

CS - COMPUTER SCIENCE (CS)

CS 510. Programming Languages. (3 Credits)

Programming language concepts: syntax; characteristic of grammars such as context-free and ambiguous; Backus-Naur Form; organization of programming languages such as block structure, list processing, etc.

Prerequisite: CS 255.

CS 521. Automata Theory and Compiler Construction. (3 Credits)

Formal grammars, mathematical machines and their relationships.

Compiler writing techniques and their application on a simple language.

Prerequisite: CS 355.

CS 561. Numerical Analysis. (3 Credits)

Error analysis for iterative methods; approximation theory; numerical differentiation and quadrature; initial-value problems for ordinary differential equations; iterative techniques in matrix algebra. Also listed as MA 561 but creditable only in the field for which registered.

Prerequisites: CS 155 or 210; MA 227.

CS 587. Computer Architecture. (3 Credits)

Boolean algebra and the elements of logic design. Study of the theory and design of register transfer, arithmetic unit, control unit, and memory.

Micro, mini, and mainframe processors. Design options including array processors, stackbased processor, pipelining, and multiprocessing.

Prerequisites: CS 310, 386.

CS 590. Graduate Seminar. (3 Credits)

Computer science topics selected according to the needs of the students.

Prerequisites: graduate classification and departmental approval.