Computer Science (CSC)

(Computer Science & Technology Department)

CSC 101—Computer Science 1
3 lect., 3 lab, 4 cr. (Spring)
This introductory course includes fundamental topics such as computer organization, control structures, input and output data, data types, arrays, strings, methods, and classes. Problem-solving techniques, algorithm design, and implementation strategies are introduced to demonstrate how these methods are used to attain solutions. Students will be introduced to object-oriented techniques.
Prerequisite: Math placement of MAT 121 or higher

CSC 102—Computer Science 2
3 lect., 3 lab, 4 cr. (Fall)
A continuation of structured programming using the Java language. Students will design and test algorithms for computer solutions. Topics include user defined data classes, arrays, files, algorithm analysis and software engineering concepts. This course fulfills the math requirement for the A.S. degree
Prerequisite: CSC 101 or permission of the department chair

CSC 108—Web Programming 1
2 lect., 2 lab, 3 cr. (Spring)
This is a computer based course that introduces the student to client-sided Internet web page programming. The student will cover topics including, general concepts, terminology, XHTML, JavaScript, DHTML, and XML. Assignments provide experience in the use of the scripting/programming languages utilized to create web pages.
Prerequisite: CIT 111, Successful completion (DVP) of MAT 020 or MAT 040 or placement into MAT 092 or higher

CSC 130—Computers and Computing
2 lect., 2 lab, 3 cr. (Fall/Spring)
Designed for students who desire an introduction to computers and computer programming, with "hands on" lab experience. Object oriented programming (Visual Basic) is taught using microcomputers with applications drawn from such fields as education, mathematics, and science.
Prerequisite: MAT 102 or by permission of instructor

CSC 138—Scripting
2 lect., 2 lab, 3 cr. (Fall/Spring)
Students will be introduced to basic scripting in a current language (e.g. Python). Topics include the interpreter, variables and expressions, conditional branching, loops, objects, and basic data structures. Laboratory assignments will utilize problem-solving techniques to develop complete scripts and concentrate on practical solutions for a variety of administrative and programming tasks.

CSC 201—Data Structures
2 lect., 3 lab, 3 cr. (Spring)
A course in Data Structures. Arrays and records are reviewed and abstract data structures and their implementations are introduced using recursion and dynamic storage where appropriate. Structures studied include linked lists, stacks, queues, trees, and graphs. This course fulfills the math requirement for the A.S. degree
Prerequisite: CSC 102

CSC 204—Computer Organization and Assembly Language
3 cr. (Fall)
An introduction to the organization of digital computers. Topics include information representation, system architecture, instruction sets, addressing modes, input/output techniques, and subroutine linkage considerations. Students write Intel 80286 microprocessor assembly language programs.
Prerequisite: CSC 101

CSC 205—Web Programming 2
2 lect., 2 lab, 3 cr. (Fall)
This is a computer based course which introduces the student to server-sided Internet web page programming. The student will cover topics including, general concepts, terminology, IIS, Apache, SQL, ASP, XML, Perl, CGI, and PHP. Assignments provide experience in the use of the scripting/programming languages utilized to create interactive web pages.
Prerequisite: CIT 108

CSC 227—JavaScript
2 lect., 2 lab, 3 cr.
JavaScript is a scripted programming language that helps developers make web pages dynamic and interactive by implementing custom scripts to provide enhanced functionality. Many of the capabilities that make the Internet so much a part of our daily life are coded in some instance of JavaScript. JavaScript is very popular and adopted universally by every web browser. Most employers providing web services would certainly expect entry level employees to have a solid understanding of this toolset. Note that JavaScript is not to be confused with Java, a more structured language used to create applications, and one that is already taught in our curriculum (CSC 102)
Prerequisite: CIT 111, CSC 138

CSC 232—Mobile Application Development
2 lect., 2 lab, 3 cr.
This course introduces the student to the principles and issues associated with mobile application development on today's popular platforms. The focus of the course is the creation of apps within the backend systems for use on devices such as tablets, smartphones, and automobiles. There are more than 5 billion mobile phone users in the world - more than desktop or laptop users. Mobile apps are the key components of these systems. Topics will include user interface design, application components, inter-component communications, data storage, asynchronous processing, 2D graphics, and security. Students will develop their own apps in their semester-long projects.
Prerequisite: CSC 101