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
3 lect., 3 lab, 4 cr. (Fall)
This course introduces students to the basics of web site development. Topics include general concepts and terminology, client-side vs. server side programming, web protocols and standards, and developing interactive web sites using HTML forms and database integration. Assignments provide experience in the use of a contemporary web scripting/programming language to create dynamic web pages. (3 lect., 3 lab, 4 cr.)
Prerequisite: CIT 138, 215 Successful completion (DVP) of MAT 020 or MAT 040 or placement into MAT 092 or higher
Pre/Corequisite: CIT 225

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—Introduction to Applied Logic Through Scripting
2 lect., 2 lab, 3 cr. (Fall/Spring)
Students will be introduced to basic coding and computational problem solving using a contemporary scripting language. Topics include the Python shell, the interpreter, problem solving techniques, variables and expressions, conditional branching, loops, objects, and basic data structures. Labs will present problems that require the student to clearly understand the task, analyze the relevant data, and develop critical thinking skills that will lead to the best possible programming solution. (G11A)

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., 1 lab, 3 cr. (Spring)

This course covers advanced web development, concentrating on database integration with a contemporary web development framework. REST interfaces will also be covered. Assignments provide experience in the use of the scripting/ programming languages to create interactive web pages. (3 lect., 3 lab, 4 cr.)
Prerequisite: CSC 108

CSC 227—JavaScript
2 lect., 2 lab, 3 cr. (Fall)
Students will be introduced to the JavaScript programming language. Topics include variables and expressions; conditional branching; loops; objects; and basic data structures. This class will concentrate on acquiring a working knowledge of the Document Object Model (DOM), and develop interactive web components. JavaScript libraries will be reviewed. A JavaScript framework will also be introduced, and server-side JavaScript will be discussed. Laboratory assignments will concentrate on practical strategies for interactive website development.
Prerequisite: CIT 111, CSC 138

CSC 232—Mobile Application Development
2 lect., 2 lab, 3 cr. (Spring)
This course introduces students to programming technologies, design, and development related to mobile applications for smartphones and tablets. Topics include mobile device architecture, programming languages, software engineering, user interface design, and app distribution. Students will learn how to build apps from start to finish, utilize tools that programmer teams use, proper version control, and collaborative programming. This is a project-based course.
Prerequisite: CSC 101