COMPUTER PROGRAMMING

COP 1000, Introduction to Programming Logic Introduction to Programming Logic
3 hrs., 3 crs.,
(Offered fall and spring). This course provides programming logic that emphasizes the use of flow charts, pseudo-code, and functional structure charts to develop well-formed algorithms. Both are structured and object-oriented design methodologies will be examined.

COP 2224, Introduction To C++ Programming Introduction To C++ Programming
3 hrs., 3 crs.,
(Offered fall). Prerequisite: *COP1000. This course helps students to develop problem-solving skills using programming languages. Students are introduced to fundamentals of C++ programming with an emphasis on primitive data types, control structures, looping structures, methods, and arrays. The student will also gain a basic understanding of the style of programming called object oriented programming.

COP 2250, Introduction to Java Programming Introduction to Java Programming
3 hrs., 3 crs.,
(Offered spring). Prerequisite: *COP1000. This course helps students to develop problem-solving skills using programming languages. Students are introduced to fundamentals of Java programming with an emphasis on primitive data types, control structures, looping structures, methods and arrays. The student will also gain a basic understanding of the style of programming called object oriented programming.

COP 2250H, Honors Introduction to Java Programming Honors Introduction to Java Programming
3 hrs., 3 crs.,
(Offered spring). Prerequisite: *COP1000 and COP2700 or permission of instructor. This course helps students to develop problem-solving skills using programming languages. Students are introduced to fundamentals of Java programming with an emphasis on primitive data types, control structures, looping structures, methods and arrays. The student will also gain a basic understanding of the style of programming called object oriented programming. This course will investigate objects by using classes and methods. External database sources will be used for both WinForm and WebForm based programs.

COP 2251, Java Programming II Java Programming II
3 hrs., 3 crs.,
(Offered fall). Prerequisite: COP2250 and COP2700. This course will teach students to write advanced Java programs. Topics include Swing Graphical User Interface (GUI) applications, advanced layout managers, Swing applets, threads, regular expressions, collections, Java networking, Remote Method Invocation (RMI), JavaBeans, Java Database Connectivity (JDBC), and Java security. Students will write complete applications and small Java applets.

COP 2657, Introduction to Smartphone Programming Introduction to Smartphone Programming
3 hrs., 3 crs.,
Prerequisite: *COP2250. This course provides a comprehensive project experience in the development of mobile applications on several popular software platforms including IOS (formerly iPhone OS), Google android, rim blackberry and Microsoft Windows Mobile 7. Students receive intensive tutorial introductions to each platform, covering hardware capabilities and limitations, the development environment, and the communications infrastructure available on campus to support networking and testing.

COP 2700, Data Structure (SQL) Data Structure (SQL)
3 hrs., 3 crs.,
(Offered fall and spring). This course provides students with a solid foundation in SQL, which provides a means for accessing and manipulating databases. Students will be familiarized with the structure of databases and introduced to the relational database model. Students will learn the fundamentals of the SQL language, including how to: create and design tables; carry out queries; add and delete data from a database; create views, and handle security.

COP 2701, Database Design and Management Database Design and Management
3 hrs., 3 crs.,
(Offered spring). Prerequisites: COP1000, COP2700. This course is designed to familiarize individuals with modern database technologies. Students will complete a series of database application projects using enterprise database software. Topics include advanced database design, entity-relationship modeling, the structured query language (SQL) including database DML and DDL functions, database query optimization, triggers, and elementary stored procedures.

COP 2840, Internet Programming Internet Programming
3 hrs., 3 crs.,
(Offered spring). Prerequisites: DIG2100, COP1000. This course builds expertise in Internet programming using JavaScript and Vbscript languages. Client-side and server-side scripting are included. Scripts will be used with HTML to add interactive capabilities to web sites.

COP 2940, Integrative Programming/Technologies Capstone Integrative Programming/Technologies Capstone
3 hrs., 3 crs.,
(Offered spring). Prerequisites: *COP2250, *DIG2100, *COP2700 or permission of instructor. This capstone course provides the opportunity for students to demonstrate their mastery of the skills earned in the Software and Databased Developer (SDD-AS) program. The students will apply their knowledge to programmatically solve a real-world problem. This course should be taken during the student's last semester of the SOD-AS program. The course provides the student an opportunity to design, develop, test, and deploy an end-to-end application.

COP 3834, Developing Websites Using PHP/MySQL Developing Websites Using PHP/MySQL
3 hrs., 3 crs.,
(Offered summer). Prerequisites: *COP1000, *DIG2100, *COP2700 or permission of instructor. This course will teach students necessary skills to effectively implement dynamic web sites using PHP hypertext preprocessor (PHP) and MySQL, connecting to a MySQL database, writing basic structured query language (SQL) commands, and developing applications with PHP/MySQL.

COP 3855, Advanced Web Animation (JQUERY) Advanced Web Animation (JQUERY)
3 hrs., 3 crs.,
(Offered fall). Prerequisites: *COP2840. This course provides more practical and professional tools for working with Cascading Style Sheets (CSS) and JavaScript using the jQuery and the jQuery UI (User Interface) libraries.

COP 4640, Operating Systems Environments Operating Systems Environments
3 hrs., 3 crs.,
(Offered spring). Prerequisites: *CGS1570, *CTS1650, COP1000, *MAN3303. Introduction to Operating Systems from an applied point of view. Topics include operating systems configuration, characteristics, and evaluations. Laboratory exercises require students to develop and maintain a multi-user operating system, develop custom system utilities, and evaluate different operating systems configurations.

COP 4864, Client Side Programming Client Side Programming
3 hrs., 3 crs.,
(Offered fall). Prerequisites: COP2840, must be admitted to one of the BAS programs. A course in principles of client-side technologies that form the complement of server-side applications. This course provides a solid foundation for the concepts of client-side programming and an introduction to client-side frameworks.