

COMPUTER SCIENCE PROGRAM OBJECTIVES

PROGRAM OBJECTIVES: The primary objectives and learning outcomes of the program are to:

1. Create an understanding of the principles of computer science and problem solving.

Students will:

- a) Demonstrate a fundamental understanding of algorithms, data structures, software design, concepts of programming languages, and computer organization and architecture, and an awareness of the evolution and dynamic nature of the foundational core of computer science.
- b) Demonstrate the ability to analyze and solve computing problems.
- c) Demonstrate knowledge of a variety of programming languages and a proficiency in at least one higher-level language.
- d) Demonstrate understanding of discrete mathematics, differential and integral calculus, and probability and statistics.
- e) Demonstrate the ability to collect, analyze, and interpret data.

2. Build an awareness of computing practices in industry and emerging technologies, emphasizing a working knowledge of current software design and development techniques.

Students will:

- a) Demonstrate an awareness of emerging technologies and the ability to evaluate and utilize currently available software development tools.
- b) Demonstrate knowledge of the principles and practices for software design and development.
- c) Demonstrate the ability to successfully apply the principles and practices for software design and development to real problems.
- d) Demonstrate the ability to communicate effectively, both orally and in written form, and work in a team environment.

3. Provide a broad education that enables graduates to understand the impact of computing technologies in a societal context.

Students will:

- a) Demonstrate familiarity with basic concepts, emerging technologies, and contemporary issues relating to the societal impacts of computing.
- b) Demonstrate an understanding of professional and ethical considerations related to computing.

4. Provide a computer science education that enables our graduates to pursue rewarding professional careers, graduate studies, and lifelong learning.

Students will:

- a) Be competitive in the computing job market or be admitted to a good graduate program in computing.
- b) Demonstrate an ability to acquire new knowledge in the computing discipline and to engage in life-long learning.