4960-4970. Science Institute (Chemistry). 1–6 hours each. For students accepted by the university in special institute courses. May be repeated for credit, not to exceed 6 hours in each course.

Chinese
see Foreign Languages and Literatures

Communication Studies

Students interested in majoring in communication studies must complete all pre-major requirements. COMM 3010 may be taken concurrently with **one** other communication course; students may either take 3010 concurrently with their final 2000-level pre-major course or their first enrollment in an upper-division course. Students who do not complete COMM 3010 with a grade of C or better are prohibited from enrolling in other upper-division communication courses until they have completed COMM 3010 successfully.

Communication Studies, COMM

1010 (SPCH 1311). Introduction to Communication. 3 hours. (1;0;2) A survey of the basic principles of human communication, with opportunities to apply these principles in different contexts. *Satisfies a portion of the Understanding the Human Community requirement of the University Core Curriculum.*

1440. Honors Classical Argument. 3 hours. Uses of argument in rational decision making based on classical theories of reason. Elements of argument, classical foundations of argument and contemporary application of argument principles. Prerequisite(s): acceptance to Honors College. *Satisfies a portion of the Understanding the Human Community requirement of the University Core Curriculum.*

2020 (SPCH 1318). Interpersonal Communication. 3 hours. An introduction to interpersonal communication research results and theories with application in two-person and small group relationships in a variety of human communication contexts. *Satisfies a portion of the Understanding the Human Community requirement of the University Core Curriculum.*

2040 (SPCH 1315). Public Speaking. 3 hours. (1;0;2) Introduction to principles of and practice in preparing public speaking speeches. Stresses the role of public speaking in democratic decision making. *Satisfies a portion of the Understanding the Human Community requirement of the University Core Curriculum.*

2060 (SPCH 2341). Performance of Literature. 3 hours. (1;0;2) Performance as a method of textual study. An introduction to the theory and practice of analyzing, rehearsing and performing non-dramatic texts. Recommended for elementary education majors. *Satisfies a portion of the Understanding the Human Community requirement of the University Core Curriculum.*

2140. Rhetoric and Argument. 3 hours. (1;0;2) Introduction to the critical dimensions of rhetoric and argument through presentation and evaluation of public discourse. Balanced attention to the theory and practice enabling students to analyze the persuasive function of public discourse; to discuss the role of audience in the construction of public discourse; and to develop skills for constructing, supporting, and evaluating public discourse.

2900. Special Problems. 1–3 hours.

3010. Communication Perspectives. 3 hours. Skills and concepts necessary to review communication research, to engage in critical research about communication behavior, and to write scholarly papers in an appropriate format. Restricted to COMM majors, this course is a requirement for students under the 2000-01 (or later) catalog and must be taken prior to or concurrently with a student's first enrollment in upper-division COMM courses. Prerequisite(s): COMM 1010, 2020, 2060 and 2140 with a grade of C or better. Communication majors only.

3120. Nonverbal Communication. 3 hours. Applications of research and theory in understanding the impact of nonverbal communication in a variety of human contexts. Prerequisite(s): COMM 2020.

3220. Health Communication. 3 hours. Communication in medical settings; origins, nature and impact of communication practices and beliefs in the health-care delivery system; role of interaction on human well-being. Prerequisite(s): COMM 2020.

3260. Storytelling. 3 hours. Investigation of folk literature, original sources and literary genres employed in the art of storytelling. Training in the acquisition of techniques and skills employed by the storyteller. Prerequisite(s): COMM 2060 or THEA 1050.

3265. Topics in Storytelling. 3 hours. Understanding how the art of storytelling influences and supports the development of diverse cultures. Comparison and contrast of storytelling traditions of at least three different groups related by geography (i.e. Americas, Asia or Africa) or topic (fairy tales, family stories or creation myths). Performance and analysis of narratives develops performance skills and sharpens critical thinking skills. Provides opportunities to participate in performances as a researcher, adapter, performer and critic. Prerequisite(s): COMM 2060 or THEA 1050. May be repeated for credit as topics vary.

3320. Communication and Conflict Management. 3 hours. Examination of the role of communication in the effective management of conflict and introduction to basic mediation topics such as gender, intercultural and nonverbal communication. Study of conflict in various common contexts: intrapersonal, interpersonal, group and organizational. Prerequisite(s): COMM 2020 or AECO 4000 or AECO 4020 or AECO 4120.

3340. Methods of Rhetorical Criticism. 3 hours. A survey of significant methodologies available to rhetorical critics. Emphasis on the critical abilities necessary to describe, explain, analyze, and evaluate symbolic influence in the public sphere. Prerequisite(s): COMM 2140.

3440. Public Address Studies. 3 hours. Major theories of public address and the critical assessment of selected persuasive addresses in the public arena. Prerequisite(s): COMM 2040 and 2140.

3520. Advanced Interpersonal Communication. 3 hours. Advanced study of interpersonal communication research, focusing on theory and application in a variety of contexts. Prerequisite(s): COMM 2020.

Courses of Instruction

3620. Intercultural Communication. 3 hours. Knowledge and skills designed to increase intercultural communication competence. Investigation into the ways in which culture interrelates with and affects communication processes. Examines affective, behavioral and cognitive processes involved in intercultural learning. Prerequisite(s): COMM 2020.

3720. Small Group Communication. 3 hours. (2;0;1) Theory, research and laboratory experience in small group communication; problems in group discussion; decision-making techniques. Prerequisite(s): COMM 2020 or PSYC 2650.

3760. Performance Methods. 3 hours. Advanced topics in individual performance as a method of textual study as well as theory and practice in individual performance as an aesthetic event and as a rhetorical and social act. Prerequisite(s): COMM 2060 or THEA 1050.

3840. Argumentation and Debate. 3 hours. (2;0;1) Theory, research and practice in developing and presenting arguments on public policy issues; reasoning, strategy and oral advocacy. Prerequisite(s): COMM 2040 and 2140.

3860. Group Performance. 3 hours. Theory and practice in analyzing texts, adapting and compiling scripts, and directing and rehearsing productions. Group performance is studied from three perspectives: as a method of textual study, as an aesthetic event, and as a social and rhetorical act. Prerequisite(s): COMM 2060 or THEA 1050.

3920. Organizational Communication. 3 hours. Principles of communication applied in the organizational environment. Focus upon diagnosis, analysis, and resolution methods related to communication-based problems with organizations. Prerequisite(s): COMM 2020 or MGMT 3820 or MGMT 4460 or MGMT 4470 or PSYC 3520.

4020. Communication Theory. 3 hours. Process of theory construction with particular emphasis on human communication, elements and types of theories, theoretical logics, metatheoretical perspectives toward communication, and specific content theories of communication. Prerequisite(s): COMM 2020.

4021. Communication Research Methods. 3 hours. Experimental and quantitative techniques usable in research in communication. Prerequisite(s): COMM 2020.

4040. Rhetorical Theory. 3 hours. A study of rhetorical traditions that provide useful insights into how individuals engage in rhetorical transactions. Prerequisite(s): COMM 2140.

4060. Performance Theory. 3 hours. Examination and comparison of text-centered, performer-centered and audience-centered theories of performance; functions of performance; and methods for evaluating performance. Prerequisite(s): COMM 2060; COMM 3760 or 3860.

4065. History of Performance Theory. 3 hours. Examination of the varied performance techniques, philosophies and conventions that have contributed to the formation of contemporary performance theory and practice. Covers approaches from classical to contemporary solo performance styles. Provides the opportunity to engage these performance traditions critically through discussion, analysis and creative reconstruction. Prerequisite(s): COMM 2060, COMM 3760 or 3860; or THEA 1050 and 2351.

4220. Gender and Communication. 3 hours. Examination of differences in communication behavior of males and females with particular reference to biological sex and psychological gender. Explores male and female communication in a variety of different contexts. Prerequisite(s): COMM 2020 or WMST 2100.

4240. Rhetoric, Culture and Ideology. 3 hours. Consequences of discourse on culture. May include communication throughout the life cycle, rhetorical creation and maintenance of social movements, international and intercultural rhetoric, feminist rhetorical criticism, ideological criticism, the rhetorical aspects of popular culture and the grounds for the criticism of culture from a rhetorical perspective. Prerequisite(s): COMM 2140.

4260. Performance and Culture. 3 hours. Examination of the role of performance in cultures. Research and analysis of texts and performance practices among various ethnic and cultural groups. *Satisfies a portion of the Understanding the Human Community requirement of the University Core Curriculum.*

4340. Rhetoric and Politics. 3 hours. Rhetoric of political campaigns, presidential rhetoric, legal communication, and the rhetorical creation, maintenance, use and legitimization of symbolic power. Prerequisite(s): COMM 2140 and 3340.

4360. Rhetoric of Performance. 3 hours. Contemporary performance as a critical and persuasive tool within social contexts. Research and analysis of performance texts and contexts designed to criticize social or cultural practices. Prerequisite(s): COMM 2060, COMM 3760 or 3860; or THEA 1050 and 2351.

4420. Communication and Relational Development. 3 hours. The role of communication processes in initiating, developing, defining, maintaining and dissolving various forms of human relationships. Examines the nature of communication in a variety of relational contexts. Prerequisite(s): COMM 2020.

4440. Issues in Freedom of Speech. 3 hours. Theories, doctrines, statutes and cases related to the First Amendment guarantee of freedom of speech. Prerequisite(s): COMM 2140.

4800. Communication Internship. 1–3 hours. (0;0;1–3) Supervised work in a job directly related to the student's major, professional field of study or career objective. Prerequisite(s): communication studies major; junior or senior classification; minimum GPA of 3.0 on courses taken at UNT; completion of department core plus at least 6 upper-level hours in communication studies at UNT; student must meet employer's requirements and have consent of department internship supervisor. May be repeated, but a maximum of 3 semesters credit hours of internship credit may be applied to the major in communication studies. Pass/no pass only.

4829. Topics in Communication Processes. 3 hours. Rotating topics in interpersonal communication, organizational communication, or communication research methods. Prerequisite(s): COMM 2020. May be repeated for credit as topics vary.

4849. Topics in Rhetorical Studies. 3 hours. Investigation of various topics related to the study of humans using symbolic discourse to influence others. Theory and application using qualitative and historical/critical methodologies. Prerequisite(s): COMM 2140. May be repeated for credit as topics vary.

4869. Topics in Performance Studies. 3 hours. Rotating topics may include: performance of particular genres, including poetry narrative, drama or non-literary texts; performance methods, including thematic approaches to performance or historical styles of performance; or theoretical issues in performance, including narrative theory, intertextuality or New Historicism. Prerequisite(s): COMM 2060. May be repeated for credit as topics vary.

4900-4910. Special Problems. 1–3 hours each. Prerequisite(s): problem must be approved by department chair.

4950. Senior Honors Thesis. 3 hours. Available to COMM majors having completed at least 90 semester hours with an overall GPA of 3.50 or better. Prerequisite(s): COMM 4020 and 4021, or 3340 and 4040, or 4060.

4951. Honors College Capstone Thesis. 3 hours. Major research project prepared by the student under the supervision of a faculty member and presented in standard thesis format. An oral defense is required of each student for successful completion of the thesis. Prerequisite(s): completion of at least 6 hours in honors courses; completion of at least 12 hours in the major department in which the thesis is prepared; approval of the department chair and the dean of the school or college in which the thesis is prepared; approval of the dean of the Honors College. May be substituted for HNRS 4000.

Community Service
see Public Service

Composition, Music
see Music

Computer Education and Cognitive Systems
see *Graduate Catalog*

Computer Engineering
see Computer Science and Engineering

Computer Science and Engineering

Computer Science and Engineering, CSCE

1010 (COSC 1300 or 1400). Introduction to Computer Science. 3 hours. (2;0;1) A basic course covering logical operation and organization of digital computers, computer hardware and software, number systems, and application software packages. May not be counted toward computer science and engineering major or minor.

1020 (COSC 1315 or 1415). Program Development. 4 hours. (3;1) Introduction to problem-solving, algorithms and programming in a high-level language. May not be counted toward a computer science major or minor. Prerequisite(s): high school algebra or equivalent.

1030 (COSC 1336 or 1436). Computer Science I. 4 hours. (3;1) Introduction to computer science and engineering, problem-solving techniques, algorithmic processes, software design and development. Prerequisite(s): high school algebra or equivalent.

1035. Information Systems I. 3 hours. Introduction to the design of medium- to large-scale enterprise information systems and distributed systems using appropriate framework. Introduces tools and techniques for building such systems and incorporates project-based learning as students work in teams to apply their knowledge in a semester-long development activity. Prerequisite(s): CSCE 1030; MATH 1650 (may be taken concurrently).

1040 (COSC 1337 or 1437). Computer Science II. 3 hours. Continuation of CSCE 1030. Software design, structured programming, object oriented design and programming. Prerequisite(s): CSCE 1030 and MATH 1650 (may be taken concurrently).

1045. Information Systems II. 3 hours. Continues the concepts introduced in Information Systems I with introduction of active content, data-driven content and service-oriented architectures. Students are organized in teams to complete a large-scale development activity using the knowledge and tools presented in the course. Prerequisite(s): CSCE 1035.

2050 (COSC 2336 or 2436). Computer Science III. 3 hours. Elementary data structures, practice in software design, implementation and testing with emphasis on creating and modifying larger programs. Prerequisite(s): CSCE 1040.

2410. Programming Laboratory. 1–4 hours. Practice with computer languages and processing techniques. Prerequisite(s): CSCE 1040 or BCIS 3620 or BCIS 3690.

2610 (COSC 2325 or 2425). Computer Organization. 3 hours. Principles of computer systems organization, instruction sets, computer arithmetic, data and control paths, memory hierarchies. Prerequisite(s): CSCE 2050. Corequisite(s): EENG 2710. (Same as EENG 3710.)

2615. Enterprise Systems Architecture, Analysis and Design. 3 hours. Overview of software architectures for information systems starting with requirements and proceeding through the analysis and design aspects of the software development lifecycle. Introduction to a variety of implementation methodologies as well as alternate architectural paradigms. Laboratory and project activities expose students to the design and specification of IT systems to meet a variety of business and technical problem environments. Prerequisite(s): CSCE 1040 and 1045.

2900. Special Problems in Computer Science and Engineering. 1–4 hours. Individualized instruction in theoretical or experimental problems. For elective credit only.

3010. Signals and Systems. 3 hours. Elementary concepts of continuous-time and discrete-time signals and systems. Specific topics include linear time-invariant (LTI) systems, impulse response, convolution, Fourier series, Fourier transforms, frequency-domain analysis of LTI systems, Laplace transforms, z-transforms, and rational function descriptions of LTI systems. Prerequisite(s): MATH 2730 and EENG 2610. (Same as EENG 2620.)

3020. Fundamentals of Communication Theory. 3 hours. Introduction to the concepts of transmission of information via communication channels. Amplitude and angle modulation for the transmission of continuous-time signals. Analog-to-digital conversion and pulse code modulation. Transmission of digital data. Introduction to random signals and noise and their effects on communication. Optimum detection systems in the presence of noise. Prerequisite(s): CSCE 3010 and MATH 1780. (Same as EENG 3810.)

3030. Parallel Programming. 3 hours. Introduction to processing in parallel and distributed computing environment. General concepts of parallel machine models, processes, threads, mutual exclusion, synchronization, message passing. Design and analysis of parallel algorithms for engineering and scientific applications. Parallel programming using Pthreads and MPI. Prerequisite(s): CSCE 2050.