

## **Computer Science and Software Engineering**

### **SOFTWARE ENGINEERING PROGRAM EDUCATIONAL OBJECTIVES**

The overall objective of the Software Engineering program is to prepare graduates who will be successful in their chosen career paths. Within a few years of graduation, alumni of the Software Engineering program will attain:

**PEO 1:** Success in their chosen profession as evidenced by career satisfaction, promotions/raises, and leadership at levels appropriate to their experience.

*and/or*

**PEO 2:** Success in post-undergraduate studies as evidenced by satisfaction with the decision to further their education, advanced degrees earned, and professional visibility (e.g., publications, presentations, awards, etc.).

### **SOFTWARE ENGINEERING STUDENT OUTCOMES**

The Software Engineering program prepares students to attain the educational objectives by ensuring that students demonstrate achievement of the following student outcomes.

**SO 1:** An ability to identify, formulate, analyze, and solve problems, as well as identify the computing requirements appropriate to their solutions.

**SO 2:** An ability to design, implement, and evaluate software-based systems, components, or programs of varying complexity that meet desired needs, satisfy realistic constraints, and demonstrate accepted design and development principles.

**SO 3:** An ability to apply knowledge of computing, mathematics, science, and engineering appropriate to the discipline, particularly in the modeling and design of software systems and in the analysis of tradeoffs inherent in design decisions.

**SO 4:** An ability to use current techniques, skills, and tools necessary for professional practice.

**SO 5:** An ability to design and conduct experiments appropriate to the discipline, as well as to analyze and interpret data.

**SO 6:** An ability to function effectively on multidisciplinary teams to accomplish a common goal.

**SO 7:** An ability to communicate effectively with a range of audiences.

**SO 8:** An understanding of professional, ethical, legal, security, and societal issues and responsibilities appropriate to the discipline.

**SO 9:** An ability to analyze the impact of computing and software solutions in an individual, organizational, societal, global, and economic context.

**SO 10:** A knowledge of contemporary issues appropriate to the discipline.

**SO 11:** A recognition of the need for and an ability to engage in life-long learning and continuing professional development.