

B.S.E. in Engineering

Department of Applied Engineering and Technology Management
Indiana State University



Program Educational Objectives

Graduates two to three years into their careers should have the foundation to:

- 1 Apply disciplinary reasoning, critical thinking, and hands-on skills to identify, analyze, and solve problems. (**Engineering**)
- 2 Communicate effectively in both oral and written form to articulate technical knowledge, ideas, and proposals. (**Communication**)
- 3 Consider professional, ethical, and social responsibility of engineering practices. (**Global Responsibility**)
- 4 Perform effectively, think independently, and work collaboratively in a team environment in membership or leadership role. (**Management and/or Teamwork**)
- 5 Actively participate in professional development, including continuous self-improvement and lifelong learning. (**Lifelong Learning**)

Student Outcomes

Students at the time of graduation are prepared to demonstrate:

- 1.1 An ability to identify, formulate, and solve engineering problems by applying principles of engineering, science, and mathematics.
- 1.2 An ability to apply both analysis and synthesis in the engineering design process, resulting in designs that meet desired needs.
- 1.3 An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- 2.1 An ability to communicate effectively with a range of audiences.
- 3.1 An ability to 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.
- 4.1 An ability to function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.
- 5.1 An ability to recognize the ongoing need for additional knowledge and locate, evaluate, integrate, and apply this knowledge appropriately.