

# APPLIED COMPUTER SCIENCE (EC)

CSC 491	Capstone Project	3
<b>Total Hours</b>		<b>36</b>

An accelerated and all online program focusing on the applied characteristics of Computer Science. While theory is important and not absent in this program. Emphasis is placed on the applied skills readily used in industry today to prepare students for jobs as software engineers, data science specialists, full stack developers, machine learning developers, and many other careers which leverage computer programming and applied skills throughout computer science.

## Program Learning Outcomes

- 1- A: Professional responsibility. Students will recognize and be guided by the professional, legal and worldview issues involved in the use of computer technology.
- 2- B: Problem solving. Students will demonstrate how to solve problems in various user domains using the tools of computer science and information technology.
- 2- C: Elements of computational thinking. Students will recognize the broad relevance of computational thinking in everyday life as well as its applicability within other domains, and apply it in appropriate circumstances.
- 3- D: Modeling. Students will use such knowledge and understanding in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoff involved in design choices.
- 3- E: Methods and tools. Students will deploy appropriate theory, practices, and tools for the specification, design, implementation, and maintenance as well as the evaluation of computer-based systems.
- 4- F: Critical evaluation and testing. Students will analyze the extent to which a computer-based system meets the criteria defined for its current use and future development.
- 5- G: Requirements and Specifications. Students will identify and analyze criteria and specifications appropriate to specific problems, and plan strategies for their solution.
- 6- H: Knowledge and understanding. Students will exhibit knowledge and understanding of essential facts, concepts, principles, and theories relating to computer science and information technology (especially the nine grand ideas).

## Curriculum

Code	Title	Hours
CSC 175	Theory and Fundamentals of Computer Science	3
CSC 200	Coding I- Fundamentals	3
CSC 250	Coding II- Algorithms	3
CSC 300	Coding III- Data Structures	3
CSC 350	Operating Systems	3
CSC 370	Software Engineering	3
CSC 415	Artificial Intelligence	3
CSC 419	Machine Learning & Robotics	3
CSC 426	Cybersecurity	3
CSC 430	Database Fundamentals	3
CSC 460	Advanced Database and Web Development	3