

COMPUTER SCIENCE (CS)

CS133WS Computer Language I: Web Scripting 4 credits (3 lec, 2 lec lab hrs/wk)

Prerequisite(s): (CS160) or (CS195)

This programming course introduces basic concepts of client-side and server-side scripting languages emphasizing concepts of good website design and construction with the use of scripting languages. Programming focus is on modern event-driven client-server software concepts using HTML/XHTML and JavaScript and PHP. Prior HTML/XHTML knowledge is required for success.

This course may be taken 1 time for credit.

Course classification: LDC

CS160 Computer Science Orientation 4 credits (3 lec, 2 lec lab hrs/wk)

This course introduces students to the computer science field and profession. Students will be introduced to computer science, programming and careers, as well as societal and ethical issues surrounding the use of computers. Students will have the opportunity to participate in team problem solving.

This course may be taken 1 time for credit.

Course classification: LDC

CS161 Introduction to Computer Science I 4 credits (3 lec, 2 lec lab hrs/wk)

Prerequisite(s): (CS160) or (ENGR112)

Introduction to Computer Science is a first year computer science course designed to teach the basic concepts of computer science and object-oriented programming. Topics can include simple data types, algorithmic problem solving, conditional and iterative structures, function definition, object-oriented programming design, analysis of algorithms, programming security, and proper code documentation.

This course may be taken 1 time for credit.

Course classification: LDC

CS162 Introduction to Computer Science II 4 credits (3 lec, 2 lec lab hrs/wk)

Prerequisite(s): (CS161)

This is a second course in a series for CIS/CS/ENGR majors and anyone seeking a rigorous introduction. The course covers algorithm development and program design using an object-oriented language such as C++ and Python. Topics include logical operators, control structures, program testing and debugging, secure coding techniques, documentation, user-defined methods and classes, parameter passing, graphical user interfaces, one and two-dimensional arrays, simple sorting and searching, graphs of functions, and string manipulation.

This course may be taken 1 time for credit.

Course classification: LDC

CS180 Internship: Computer Science 1-12 credits (3 lab hrs/wk/cr)

Prerequisite(s): Instructor consent

Practical on-site experience that will allow students to explore workplace environments and career options.

This course may be taken 12 times for credit.

Course classification: LDC

CS195 Web Development I 3 credits (2 lec, 2 lec lab hrs/wk)

Prerequisite(s): (CIS120) or (CS160)

This class introduces the basic elements of beginning webpage creation using a text editor and HTML/XHTML. This class will focus on web terminology basic HTML/XHTML coding to include hyperlinks anchors tables forms and frames design principles and accessibility issues.

Students will explore the availability of tools for webpage creation site management validation and accessibility checks.

This course may be taken 1 time for credit.

Course classification: LDC

CS244 Systems Analysis 3 credits (3 lec hrs/wk)

Prerequisite(s): (CIS125DB) or (CS275)

This course will introduce methods and modeling tools used in the systems development process. Emphasis is on structured analysis of computer information systems. Assignments will include the use of project management software CASE tools and graphic tools applied to problems similar to those found in systems in business and industry.

This course may be taken 1 time for credit.

Course classification: LDC

CS261 Data Structures 4 credits (3 lec, 2 lec lab hrs/wk)

Prerequisite(s): (CS162)

This course covers complexity analysis, approximation methods, trees and graphs, file processing, binary search trees, hashing, and storage management.

This course may be taken 1 time for credit.

Course classification: LDC

CS275 Database Management 4 credits (3 lec, 2 lec lab hrs/wk)

Prerequisite(s): (CS133WS) or (CS161) or (CS165)

This course is designed to be broader than teaching specific database products. It will address database development, a concept which includes data modeling, database design, and database implementation. It will identify the entity-relationship and object data modeling techniques, and the importance of normalizing data models. Techniques of implementing these models into a relational database scheme will be presented.

This course may be taken 1 time for credit.

Course classification: LDC

CS280 CWE: Computer Science 1-12 credits (3 lab hrs/wk/cr)

Prerequisite(s): Instructor consent

Practical on-site experience that will allow students to test knowledge learned in the classroom and explore a variety of workplaces in which to apply that knowledge

This course may be taken 12 times for credit.

Course classification: LDC