

Computer Information Systems

Prerequisite courses must be passed with a minimum grade of C.

LOWER DIVISION

CIS 180. Selected Introductory Topics in Computer Literacy (.5-3). May include communications, operating systems, specialized applications software, or general overview topics at introductory levels. [Possible mandatory CR/NC. Meets as lecture (CIS 180B), lab (CIS 180L), or a combination (CIS 180, CIS 180C). May be limited to five weeks (CIS 180B, CIS 180C, CIS 180L). Rep with different topics.]

CIS 235 / CS 235. Java Programming (3). Object orientation; event handling; abstract windowing toolkit applets; applications; Java database connectivity; applications programming interface and Java doc. [Service fee.]

CIS 260. Systems Analysis (3). Information systems life cycle and its relationship to business organizations. Tools and techniques to analyze, design, develop, and implement a computer-based business information system. Computer-assisted software engineering (CASE) tools. [Weekly: 2 hrs lect, 2 hrs lab.]

CIS 291. Data Structures in C++ (3). Techniques for representing and manipulating data structures using C++. Static and dynamic properties of data structures. Represent structured information such as stacks, queues, trees, linked lists, graphs. Efficient algorithms for creating, finding, altering, and removing structured data. [Prereq: IA. Weekly: 2 hrs lect, 2 hrs lab.]

UPPER DIVISION

CIS 315 / CS 315. Database Design & Implementation (3). Design/implementation concepts for relational model. Enterprise and entity-relationship modeling. Schema development: normalization; SQL data definition and data manipulation language; user-defined types, rules, and triggers to support the schema. Features to support integrity, ease of use, and control: concurrency, locking, distribution, performance. [Prereq: CIS 260 or CS 233, MATH 253 recommended. Weekly: 2 hrs lect, 2 hrs lab.]

CIS 318 / CS 318. Programming Database Applications (3). 4th generation language tools. Ad hoc interaction with database using SQL. Program SQL scripts; design applications using forms and menus; program an application using form and menu structures; program with a report generator; access the database from a procedural language. [Prereq: CIS 315/CS 315 and MATH 253. Weekly: 2 hrs lect, 2 hrs lab.]

CIS 350. Computer Architecture & Assembly Language (3). Computer system components and their relationships. Digital logic, microarchitecture, microprogramming. Number systems; two pass assembler; instruction sets; addressing modes; using assembly language. [Desired: CIS 291/CS 291 (or IA for students from other disciplines). Weekly: 2 hrs lect, 2 hrs lab.]

CIS 372 / CS 372. Telecommunications (3). Data communications principles and applications; administering and managing communications systems. Protocols, networks, communication hardware, design, performance analysis. [Prereq: CS 233 or IA. Weekly: 2 hrs lect, 2 hrs lab.]

CIS 373 / CS 373. Network Design & Implementation (3). Comprehensively examine network design standards, communication protocols, configuration and management methods, security, and traffic analysis. Practical lab activities with tools and equipment. [Prereq: CIS 372 or CS 372.]

CIS 450. Information Resources Management (3). Survey organizational information needs; develop an organizational information strategy; plan and control; staff for success; write/review requests for proposals and bids; analyze make vs. buy decisions; write/review contracts; make management presentations. [Prereq: CIS 318/CS 318 and CS 372.]

CIS 480 / CS 480. Selected Topics in Information Systems (1-4). May include object-oriented programming, artificial intelligence programming, computer graphics, or specialized application tools. [Possible mandatory CR/NC. Weekly: meets 1 hr per unit as lect (CIS 480B/CS 480B); 2 hrs per unit lab (CIS 480L); or combination of 2 hrs lect, 2 hrs lab (CIS 480L). Rep with different topics.]

CIS 482 / CS 482. Internship (1-4). Supervised experience in business, governmental, or service agencies, matching theory with practice. [Prereq: IA. CR/NC. Weekly: 3 hrs per unit of credit.]

CIS 492 / CS 492. Systems Design & Implementation (3). Apply computer programming and implementation concepts to comprehensive group project. Use management planning and scheduling tools; practice assessing and reporting progress; develop, test, quality assure software; develop documentation. CIS majors only. [Prereq: CIS 318/CS 318, CIS 350, CIS 372, CIS 450. All prereqs must be completed with C or above. Weekly: 2 hrs lect, 2 hrs lab.]

CIS 499 / CS 499. Directed Study (1-4). Individual study on selected topics. Open to advanced students with consent of faculty sponsor and DA. [Rep by topic for a maximum of 12 units; multiple enrollments in term.]