

- 805. Water Treatment Principles**
Winter. 3(3-0) C E 483.
Chemical and physical principles of water treatment.
- 806. Sewage Collection and Treatment**
Spring. 3(3-0) C E 483.
Chemical, physical and biological principles of sewage collection and treatment.
- 899. Research**
(EGR 899.) Fall, Winter, Spring, Summer. Variable credit. Approval of department.
- 905. Biological Principles of Sanitary Engineering I**
Fall. 3(2-3) C E 483.
Fundamental physical, chemical, and biological principles relating to the field of sanitary engineering.
- 906. Biological Principles of Sanitary Engineering II**
Winter. 3(2-3) 905.
Fundamental physical, chemical, and biological principles relating to the field of sanitary engineering.
- 999. Research**
(EGR 999.) Fall, Winter, Spring, Summer. Variable credit. Approval of department.

COMMUNICATION COM

College of Communication Arts

- 100. Human Communication I**
Fall, Winter, Spring, Summer. 3(3-0)
Process and functions of communication. Principles underlying communication behavior. Practice in analyzing communication situations and in speaking and writing.
- 101. Human Communication II**
(S T 101.) Fall, Winter, Spring, Summer. 3(3-0) 100.
Continuation of 100, with greater emphasis on speaking and writing, and on analyzing increasingly complex communication situations.
- 199. Methods of Inquiry**
Fall, Spring. 3(3-0) Majors and minors only. 101.
Major theoretic orientations toward communication. Primary tools of scholarly inquiry.
- 205. Persuasion**
(305., S T 305.) Fall, Winter, Spring. 4(4-0) 101.
Process of influencing human behavior through persuasive communication. Experience in creating persuasive messages and in evaluating the acceptability of persuasive attempts.
- 210. Leadership**
(116., S T 116.) Winter. 4(4-0) 100.
Principles and practice in the utilization of communication for effective leadership.
- 299. Individual Projects**
Fall, Winter, Spring, Summer. Variable credit. May re-enroll for a maximum of 15 credits. 199, approval of project proposal by department.
Independent research, experience in communication laboratories, or tutorial work in communication skills.

- 300. Effects of Communication**
Fall, Winter, Summer. 4(4-0) 100.
Examination of the dimensions of communication effects.
- 315. Organizational Communication**
(311., S T 311.) Spring. 4(4-0) 101.
Principles and practice in the management of communication systems, with emphases on conflict resolution, information exchange, innovativeness, and information management.
- 350. Signs and Sign-Behavior**
Fall, Winter, Summer. 4(4-0) 100.
Theories of man's symbolic behaviors. Semiotics and general semantics.
- 351. Message Analysis I**
(440.) Winter. 4(4-0) 350.
Methods of describing messages and message codes, with emphasis on the concept of information.
- 352. Message Analysis II**
(320.) Spring. 4(4-0) 351.
Continuation of 351, with emphasis on non-verbal codes: gesture, expression, time and space, light.
- 360. Critical Perspectives on Communication**
Winter. 4(4-0) 100.
Interdependence of communication and other societal factors, emphasizing criteria for ethical and social appropriateness.
- 399. Seminar**
(400.) Winter, Spring. 4(4-0) Majors only. 360.
Contemporary issues in communication.
- 405. Research in Communication Strategies and Styles**
(S T 405.) Fall, Spring, Summer. 5(5-0) Seniors. 300.
Research literature in communication strategies and styles.
- 413. Seminar in Communication Education**
(S T 413.) Fall, Winter, Spring, Summer. 4(4-0) ED 327U.
Philosophies of curricular and co-curricular programs in communication education. Internship experience in those programs.
- 420. Message Design**
Winter. 4(4-0) 101.
Principles and practice in message-media construction and selection.
- 499. Special Projects**
Fall, Winter, Spring, Summer. Variable credit. May re-enroll for a maximum of 15 credits. Approval of project proposal by department.
Independent research, group research, student-directed group projects.
- 805. Communication Research**
Fall. 5(4-2) Majors.
Communication research strategy and methodology. Scientific process, bases for derivation and verification of hypotheses, and basic methods of designing research in communication.
- 806. Communication Research**
Winter. 5(4-0) 805.
Continuation of 805.
- 820. Communication Theory and Process**
Fall, Winter, Summer. 3(3-0)
Theoretic models of communication, with emphasis on the applications of communication theory to various professional communication areas.

- 821. Mass Communication Theory and Research**
(921.) Spring. 4(3-0)
Current theories and research in mass communication.
- 822. Interpersonal Communication**
(920.) Winter. 4(3-0)
Current theories and research in interpersonal communication, with emphasis on persuasion.
- 828. Cross-cultural Communication**
(428.) Winter, Spring. 4(4-0)
Role of communication in the economic, social and political development of less developed countries. Problems in communicating across cultural boundaries.
- 850. Seminar in Research Utilization**
(950.) Spring, Summer. 4(3-0) May re-enroll for a maximum of 8 credits. Approval of department.
Applications of communication research to professional practice in such areas as teaching, change agencies, information system management, etc.
- 870. Communication and Change: The Diffusion of Ideas and Information**
(470.) Fall, Spring. 4(4-0)
Research traditions underlying the diffusion of ideas and information, and acceptance of innovation and change. Strategic principles for introduction of change through the use of communication.
- 890. Special Problems**
Fall, Winter, Spring, Summer. 1 to 6 credits. Approval of department.
Special problems as arranged with instructor.
- 899. Research**
Fall, Winter, Spring, Summer. Variable credit. Approval of department.
- 905. Communication Research Design**
Spring. 4(4-0) 806.
Methods of data collection and analysis in communication research. Designing exploratory studies of the communication process. Interviewer training and bias. Content analysis of the mass media. Writing and critiquing research reports.
- 940. Seminar in Communication Theory and Research**
Fall, Winter, Spring, Summer. Variable credit. May re-enroll for a maximum of 45 credits. Approval of department.
Theoretic and research issues in communication.
- 990. Special Problems**
Fall, Winter, Spring, Summer. 1 to 6 credits. Approval of department.
- 999. Research**
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

COMPUTER SCIENCE CPS

College of Engineering

- 110. FORTRAN Programming**
Fall, Winter, Spring, Summer. 3(3-0)
Students may not receive credit in both 110 and 120.
Introduction to FORTRAN programming; use of library programs; applications from various areas.