

5710. Advanced Inorganic Chemistry. 3 hours. An advanced study of the interrelation of structure, bonding and reactivity of inorganic and organometallic compounds; basic applications of molecular symmetry and group theory to chemical problems. Prerequisite(s): pass exemption examination in inorganic chemistry, or CHEM 5560.

5800. Procedures and Materials for Science Instruction. 3 hours. (2;4) Problems, techniques and procedures for classroom and laboratory experiences based on current science education research. Recommended for students who desire secondary teacher certification in a science field. Field experience in the public schools is a required component. Prerequisite(s): completion of undergraduate science courses required for certification and consent of department.

5810. Selected Topics in Chemistry Education. 3 hours. Topics of current interest that vary from year to year. Prerequisite(s): consent of department. May be repeated for credit as topics vary.

5820. Studies in Chemistry Education: Pedagogical Materials and Curriculum Development. 3 hours. (2;1) Examines national trends in science education curriculum, explores issues associated with materials development and testing as it applies to chemistry curriculum, and engages students in implementing the protocols used within the discipline focusing on chemical demonstration activities.

5840. Chemistry Behind the Elements. 3 hours. The fundamentals of the universe are based on principles of periodicity as revealed in the descriptive chemistry of the elements. Among the areas covered are the characteristics of the families of elements, when and where each element was discovered and by whom the discoveries were made. Also includes the impact these discoveries have had on society and technological advances. Pertinent industrial applications of the elements and materials derived from them are presented.

5880. Learning Theories in Chemistry Education. 3 hours. Survey of chemistry education and preparation for teaching and learning as they have developed, along with pertinent research findings and design from the current literature.

5900-5910. Special Problems. 1–3 hours each. For students capable of developing a problem independently through conferences and activities directed by the instructor. Problem chosen by the student with the consent of the instructor.

5920-5930. Research Problems in Lieu of Thesis. 3 hours each. An introduction to research; may consist of an experimental, theoretical or review topic. A paper conforming to recommendations outlined in the "Handbook for Authors of Papers in the Journals of the American Chemical Society" must be submitted for credit in each course.

5940. Seminar in Current Chemistry. 1 hour. Colloquia covering current topics in chemistry. Required of all full-time graduate students in each term/semester of graduate residence. Prerequisite(s): senior standing. May be repeated for credit. Pass/no pass only.

5950. Master's Thesis. 3 or 6 hours. May be repeated for credit. To be scheduled only with consent of department. 6 hours credit required. No credit assigned until thesis has been completed and filed with the graduate dean. Continuous enrollment required once work on thesis has begun.

5960. Science Institute. 1–6 hours. Courses for students accepted by the university for enrollment in special institute courses. May be repeated for credit, not to exceed a total of 6 hours in each course.

6010. Seminar for Doctoral Candidates. 3 hours. Demonstration of competence in a specific area of chemistry (analytical, organic, physical, inorganic) as evidenced by criteria established by the faculty of each discipline. May be repeated for credit. Six credit hours required.

6900-6910. Special Problems. 1–3 hours each. For doctoral students capable of developing a problem independently through conferences and activities directed by the instructor. Problem selected by the student with the consent of the major professor.

6940. Individual Research. 1–12 hours. Doctoral research of independent nature. May be repeated for credit.

6950. Doctoral Dissertation. 3, 6 or 9 hours. To be scheduled only with consent of department. 12 hours credit required. No credit assigned until dissertation has been completed and filed with the graduate dean. Doctoral students must maintain continuous enrollment in this course subsequent to passing qualifying examination for admission to candidacy. May be repeated for credit.

6990-6991. Individual Research. 1–3 hours each. For postdoctoral fellows to further training and research experience in developing and solving research problems independently. Prerequisite(s): consent of department. May be repeated for credit. Pass/no pass only.

Chinese

see *Undergraduate Catalog*

Communication Studies

Communication Studies, COMM

5080. Introduction to Graduate Study and Research in Communication Studies. 3 hours. Broad perspective on communication studies content areas.

5081. Research Methodologies in Communication. 3 hours. Qualitative and quantitative methodologies for communication studies research.

5220. Organizational Communication. 3 hours. Study of the transmission of information and ideas within an organization with emphasis on the problems encountered in the business world.

5225. Interpersonal Communication. 3 hours. Contemporary research and theory in the study of communication patterns found at various stages of normal interpersonal interactions.

5226. Seminar in Health Communication. 3 hours. Introduction of communication theories and approaches related to health care in interpersonal, organizational and mass communication settings.

5227. Seminar in Intercultural Communication. 3 hours. Provides an opportunity to explore existing and emerging issues, theories and practices in intercultural communication.

5260. Group Performance. 3 hours. Historical and contemporary theoretical approaches to group performance in performance studies and related disciplines; practical experience in scripting and directing group performance.

5280. Communication and Information in the Classroom. 3 hours. The study of the major variables in the communication process and their impact on student learning and satisfaction. Designed primarily for teachers of all levels and content specialties.

5320. Quantitative Research Methods in Communication. 3 hours. Experimental and quantitative techniques usable in research in communication.

5325. Communication Theory. 3 hours. A survey of scientific and humanistic perspectives on the communication process and social contexts in which it occurs.

5340. Rhetorical Methods. 3 hours. The use of critical and rhetorical theories in the investigation and evaluation of rhetorical acts and artifacts.

5345. Rhetorical Theory. 3 hours. An examination of significant rhetorical theories and theorists.

5360. Performance Criticism. 3 hours. Theories of value and evaluation in performance studies and their influence on the practice of criticism, in general, and performance criticism, in particular. Contexts range from everyday acts of evaluation to formal, public instances of criticism.

5365. Performance Theory. 3 hours. Historical and contemporary theoretical approaches to performance studies, including theories from related disciplines and their impact on theory and practice in performance studies.

5380. Theory and Research in Persuasion. 3 hours. Recent theory and research on the persuasive process. Includes effects of variables in public, interpersonal, organizational and mass communication contexts.

5425. Gender and Communication. 3 hours. Examination of research and theory in gender and communication, investigating how communication structures gender and how gender affects communication.

5440. Public Address Studies. 3 hours. Research and theory in the critical interpretation and assessment of public discourse.

5460. Narrative Theory. 3 hours. Examination of theories of narrative and narrative structure and their significance. The study of narrative and nonnarrative phenomena, including fiction, drama, film and politics.

5480. Practicum. 3 hours. Training in the teaching of some aspect of communication. Under the supervision of a faculty member, the student prepares and presents instructional units, conducts class discussions and handles administrative matters peculiar to the type of course involved. No more than 3 hours may apply toward master's degree. Duties performed under teaching fellowships or graduate assistantships do not earn credit in this course.

5481. Graduate Internship. 3 hours. Supervised work in a job related to the student's major, professional field of study or career objective. Prerequisite(s): 9 graduate hours in communication; two letters of recommendation from professors in department; and consent of internship director.

5520. Communication and Conflict. 3 hours. Examines the role of communication used in managing conflict in its most common contexts: intrapersonal, interpersonal, group, organizational, professional, social and international. Theory and research are examined to develop more effective communication in conflict situations.

5525. Communication and Change. 3 hours. A study of the impact of human communication on the process of change in formal and informal organizations with emphasis on understanding and planning change.

5540. Freedom of Expression. 3 hours. Theories, statutes and cases involving the First Amendment guarantee of freedom of speech.

5560. History of Performance Studies. 3 hours. Philosophies, conventions and techniques that have contributed to the formation of contemporary performance theory. Examines performance approaches from classical to contemporary eras.

5625. Communication Consulting. 3 hours. Examination of organization communication consulting and of communication theorists and practitioners. Opportunities to develop and/or refine training and facilitating skills and unique models of communication consulting.

5720. Communication Style and Competence. 3 hours. Examination of the major theoretical and empirical approaches to style and competence in communication. Issues of conceptualization, assessment, instruction and training in communication style and competence are covered.

5820. Seminar in Communication Processes. 3 hours. Contemporary research and theory in communication processes. Rotating topics. May be repeated for credit as topics vary.

5840. Seminar in Rhetorical Studies. 3 hours. Contemporary research and theory in oral rhetorical studies. Rotating topics. May be repeated for credit as topics vary.

5860. Seminar in Performance Studies. 3 hours. Contemporary research and theory in performance studies. Rotating topics. May be repeated for credit as topics vary.

5880. Seminar in Communication Studies and Research. 3 hours. Rotating topics. May be repeated for credit as topics vary.

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Community Service

see Public Affairs and Community Service

Composition, Music

see Music

Computer Education and Cognitive Systems

see Educational Psychology

Computer Engineering

see Computer Science and Engineering