

# Program Learning Outcomes

## Computer Science and Engineering

### ***Program Educational Objectives***

- to prepare graduates to practice computer science in a broad range of industries
- to prepare interested graduates to pursue graduate education or other professional degrees
- to prepare graduates to contribute to their profession and society

### ***Student Outcomes***

1. an ability to apply knowledge of mathematics, science, computing, and engineering
2. an ability to design and conduct experiments, as well as to analyze and interpret data
3. an ability to design, implement, and evaluate a system, process, component, or program to meet desired needs, within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
4. an ability to function on multi-disciplinary teams
5. an ability to identify, formulate, and solve computer science and engineering problems and define the computing requirements appropriate to their solutions
6. an understanding of professional, ethical, legal, security and social issues and responsibilities
7. an ability to communicate effectively with a range of audiences
8. the broad education necessary to understand the impact of computer science and engineering solutions in a global and societal context
9. a recognition of the need for, and an ability to engage in life-long learning
10. knowledge of contemporary issues
11. an ability to use current techniques, skills, and tools necessary for computing and engineering practice
12. an ability to apply mathematical foundations, algorithmic principles, and computer science and engineering theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices
13. an ability to apply design and development principles in the construction of software systems or computer systems of varying complexity.