Computer Science and Engineering—Descriptions of Courses

922. Interpersonal Communication
Fall, Spring. 3(3-0) Theory and research in interpersonal communication. Role of communication in processes such as interpersonal influence and relationship development.

990. Independent Study
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students in Communication. Approval of department. Individualized study under faculty direction.

999. Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 99 credits in all enrollments for this course. R: Open only to Ph.D. students in Communication.

COMMUNICATION ARTS AND SCIENCES

College of Communication Arts and Sciences

192. Environmental Issues Seminar
Fall, Spring. 3(3-0) A student may earn a maximum of 4 credits in all enrollments for this course. Interdepartmental with Natural Science, Agriculture and Natural Resources, Engineering, and Social Science. Administered by Natural Science. R: Open only to students in the College of Agriculture and Natural Resources or College of Engineering or College of Natural Science or College of Communication Arts and Sciences or College of Social Science. Approval of college. Environmental issues and problems explored from a variety of perspectives, including legal, scientific, historical, political, socio-economic, and technical points of view.

492. Special Topics
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Approval of college. Varied topics pertaining to the study of communication processes.

825. Mass Communication and Public Health
Fall, Spring. 3(3-0) R: Academic or professional background in mass communication and/or health. Health communication campaigns in domestic and international contexts. Focus on principles of effective communication.

826. Health Communication for Diverse Populations
Spring, 3(3-0) R: Academic or professional background in mass communication and/or health. Theory, research, and practice of communicating with specialized populations in clinical and public health contexts. Emphasis on interpersonal and small-group strategies.

892. Special Topics
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Open only to graduate students in the College of Communication Arts and Sciences or approval of college. Varied topics pertaining to advanced study of communication processes.

COMPUTER SCIENCE AND ENGINEERING

CSE

Department of Computer Science and Engineering

College of Engineering

101. Computing Concepts and Competencies
Fall, Spring, Summer. 3(2-2) Core concepts in computing including information storage, retrieval, management, and representation. Applications from specific disciplines. Applying core concepts to design and implement solutions to various focal problems, using hardware, multimedia software, communication and networks. SA: CSE 100, CSE 130

131. Introduction to Technical Computing
Fall, Spring. 3(2-2) Use of computing systems for technical communications and problem solving in engineering, mathematics, and science. Development and use of mathematical models suitable for computer representation, solution, graphical display, and animation. SA: CSE 131

231. Introduction to Programming I
Fall, Spring. 4(3-2) P: (CSE 118 or CSE 124 or CSE 125 or CSE 130) R: CSE 131 Introduction to object-centered programming using C++; development of classes and reliable software. Data structures and their encapsulation; stacks, queues, lists, trees, and hash tables. Algorithms operating on data structures. Object-oriented design and programming. SA: CSE 230

232. Introduction to Programming II
Fall, Spring. 4(3-2) P: (CSE 231) Continuation of object-centered programming using C++; development of classes and reliable software. Data structures and their encapsulation; stacks, queues, lists, trees, and hash tables. Algorithms operating on data structures. Object-oriented design and programming. SA: CSE 239

260. Discrete Structures in Computer Science
Fall, Spring. 4(3-0) P: (MTH 133 or MTH 126 or MTH 153H or LBS 119) Propositional and first order logic. Equivalence, inference and method of proof. Mathematical induction, diagonalization principle. Basic counting. Set operations, relations, functions. Grammars and finite state automata. Boolean algebra. Truth tables and minimization of Boolean expressions. Applications to computer science and engineering. SA: CSE 260

290. Independent Study in Computer Science
Fall, Spring. 1 credit. A student may earn a maximum of 3 credits in all enrollments for this course. R: Approval of department; application required. Supervised individual study in an area of computer science. SA: CSE 290

320. Computer Organization and Assembly Language Programming
Fall, Spring. 4(3-2) P: (CSE 232 and CSE 260) Not open to students with credit in EE 331. Machine representation of data and instructions. Machine organization, primary storage, registers, arithmetic logic unit, control unit, operations. Assembly language programming, interface to high level languages. Assemblers and loaders. SA: CSE 320

331. Algorithms and Data Structures
Fall, Spring. 4(3-2) P: (CSE 232 and CSE 260) R: Open only to students in the Department of Computer Science and Engineering or Computer Engineering majors or the LBS Computer Science coordinate major or the Computer Science disciplinary minor. Linear data structures, trees, and graphs and algorithms which operate on them. Fundamental algorithms for searching, sorting, string matching, graph problems, and their analysis. SA: CSE 331

410. Operating Systems
Fall, Spring. 4(3-2) P: (CSE 232 and CSE 260) and (CSE 320 or ECE 331) R: Open only to students in the Department of Computer Science and Engineering or the Computer Engineering major or the LBS Computer Science field of concentration or the LBS Computer Science coordinate major or the Computer Science disciplinary minor. History and evolution of operating systems. Process and processor management. Primary and auxiliary storage management. Performance evaluation, security, distributed systems. Case studies of modern operating systems. SA: CSE 410