

# SURVEYING ENGINEERING, B.S.

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**Begin Campus:** Wilkes-Barre

**End Campus:** Wilkes-Barre

## Program Educational Objectives

The Surveying Engineering program prepares students with technical and professional skills for professional practice. Within three to five years of graduation, our Surveying Engineering graduates will have:

1. Forged careers as surveyors, engineers, and/or managers within surveying, engineering, or related fields, whether in the private or public sector, actively contributing to business operations.
2. Demonstrated expertise in using mathematics, scientific principles, measurement techniques, and contemporary technology tools in surveying for proficiently collecting and analyzing spatial data, as well as for developing surveying and/or engineering design solutions for practical applications.
3. Exhibited a strong commitment to ethical and professional conduct, consistently adhering to industry standards and ethical principles across all aspects of their professional work.
4. Demonstrated proficiency in effectively articulating technical and non-technical concepts to diverse audiences through written, verbal, and graphical mediums.
5. Worked collaboratively within multidisciplinary teams, showcasing their ability to function as productive team members, lead projects, respect diverse perspectives, and contribute to team success.
6. Engaged in continuous professional development, including pursuing advanced degrees, pursuing professional certification(s) and/or licensure, or participating in professional organizations, to stay current in the field, enhance their knowledge and skills, and share that with the professional community.

## Student Outcomes

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