902. Communication Research Design II  
Spring, 4(4-0)  
P: COM 901. R: Open only to graduate students. Further study of methods of data collection and analysis. Writing and critiquing research reports.

915. Organizational Communication II  
Spring of odd-numbered years. 3(3-0)  
P: COM 815; COM 800 or COM 902. Organizational communication structure and information processing. The organization's embeddedness in a larger social environment.

921. Micro and Macro Media  
Pall of odd-numbered years. 3(3-0)  
P: COM 800 or COM 902. Perspectives on media processes pertaining to individuals, groups, and large-scale systems. Topics include cognitive processing of media, public opinion and affective responses to media.

922. Interpersonal Communication  
Pall. 3(3-0)  
P: COM 800 or COM 902. Theory and research in interpersonal communication. Role of communication in processes such as interpersonal influence and relationship development.

990. Independent Study  
Pall, 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  
Pall, 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.

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

499. Doctoral Seminar  
Pall, Spring, Summer. 3(3-0)  
P: COM 901. 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.

330. Data Structures and Programming  
Concepts  
Fall, Spring, 4(3-2)  
P: CPS 230, CPS 260.  
Data types and structures. Algorithms including searching, sorting and hashing. Program correctness, program analysis. Abstract data types including stacks, queues, and trees. Object-oriented programming, introduction to various program libraries.

360. Automata and Formal Language Theory  
Spring, 3(3-0)  

410. Operating Systems  
Fall, Spring, 4(3-2)  
P: CPS 330; CPS 320 or EE 331. R: Open only to Computer Science, Computer Engineering, Electrical Engineering, and LBS Computer Science majors.  
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.

420. Computer Architecture  
Fall, Spring, 4(3-2)  
P: CPS 330; EE 331 or CPS 320, CPS 360. R: Open only to Computer Science, Computer Engineering, Electrical Engineering, and LBS Computer Science majors.  
Digital logic and sequential machine design. Computer organization, control unit and arithmetic logic unit implementation. Input-output, memory organization, parallel operations. Digital system simulation.

422. Computer Networks  
Fall, Spring, 4(3-2)  
P: STT 351; CPS 320 or EE 331; CPS 410 or concurrently. R: Open only to juniors or seniors in the Computer Science or Computer Engineering or Electrical Engineering or LBS Computer Science major.  
Computer network architectures and models. Medium access control. Physical, data link, network, transport, and session layers. Local-area and wide-area networks.

440. Artificial Intelligence and Symbolic Programming  
Fall, 4(3-2)  
P: CPS 330, CPS 360. R: Open only to Computer Science, Computer Engineering, and LBS Computer Science majors.  
Machine intelligence. Heuristic programming. Representation and control in LISP and PROLOG. Applications to search, rule-based diagnosis, and parsing.

449. Design of Intelligent Systems (W)  
Spring, 4(3-2)  
P: CPS 440; CPS 320 or EE 331. R: Open only to seniors or graduate students in a College of Engineering Computer Science major. Completion of Tier I writing requirement. Not open to students with credit in CPS 479 or CPS 478.  
Intelligent system applications such as natural language, machine vision, or a diagnostic expert system. Team development, software engineering, project management.