

ENGINEERING, B.S.

Begin Campus: Abington, Brandywine, DuBois, Hazleton

End Campus: Abington, Brandywine, DuBois, Hazleton

Program Educational Objectives

The Engineering program offers a broad and cross-disciplinary curriculum that prepares students in a variety of technical areas and professional skills for the practice and future development in their profession. Due to their experience in our program, within few years of graduation, we expect our graduates to have the ability to:

1. Practice engineering in their chosen area in the private industry or the government.
2. Assume an increasing level of responsibility and leadership within their respective organizations.
3. Communicate effectively and work collaboratively with internal and external stakeholders in multidisciplinary, advanced technological and multicultural work environments.
4. Maintain a strong commitment to ethical practice with sensitivity for environmental, societal, and economic contexts at local and global levels.
5. Engage in continuous learning through graduate school, professional training programs, and independent study.

Student Outcomes

Student outcomes describe what students are expected to know and be able to do by the time of graduation. The B.S. 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.