Career-Focused Bachelor of Science in Computer Science

(subject to review)

The Career-Focused bachelor's degree in computer science is tailored for students interested in pursuing a career in the dynamic field of software development. With a structured curriculum, the program provides a solid foundation in the software skills needed to address various tech challenges in professional settings. Students will develop crucial competencies in software development, emphasizing areas like cloud computing, artificial intelligence, machine learning, and database concepts. The coursework covers the programming languages, frameworks, algorithms, and techniques used by today's software development professionals.

Modern computer science intersects with a variety of academic fields, including business, economics, the sciences, and mathematics. Training in software development equips students to enter the growing markets of database systems, software design, cloud computing, and more. The skills of problem-solving and algorithmic thinking enhance students' approaches to challenges across disciplines. With practical training in programming and computer systems, students become proactive in implementing and automating effective problem-solving strategies.

Upon completion of the program, graduates are expected to:

- Apply knowledge of math, science, engineering, and contemporary developments in the fields of software programming, networking, system design, computer science and/or project management.
- Analyze problems through the use of computer science concepts and processes to formulate, implement and test software-based algorithms.
- Incorporate historical context and emerging developments in computer science to create adaptable and efficient algorithmic solutions that reflect ethical considerations and global awareness.
- Use the techniques, skills and emerging tools necessary for analysis and evolution of algorithms in computer science.
- Integrate knowledge, tools and problem-solving skills to carry out the design, creation, maintenance and testing of state-of-the-art software solutions.

Major Courses (Required)

CSIS1101	Computer Science I	3
CSIS1112	Computer Science II	3
CSIS2018	Advanced Data Structures	3
CSIS2023	Survey of Programming Languages	3
CSIS2030	Database Concepts	3
CSIS2045	Introduction to Operating Systems	3
CSIS3106	Software Verification, Validation, Testing and Security	3
CSIS3126	Design Project I	3
CSIS3XXX	Introduction to Artificial Intelligence & Machine Learning (NEW)	3
CSIS3XX1	Cloud Computing to Scale (NEW)	3
CSIS4010	Software Engineering	3

Applied/Experiential Learning

Students in this program are required to complete 600 hours of Work Integrated Learning.	

Related Professional Studies

CYB2010	Computer Architecture with Assembly Language Programming	3
CYB3038	HCI/Usable Security	3
ITEC2081	Network Protocols I	3
ITEC3050	Information Security with Cryptography	3
PRMG2010	Introduction to Project Management & Project Membership	3

A&S Core Experience

Communications Foundations Courses	9
Integrative Learning	6
Arts and Humanities	6
Mathematics	6
Science	4
Social Sciences	6
A&S Electives	6
Total Credits	**91.0**