil, and Bioenvironmental Engineering: Statics, Computational Mechanics, and Mechanics of Materials\*
- \* Student must consult with the Engineering Coordinator before selecting these courses.
- \*\* Students in Electrical or Computer Engineering must take Electronics.

Years four and five are offered at Rutgers or NJIT.

#### FOR ADDITIONAL INFORMATION

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### FOR INFORMATION ABOUT THE PROGRAM:

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