## ABOUT

Le Moyne's emphasis on the liberal arts ensures that its graduates are equipped not just with the technical skills they'll need to succeed in the workplace, but with the characteristics employers say they're looking for in their workers: integrity, excellent communication skills, a strong work ethic and the ability to function as part of a team.

Professors teaching in the Bachelor's + Master's Engineering Partnership understand that knowledge does not exist in a vacuum, and that the complexity of modern systems requires people with expertise in different areas to work closely together toward a common goal. These are the skills you will acquire with a liberal arts education from Le Moyne.

The chief advantage of the Syracuse University -Le Moyne College dual degree partnership is that it allows students to earn both a bachelor's and master's degree in five and a half years. Many other liberal arts colleges have "3+2" arrangements with engineering schools that only allow students to earn two bachelor's degrees in approximately the same period of time one from each school.

Students in traditional 3+2 engineering programs must finish their second bachelor's degree at the engineering institution. However, those in Le Moyne's Bachelor's + Master's Partnership can complete their undergraduate degree entirely at Le Moyne, sharing the total college experience and graduating with their classmates before going on to Syracuse University to complete their master's degree in engineering.



#### **Financing Your Education**

While at Le Moyne, students will pay Le Moyne tuition and will be eligible to receive financial aid from the College. They will not be charged to use most Syracuse University student services - such as libraries, computing facilities or recreational facilities. Students who maintain good academic standing at Le Moyne will be awarded a scholarship covering 50 percent of the cost of their graduate school tuition at Syracuse University.

#### Bachelor's + Master's

# ENGINEERING PARTNERSHIP



### LE MOYNE Greatness meets Goodness<sup>®</sup>

### Office of Admission 1419 Salt Springs Road 315-445-4300

Syracuse, NY 13214-1301 admission@lemoyne.edu

#### Director: Stamatios Kyrkos, Ph.D.

Associate Professor of Physics Coyne Science Center 117 315-445-4318 kyrkoss@lemoyne.edu

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LE MOYNE Greatness meets Goodness



# **OPPORTUNITY**

From designing spacecraft to developing solutions to environmental problems to supervising the construction of roads and tunnels, engineers and computer scientists are vital to a wide variety of industries. The growing fields of engineering and computer science will continue to need a talented pool of workers. Le Moyne's Bachelor's + Master's Engineering Partnership with the College of Engineering and Computer Science at Syracuse University prepares individuals to enter these burgeoning fields by providing them with the technical and interpersonal skills they'll need to succeed.

"Engineering interested me because I am fascinated by how electronics work and I knew that there would be good job opportunities. It has enabled me to develop my advanced-math and problem-solving skills. Now I work as a full-time engineer at API Technologies in Auburn, N.Y."

**Morgan Thomas** 

#### lemoyne.edu/engineering | engineering@lemoyne.edu

#### WHAT CAN I DO WITH A DEGREE IN ENGINEERING OR COMPUTER SCIENCE?

The job market for students studying engineering and computer science is strong, and is expected to remain so. Overall engineering employment is expected to grow by three percent between 2014 and 2024. Growth is expected to be 23 percent in biomedical engineering, 12 percent in environmental engineering, 10 percent for petroleum engineering, and six percent in health and safety engineering.

**Aerospace engineers** design, develop and test aircraft, spacecraft and missiles and supervise the manufacture of these products. Aerospace engineers develop new technologies for use in aviation, defense systems and space exploration.

**Bioengineers** research, design, develop and test biologics, materials, processes, medical devices and implants, and informatics. They produce solutions to problems important to biology and medical research.

**Civil engineers** design and supervise the construction of roads, buildings, airports, tunnels, dams, bridges, and water supply and sewage systems. Civil Engineering encompasses many specialties, including transportation, construction and geotechnical engineering.

**Computer engineers** design, develop and test computing hardware, including electronic circuits, digital systems, computer architecture and integrated circuits. They work in the computer industry and for companies that embed electronic controls into a product.

**Electrical engineers** design, develop, test and supervise the manufacture of electrical equipment,

including electric motors; machinery controls, lighting, and wiring in buildings; and power generation, control and transmission devices used by electric utilities.

**Environmental engineers** develop solutions to environmental problems using the principles of biology and chemistry. They are involved in water and air pollution control, recycling, waste disposal and public health issues.

**Mechanical engineers** research, design, develop, manufacture and test tools, engines, machines and other mechanical devices. Engineers in this discipline work on power-producing machines such as electric generators, internal combustion engines, and steam and gas turbines, as well as on power-using machines such as refrigeration equipment, machine tools and elevators.

**Software engineers** design, develop and test software applications and software systems. They work with businesses, government agencies and nonprofit organizations.

### Program Requirements

To participate in the Bachelor's + Master's Engineering Partnership, students need to maintain a 3.0 cumulative grade-point average, as well as a 3.0 grade-point average in their science, math, engineering and computing courses. **These students will be pre-admitted to the appropriate master's program at Syracuse University.** However, they will need to complete the Syracuse University online application during their senior year at Le Moyne College. Application fees and the GRE examination will be waived for these students.\*

#### Dual Degrees Earned through Le Moyne College and the College of Engineering and Computer Science at Syracuse University

| Bachelor's Degree + Number of<br>From Le Moyne + S.U. Course | Undergrad<br>es = | Entry to Master's<br>Program at S.U. |
|--|-------------------|--------------------------------------|
| Biological Sciences (BA)                                     | 5                 | Bioengineering                       |
| Chemistry (BS)   | 4                 | Chemical Engineering                 |
| Computer Science (BA)  | 7-9               | Computer Engineering                 |
|  | 0                 | Computer Science                     |
| Environmental Science Systems (BS)                           | 4                 | Environmental<br>Engineering         |
| Physics (BA or BS)   | 5                 | Aerospace Engineering                |
|  | 6                 | Civil Engineering                    |
|  | 9                 | Electrical Engineering               |
|  | 4                 | Environmental<br>Engineering         |
|  | 5                 | Mechanical<br>Engineering            |

