

# A.S. in Engineering Science

## DESCRIPTION OF THE ENGINEERING SCIENCE PROGRAM

The Engineering Science Associate of Science (A.S.) degree program provides the foundation courses needed to transfer into four-year programs in engineering. Students who graduate from this program are able to employ mathematics, science, and computing techniques to support the study and solution of engineering problems, understand the principles and methods of engineering, demonstrate practical skills in modern laboratory techniques, methods, instrumentation, and data analysis and communicate clearly their understandings of engineering and of their specific activity in the field orally and in writing.

## SKILLS

**Creativity.** Mechanical engineers design and build complex pieces of equipment and machinery. A creative mind is essential for this kind of work.

**Interpersonal skills.** Electrical and electronics engineers must work with others during the manufacturing process to ensure that their plans are implemented correctly. This collaboration includes monitoring technicians and devising remedies to problems as they arise.

**Problem-solving skills.** Mechanical engineers need good problem-solving skills to take scientific principles and discoveries and use them to design and build useful products.

## CAREER INFORMATION

Mechanical engineers plan and design tools, engines, machines, and other mechanical systems that produce, transmit, or use power. They may work in design, instrumentation, testing, robotics, transportation, or bioengineering, among other areas.

Electrical engineers design, develop, test, and supervise the manufacturing of electrical equipment, such as electric motors, radar and navigation systems, communications systems, and power generation equipment.

## EMPLOYMENT OUTLOOK

Employment of mechanical engineers is projected to grow 7 percent from 2020 to 2030, about as fast as the average for all occupations.

Overall employment of electrical and electronics engineers is projected to grow 7 percent from 2020 to 2030, about as fast as the average for all occupations.

## CAREER PATH

Mechanical engineers typically need a bachelor's degree in mechanical engineering or mechanical engineering technology. Mechanical engineers who sell services publicly must be licensed in all states and the District of Columbia. You will need to take courses in geometry, trigonometry, and calculus. Finally, because computers are such an important part of engineering, computer science courses are also good choices. The median annual wage for mechanical engineers was \$95,300 in May 2021.

Electrical and electronics engineers must have a bachelor's degree. Employers also value practical experience, such as internships or participation in cooperative engineering programs, in which students earn academic credit for structured work experience. The median annual wage for electrical engineers was \$100,420 in May 2021.

## CAREER COACH – SEARCH CAREER INFORMATION & CURRENT LOCAL WAGE DATA

<https://kingsborough.emsicc.com/programs/engineering-science-as/190619>

**INFORMATION ON HOW TO APPLY: [www.cuny.edu/apply](http://www.cuny.edu/apply) or 718-368-4600**

08-2022

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