# COP-COMPUTER PROGRAMMING (COP)

**COP 1000 Introduction to Programming (3 Credits )**
This course covers the basic concepts of computer programming. Students use a structured approach to program algorithm design and learn logic techniques such as initialization, accumulation, conditional processing, and iteration. Logic techniques and data types are illustrated using one or more high level programming languages. No prior experience with computers or programming is necessary, nor is any special knowledge of mathematics.

**COP 1220 Introduction to Programming in C (3 Credits )**
Hands-on introduction to the C Programming Language as applied to business and scientific applications. Good programming practices and problem solving with procedural programming will be emphasized. Topics include data types, control structures, arrays, pointers, functions, file I/O operations, structs, and unions.

**COP 2700 Database and SQL Concepts (3 Credits )**
This course explores the practical application of database design techniques. Master the fundamentals of database structures, relationships between tables, and the art of data organization through normalization. Learn the industry-standard Structured Query Language (SQL) to efficiently manipulate and retrieve data. Gain hands-on experience by crafting tables, writing SQL queries, and creating Data Flow Diagrams. The course also explores crucial aspects of database security, administration, and management strategies.

**COP 2800 Programming with Java (3 Credits )**
This course provides an introduction to the Java Programming language. Students will create, document, debug, and run Java applications.

**COP 2801 JavaScript Fundamentals (3 Credits )**
The focus will be basic concepts of programming with JavaScript. There will be an emphasis on JavaScript syntax and how JavaScript is used to create functions to handle events and objects. The student will learn how to modify HTML code and generate requests and responses to web browsers. No special knowledge of mathematics is required.

**COP 2805 Advanced Java Programming (3 Credits )**
This course continues implementation of Java programming begun in COP 2800. After reviewing topics of classes, objects, types, control flows, testing, debugging, documenting and using Java libraries, the following topics will be included: interfaces, polymorphism, event handling, inheritance, GUIs, array lists, exception handling, streams, system design, recursion, sorting and searching, and data structures. Students will be involved in hands-on experiences within class meetings and in between class meetings. Students will create programs meeting given specifications.