

ELECTRICAL ENGINEERING, B.S. (ENGINEERING)

Seven Penn State campuses are scheduled for closure after Spring 2027: DuBois, Fayette, New Kensington, Mont Alto, Shenango, Wilkes-Barre, and York. New students are not being admitted at these campuses.

Begin Campus: Any Penn State Campus

End Campus: University Park

Program Educational Objectives

Within three to five years after graduation, graduates of the program are expected to:

1. Engage in the practice of electrical engineering through contributions to design, product development, research, manufacturing, consulting, testing, sales, and management.
2. Acquire and apply new instrumentation and design tools to address evolving engineering challenges.
3. Communicate effectively in both written and oral forms with diverse audiences in professional contexts.
4. Pursue continued learning and professional development through graduate studies, distance education, professional training, and active involvement in professional societies.
5. Participate effectively and assume leadership roles in multidisciplinary teams with diverse professional and cultural backgrounds.
6. Demonstrate awareness of the global, societal, and ethical implications of engineering design and practice.

Student Outcomes

Student outcomes describe what students are expected to know and be able to do by the time of graduation. The Electrical Engineering program is designed to enable students to:

1. Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. Communicate effectively with a range of audiences
4. Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. Acquire and apply new knowledge as needed, using appropriate learning strategies.