

INTRODUCTION TO PROGRAMMING, CERTIFICATE OF ACHIEVEMENT

Financial Aid Eligible

The program provides students with foundational knowledge and hands-on practice across multiple programming paradigms and languages. Through coursework in HyperText Markup Language (HTML) and PHP, Hypertext Preprocessor, Java, Python, and core programming language concepts, students develop essential skills in web development, problem-solving, data structures, and object-oriented programming. This certificate prepares students for entry-level roles in software and web development or for continued study in advanced programming and computer science pathways.

Program Learning Outcomes

1. Apply object-oriented programming principles to create modular, reusable, and well-structured software solutions.
2. Analyze and utilize fundamental data structures to solve computational problems efficiently and apply core concepts across programming languages.
3. Develop simple web-based applications by integrating client-side and server-side programming concepts learned through HTML, PHP, and JavaScript.
4. Use problem-solving and algorithmic thinking to design logical solutions and translate them into functioning programs across different platforms and languages.

Course	Title	Units
Required Core		
Complete the following:		
ICS C120	Introduction to Programming	3
ICS C123	Fundamental Data Structures	3
ICS C141	Concepts of Programming Languages	3
ICS C250	Object-Oriented Programming	3
or CIS C157	Introduction to Python Programming	
Total Units		12