

# A.S. in Physics

## DESCRIPTION OF THE PHYSICS PROGRAM

The Associate in Science (A.S.) degree in Physics program enables students to express themselves effectively in written exams and laboratory reports using the terminology, notations, and symbols of Physics. Upon completion of the program the student will be able to evaluate empirical evidence supporting the fundamental laws, theories, and ideas of physics, in addition to utilizing the tools and methods.

## SKILLS

**Interpersonal skills.** Physicists and astronomers must collaborate extensively in both academic and industrial research contexts. They need to work well with others toward a common goal. Interpersonal skills also help researchers secure funding for their projects.

**Problem-solving skills.** Materials engineers must understand the relationship between materials' structures, their properties, how they are made, and how these factors affect the products they are used to make. They must also figure out why a product might have failed, design a solution, and then conduct tests to make sure that the product does not fail again. These skills involve being able to identify root causes when many factors could be at fault.

**Writing skills.** Materials engineers must write plans and reports clearly so that people without a materials engineering background can understand the concepts.

## CAREER INFORMATION

Materials engineers must have a bachelor's degree in materials science and engineering or in a related engineering field. Completing internships and cooperative engineering programs while in school can be helpful in getting a position as a materials engineer. Physicists and astronomers typically need a Ph.D. for jobs in research and academia. However, physicist jobs in the federal government typically require a bachelor's degree in physics. After receiving a Ph.D. in physics or astronomy, many researchers seeking careers in academia begin in temporary postdoctoral research positions.

## EMPLOYMENT OUTLOOK

Employment of materials engineers is projected to show little or no change from 2018 to 2028. Overall employment of physicists and astronomers is projected to grow 9 percent from 2018 to 2028.

## CAREER PATH

The median annual wage for materials engineers was \$92,390 in May 2018. Most materials engineers work full time. Some materials engineers work more than 40 hours per week. The median annual wage for astronomers was \$105,680 in May 2018. Most physicists and astronomers work full time. Astronomers may need to work at night, because radiation from the sun tends to interfere less with observations made during nighttime hours. Astronomers typically visit observatories only a few times per year and therefore keep normal office hours.

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

<https://kingsborough.emsicc.com/programs/physics-as/190619?NY-NJ-PA&radius=>

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

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