825 Mass Communication and Public Health
Fall. 3(3-0) RB: 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) RB: 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 6 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.

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. Doctoral dissertation research.

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 Mass Media and Communication or approval of college. Topics on theoretical and research issues in communication and mass media.

993 Research Internship
Fall, Spring, Summer. 1 credit. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to Ph.D. students in Mass Media. Participation in faculty research projects.

101 Computing Concepts and Competencies
Fall, Spring. 3(2-2) P:M: (MTH 103 or MTH 126 or MTH 153H or LBS 119) SA: CPS 130 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 local problems. Using hardware, multimedia software, communication and networks.

231 Introduction to Programming I
Fall, Spring. 4(3-2) P:M: (LBS 118 or MTH 124 or MTH 132 or MTH 152H) RB: (CSE 131) SA: CSE 230 Introduction to object-centered programming using C++. Design, implementation and testing of programs to solve problems in engineering, mathematics and science. Programming fundamentals, functions, classes, arrays, and pointers.

260 Discrete Structures in Computer Science

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. SA: CPS 290 Supervised individual study in an area of computer science.

291 Selected Topics in Computer Science
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Approval of department. SA: CPS 291 Topics selected to supplement and enrich existing courses and lead to the development of new courses.

320 Computer Organization and Assembly Language Programming
Fall, Spring. 4(3-2) P:M: (CSE 232 and CSE 260) SA: CPS 320 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.

331 Algorithms and Data Structures
Fall, Spring. 4(3-2) P:M: (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.

370 Software Engineering
Fall, Spring. 4(3-2) P:M: (CSE 232 and CSE 260) 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. SA: CPS 470, CSE 470 Software life cycle including specification, design, coding, testing, and verification of a software product. Stepwise refinement and rapid prototyping. Software portability, reusability and maintenance.