

- SPA 4110-3 Contemporary Spanish Literature (3 + 0)**
Prerequisite: SPA 3250
This course involves reading and analysis, through discussion and writing, of representative works of contemporary Spanish literature. The course affords students an opportunity to explore changes in cultural development in Spain from the end of the Civil War until the present. This course is conducted in Spanish.
- SPA 4120-3 Contemporary Latin–American Literature (3 + 0)**
Prerequisite: SPA 3510 or equivalent, or permission of instructor
This is a course in which the student will be critically reading and discussing the major works of contemporary Spanish American authors in order to appreciate their literary and cultural values and to participate in a meaningful language experience. Conducted in Spanish.
- SPA 4130-3 Contemporary Mexican Literature (3 + 0)**
Prerequisite: SPA 3250 or equivalent, or permission of instructor
This course offers a panoramic view of Mexican literature. It will examine the articulation of diverse social and cultural questions, as well as the ways in which Mexican writers represent themselves and their cultural heritage through literary texts. The student will read and discuss representative works of 20th century Mexican writers. Conducted in Spanish.
- SPA 4200-3 Spanish-American Essay: 19th and 20th Centuries (3 + 0)**
Prerequisites: SPA 3250 or permission of instructor
Presents, discusses and analyzes the most important literary work of representative nineteenth and twentieth centuries Spanish-American essayists. The course exposes the student to the thought and stylistic modes found in the intellectual production of the selected prominent figures to be studied. Conducted in Spanish. (Senior Experience)
- SPA 4310-3 History of the Spanish Language (3 + 0)**
Prerequisites: SPA 3140 and SPA 4010 or SPA 4020, satisfaction of all Level I and Level II General Studies course requirements, and senior standing
An introductory course in Spanish philology aimed at improving students' knowledge of Spanish sounds, forms and word order, with the focus on how the Spanish language began and has changed through the centuries. (Senior Experience)

SPEECH COMMUNICATION

- SPE 1010-3 Public Speaking (3 + 0)** This course is not approved for guaranteed transfer to other Colorado colleges and universities
Prerequisite: minimum performance standard scores on the reading and writing preassessment placement tests
This course acquaints students with the basic theory of the art of public speaking and provides experience in the preparation and delivery of short talks. (General Studies–Level I, Communications)
- SPE 1500-3 Introduction to Communication Sciences (3 + 0)**
This course introduces students to typical communication across the lifespan, the relationship between culture and communication, and the impact of communication disorders on individual and family. Speech, language, and hearing anatomy, disorders, and intervention options are introduced.
- SPE 1610-3 American Sign Language I (3 + 0) (EDU 1610, MDL 1610)**
Prerequisite: minimum performance on the reading and writing preassessment placement test
This course provides students with a basic understanding of American Sign Language including conversational skills and linguistic structures. Students are also introduced to Deaf culture. Credit will only be granted for one prefix: SPE, EDU, or MDL.
- SPE 1620-3 American Sign Language II (3 + 0) (EDU 1620 / MDL 1620)** (This course is not approved for guaranteed transfer to other Colorado colleges and universities)
Prerequisite: SPE/MDL/EDU 1610 or permission of instructor
This course is a continuation of SPE 1610 emphasizing expressive language as well as increasing competence with receptive language skills. The course continues to build vocabulary and familiarity with the complex grammar (morphology and syntax) of this visual language. The Deaf experience and culture is integrated throughout. Credit will be granted for only one prefix: SPE, MDL or EDU. (General Studies–Level I, Communications)

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- SPE 1700-3 Communication Theory (3 + 0)**
Prerequisite: SPE 1010 or permission of instructor
This course reviews the research, theoretical assumptions and model of the oral communication processes. It is designed to provide students with a broad understanding of the basis of oral communication as patterned human behavior.
- SPE 1710-3 Interpersonal Communication (3 + 0)**
Prerequisite: minimum performance scores on the reading and writing preassessment placement tests
This is a basic skill course in the art of communicating with people. This class provides students with both the exposure to theory and the opportunity to practice developing basic communication skills including listening, perceiving, asserting, nonverbal and verbal language sensitivity and problem-solving tactics. The purpose of this course is to increase student's skills and knowledge in interpersonal communication theory and concepts. (General Studies-Level I, Communications)
- SPE 1730-3 Listening and Interviewing Communication Skills (3 + 0)**
Prerequisite: SPE 1010 or permission of instructor
This course is designed to teach students two associated communication skills: listening and interpersonal interviewing. Both content (informational) and empathetic (feeling) listening skills will be emphasized. Seven situational types of interviews will be explored in the course using listening techniques as the primary communication skill.
- SPE 2110-3 Discussion Methods (3 + 0)**
Prerequisite: SPE 1010 or permission of instructor
This performance course deals largely with the processes of decision-making in small groups and conferences: research and investigation, analysis of social problems, use of evidence and argument and social interaction among participants.
- SPE 2160-3 Organizational Communication Theory (3 + 0)**
Prerequisites: SPE 1010 and SPE 1700 or permission of the instructor
This course is designed to acquaint students with relevant and current theoretical models of organizational communication systems and cultures. The course materials include formal and informal structures, group communication processes, external organizational communication systems, informational effectiveness and ethical considerations.
- SPE 2400-3 Introduction to Radio and Television Broadcasting (3 + 0)**
Prerequisite: SPE 1010 or permission of instructor
This course focuses on the evolution of broadcasting, its organization, its function, the personnel involved, and the effect broadcasting has on its audience.
- SPE 2530-3 Speech and Hearing Science (2.5 + 1)**
Prerequisite: SPE 1010 or permission of instructor
This course introduces acoustics of speech reception within the auditory system and acoustics of speech production within the vocal tract. A number of disorders interfering with normal sound transmission are introduced. Students learn about speech and hearing professionals, current technology for assessment and intervention, and strategies to enhance reception and production of acoustic energy.
- SPE 2710-3 Team and Group Communication (3 + 0)**
Prerequisite: SPE 1010 or permission of instructor
This course is designed to teach students the dynamics of group process and the special skills required to communicate successfully with many types of difficult group members.
- SPE 2720-3 Nonverbal Communication (3 + 0)**
Prerequisites: SPE 1010 and SPE 1700
Designed to explore the nature of the so-called "silent language" of the human communication process, this course focuses on the classes of nonverbal communication, their impact on human perception, patterned behavior in groups, organizational systems and cultures.
- SPE 2730-3 Communication and Conflict (3 + 0)**
Prerequisite: SPE 1710 or permission of instructor
This course develops strategies for managing conflict dynamics in communication interactions at work, home and school. Effort is made to pinpoint individual communication conflict styles and to assess their effectiveness in conflict interaction.

- SPE 2770-3 Gender and Communication (3 + 0) (WMS 2770)**
Prerequisites: SPE 1710 or permission of instructor; ENG 1010 and satisfaction of Level I Communication requirement
This course is designed to expand students' abilities to inventory their own and others' culturally derived gendered communication patterns; analyze those patterns; contrast their own resulting functional and dysfunctional gendered behaviors; relate those behaviors and outcomes to their personal, social, community, political, cultural, economic, work and professional lifestyles; and formulate and engage in new behaviors outside the academic community based on increased gendered communication awareness (General Studies - Level II, Arts and Letters).
- SPE 2890-3 Language Acquisition (3 + 0)**
Prerequisites: ENG 2010 or SPE 1500 or PSY 1800; or permission of instructor
This course allows students to investigate theories of language development and describe language developmental patterns in toddler, preschool and school-age children. The interrelationship between linguistic, cognitive and social competencies in communicative development will be explored. Students will gain knowledge concerning the diversity of normal communicative development found in a pluralistic society.
- SPE 3010-3 Advanced Public Speaking (3 + 0)**
Prerequisites: SPE 1010 and SPE 2110 or permission of instructor
Preparation, presentation and appraisal of speeches on contemporary subjects. Advanced inquiry into rhetorical analysis, the intensification of ideas and style, with emphasis upon persuasive speaking. Attention will be given to specialized forms of public address.
- SPE 3050-1 Intercollegiate Forensics (0 + 2)**
Prerequisite: SPE 1010 or permission of instructor
A course for those students participating extensively in intercollegiate speech activities. A maximum of four credits in this course may be applied toward a degree.
- SPE 3080-3 Great American Speakers (3 + 0)**
Prerequisites: SPE 1010 and satisfaction of Level I General Studies course requirements
This course critically examines the primary theses developed in selected major American speeches. This critical analysis includes an examination of the rhetorical skills of the speaker based on the persuasive models of Aristotle, Burke and Griffen and more. Estimates of the influence of such great speeches on public policy will be surveyed as a measurement of the success of such oral discourse. (General Studies—Level II, Arts and Letters)
- SPE 3090-3 Argumentation and Advocacy (3 + 0)**
Prerequisite: SPE 1010 or permission of instructor
Acquaints the student with the complexity of social problems, methods of research, methods of logical analysis and development, construction of briefs and techniques of refutation. Includes practice in preparation and oral analysis of selected arguments.
- SPE 3100-3 Business and Professional Speaking (3 + 0)**
Prerequisite: SPE 1010 or permission of instructor
This course focuses on the processes involved in effective speaking in business and industry with emphasis on preparing and delivering presentations to organizational audiences including the use of audio-visual materials as they relate to the communication process in organizations at the interpersonal level. Students will polish communication skills in preparation for some of the unique speaking situations found in modern organizations.
- SPE 3110-3 Organizational Leadership (3 + 0)**
Prerequisites: SPE 1010 and either SPE 2110 or SPE 2710
This course is designed to acquaint students with the major theories of organizational leadership and the functional dimensions of leadership strategy in specific organizational systems.
- SPE 3130-3 Conference Leadership (3 + 0)**
Prerequisites: SPE 1010 and SPE 3110, or permission of instructor
This course provides students with knowledge of the theories of group task and process behaviors and the practical application of that theory in the actual production of a conference. The course focuses on the motivation of volunteers and the appropriate styles of leadership when authority is not granted to the conference director.

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- SPE 3160-3 Communication in Politics (3 + 0)**
Prerequisites: SPE 1010 or permission of the instructor
This course acquaints students with the complexities of communication issues and strategies used in and by a variety of governmental bodies. This course emphasizes communication patterns in government institutions, the role and strategies of public influence and change on policy creation, the nature and ethics of campaign strategies and propaganda tactics, the responsibility of media in public decision-making, and the impact of communication leadership and group dynamics on the resolution of political and social issues.
- SPE 3170-3 Interpersonal Negotiation (3 + 0)**
Prerequisites: SPE 1700 and either SPE 1710 or SPE 2710
This course is designed to teach students the theory and specific negotiation skills needed for resolving interpersonal group and organizational conflict. These skills include identification of conflict issues, fractionating of issues, positioning methods, questioning tactics, measuring negotiated consequences, identifying a negotiated style, managing difficult people, mediating theory and tactics, third-party interventions and negotiating frames. Both lecture/discussion and simulated case studies are used to illustrate negotiation principles.
- SPE 3430-3 Radio–Television Announcing (3 + 0)**
Prerequisites: SPE 2400 or permission of instructor
This is an advanced course in “on air” operations designed to meet the specific needs of the broadcaster and the radio-television-film announcer. Instruction is designed to develop pleasing and persuasive verbal-vocal-nonverbal communication as a means of improving a variety of presentations. Special emphasis will be placed on standard American usage of speech and language.
- SPE 3440-3 Television Production (3 + 0)**
Prerequisite: SPE 2400 or permission of instructor
This course is an introduction to television production, operation of broadcast studio equipment, vocabulary, and experience in direction of multi-camera productions. Specific attention is focused on pre-production, including identification of audience by age, gender, and culture. Students will participate in production activities and procedures on a variety of projects.
- SPE 3450-3 Broadcast Journalism: Radio (3 + 0)**
Prerequisites: JRN 2100 or permission of instructor
This course is an introduction to radio news writing. Students learn how broadcast news copy differs from print journalism. It involves learning the techniques of writing in the broadcast style used in newsrooms.
- SPE 3460-3 Audio Production (1 + 4)**
Prerequisite: SPE 2400 or permission of instructor
This course is a hands-on practical guide for beginning and intermediate recording engineers, producers, musicians, and audio enthusiasts offering experiences in a variety of recording situations. Students will learn how to judge recordings and to use the equipment available to improve them.
- SPE 3470-3 Evolution of Cinematics as Art (2 + 2)**
Prerequisite: SPE 2400 or permission of instructor
A course designed to explore the development of selected historical, technical and aesthetic elements of filmic expression from the point of view of the creative and perceptual process emphasizing the history of the motion picture as presented through the films and ideas of several important cinematographers.
- SPE 3480-3 Workshop in Radio Production (1 + 4)**
Prerequisites: SPE 2400 and SPE 3430, or six hours of equivalent broadcasting courses and/or experience, or permission of the instructor
This course provides students with an opportunity to produce radio programs for audiences for use on commercial and/or public radio.
- SPE 3511-3 Anatomy and Physiology of Speech (2.5 + 1.5) (BIO 3511)**
Prerequisite: BIO 2310 and SPE 2530; or permission of instructor
This course provides students with basic understanding of the structural organization (anatomy), function (physiology) and neural control of the structures used to produce speech, swallowing, respiration and related human behaviors. Students explore how anatomical and physiological deficits relate to communicative pathology. It includes lecture and laboratory components and involves dissection. Credit will be granted for only one prefix: SPE or BIO.

- SPE 3540-3 Phonetics and Phonological Awareness (3 + 0)**
 Pre/Corequisite: SPE 2890
 Students will gain an understanding of the science of speech sounds and utilize the International Phonetic Alphabet in transcribing spoken language. They will learn how the ability to talk about, to reflect, and to manipulate the sounds of speech is associated with reading.
- SPE 3580-3 Speech, Sound and Fluency Disorders (3 + 0)**
 Prerequisites: SPE 2890
 Pre/Corequisite: SPE 3540
 Two disorders that impact communication involve the sounds used for speech and the fluency of speech. Etiological factors, assessment techniques, and intervention principles used to manage speech sound and fluency disorders are addressed.
- SPE 3590-3 Classroom Intervention for Communication Disorders (3 + 0)**
 Prerequisites: SPE 2890 and one of the following: (SPE 1500 and SED 3600) or (SPE 2530 and SPE 3540)
 This course allows students to explore how speech and language disorders/differences and hearing loss affect school-age children. Students learn identification, assessment, and intervention methods designed to help children and adolescents with communication disorders and differences. Students observe children with communication disorders in school settings.
- SPE 3600-3 Audiology I (3 + 0)**
 Pre/Corequisite: SPE 2530
 This course reviews acoustics of the auditory system and perception of acoustic stimuli. The focus is on anatomy and physiology of the auditory system, standard audiometric assessment, and peripheral and central auditory disorders. Students are also introduced to the vestibular system.
- SPE 3610-2 Audiology II (2 + 0)**
 Prerequisites: SPE 3600
 This course focuses on advanced anatomy of the auditory and vestibular systems, procedures to assess functioning of the auditory and vestibular systems, and prevention of primary and secondary disorders relative to hearing loss in the newborn nursery, schools, and industry. This course is recommended for all speech, language, hearing sciences (SLHS) students applying to graduate school.
- SPE 3620-3 Aural Rehabilitation (3 + 0)**
 Prerequisites: SPE 2890 and SPE 3600
 This course considers the responsibilities of interventionists for children and adults with hearing loss. Students learn about room acoustics, amplification, cochlear implants, counseling, and speech and language therapy as well as individual variables that impact intervention outcomes.
- SPE 3740-3 Psychology of Communication (3 + 0)**
 Prerequisite: SPE 1010 and satisfaction of all Level I General Studies course requirements; or permission of instructor
 This course critically examines the psychological factors underlying speech comprehension, the speaker's adjustment to an audience, the listener's sets and responses, and the attitudes, beliefs and predispositions of hearers toward human communication. This is not a psychology course. (General Studies—Level II, Arts and Letters)
- SPE 3760-3 Cultural Influences on Communication (3 + 0)**
 Prerequisites: SPE 1010 and satisfaction of Level I General Studies course requirements as well as one of the following: SPE 1710, SPE 2710, or SPE 2720
 This course examines the relationship between communication and cultural identity (histories, values, beliefs, traditions, and contributions). The ultimate goal of the course is to broaden students' perspectives of the power of communication to shape our lived experience and to expand students' capacities to adapt ethically to a changing and diverse world. Students will explore verbal and non-verbal differences and similarities across cultures and critique the role of ethnocentrism, bias, prejudice, and discrimination. Particular emphasis will be given to protected classes and co-cultures within the larger U.S. culture. (General Studies - Level II, Arts and Letters, Multicultural)
- SPE 3770-3 Family Communication (3 + 0)**
 Prerequisite: SPE 1710 or SPE 2710
 This course is designed to assist students to better understand and improve interpersonal communication processes in families, including dual-career communication problems, personality patterns, family group roles and their impact on interaction, verbal and nonverbal messages in family contexts and managing family interpersonal conflict and change.

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- SPE 3981-3 Cooperative Education: Broadcast Journalism (1 + 9)**
Prerequisite: SPE 3450
This course gives students an internship experience working as a broadcast journalist at a television station, radio station or another broadcast media outlet where they are able to use the skills learned in the classroom in a supervised, professional setting.
- SPE 3982-3-9 Cooperative Education: Broadcast Performance (1 + 9-27)**
Prerequisites: SPE 2400 and SPE 3430
This course gives students an internship experience working as talent at a television station, radio station or other broadcast media outlet where they are able to use the skills learned in the classroom in a supervised, professional setting.
- SPE 3983-3-9 Cooperative Education: Broadcast Production (1 + 9-27)**
Prerequisites: SPE 2400, SPE 3440 and SPE 3480
This course gives students an internship experience working in production at a television station, radio station or other broadcast media outlet where they are able to use the skills learned in the classroom in a supervised, professional setting.
- SPE 4050-2 Advanced Intercollegiate Forensics (0 + 4)**
Prerequisite: permission of instructor
For students participating extensively in competitive intercollegiate speech activities. A maximum of eight hours credit may be applied toward a degree.
- SPE 4080-3 Rhetorical Criticism of Public Address (3 + 0)**
Prerequisites: SPE 1010 and junior/senior standing, or permission of instructor
This course focuses on the historical and critical methodologies for analyzing rhetorical efforts, both from the points of view of an intellectual discipline and as a practical art in a democratic society.
- SPE 4090-3 Classical Rhetoric (3 + 0)**
Prerequisites: SPE 1010, and satisfaction of all Level I and Level II General Studies course requirements, and senior standing; or permission of instructor
This course acquaints students with the classical traditions of rhetorical theory including the presophists, sophists, Aristotle, Plato, Isocrates, Cicero, Quintilian, etc. Standards of “ethical persuasion” and the responsibilities of rhetorical persuasion are examined in-depth. (Senior Experience)
- SPE 4100-3 Techniques of Persuasion (3 + 0)**
Prerequisite: SPE 3090 or permission of instructor
A critical investigation of the factors that influence individuals and groups through the media of persuasive rhetorical campaigns. Course involves specific investigation and analysis of twentieth-century persuasive campaigns. Students will have opportunities to develop persuasive campaigns in various rhetorical areas.
- SPE 4120-3 Freedom of Speech (3 + 0)**
Prerequisites: SPE 1010, or permission of instructor, satisfaction of all Level I and Level II General Studies course requirements, and senior standing
This course is a study of the historical and social influences with inquiry into the legacy of our inherited rights to free speech. This course examines and refines the First Amendment’s clause on freedom of speech and the press, threats to this freedom and special inquiry into contemporary issues and cases. (Senior Experience)
- SPE 4160-3 Advanced Organizational Communication (3 + 0)**
Prerequisites: SPE 2160 and SPE 3170 or permission of instructor
This course acquaints students with organizational communication structural designs, as well as methods/models for analyzing/auditing the effectiveness of such organizational communication systems. The course also addresses implementing organizational communication change through communication processes.
- SPE 4440-3 Advanced Television Production (3 + 0)**
Prerequisite: SPE 3440
This course is an advanced course in television production with projects in both the studio and the field. Specific attention is focused on the production process. Students will participate in a variety of projects.

- SPE 4450-3 Broadcast Journalism: Television (3 + 0)**
 Prerequisite: SPE 3450
 This course is an introduction to television news writing. Students learn how to write for a visual medium, including newscast writing, and writing for visuals and video.
- SPE 4470-3 TV Criticism: Production and Content (3 + 0)**
 Prerequisite: SPE 3440 or permission of instructor
 This course analyzes contemporary television programming for aesthetics and effectiveness. All production elements and the content of programs are critiqued to create a more discerning audience and/or program creator.
- SPE 4480-3 Seminar Practicum in Broadcasting (1 + 4)**
 Prerequisite: SPE 3480 or permission of instructor
 This is an advanced course in radio production that offers an opportunity to supervise a variety of productions as a producer/director and to evaluate the production of radio programs including soft news, commercials, and public service announcements. Open to junior- and senior-level broadcasting students, this course may be repeated for a maximum of nine credit hours that may be applied toward their degree.
- SPE 4500-3 Principles of Assessment and Intervention (2 + 2)**
 Prerequisites: SPE 2890 and one of the following courses (SPE 3590, SPE 4510, SPE 3620 or SPE 3580)
 This course examines professional issues and assessment/intervention principles and practices in speech-language pathology and audiology. The field-based experience allows students to implement standards-based instruction for children with communication disorders in educational settings and/or observe assessment/intervention methods in clinical settings. (Senior Experience)
- SPE 4510-3 Language Disorders (3 + 0)**
 Prerequisites: SPE 2890 and (SPE 2530 or SPE 1500); or permission of instructor
 This course examines language disorders and the neurological, cognitive, environmental and sociocultural actors that contribute to them. Students are introduced to assessment and intervention strategies designed to enhance language/communication development, with particular emphasis on child language disorders and their effects. Field based observations will be required.
- SPE 4550-4 Speech-Language Pathology Assistant Methods (1 + 9)**
 Prerequisites: SPE 2890, SPE 2530, SPE 3540 and SPE 3600; or permission of instructor
 Pre/Corequisite: SPE 3500, SPE 3580, SPE 3620, SPE 4500, SPE 4510; or permission of instructor
 This course allows students with an undergraduate major or equivalent coursework in speech-language-hearing sciences (Option A) to gain the competencies required for employment as a speech-language pathology assistant (SLPA) in schools. The course is composed of a one-credit seminar and three-credit public school SLPA internship.
- SPE 4551-3 Early Childhood Communication Assessment (2.5 + 1)**
 Prerequisites: SPE 2890 and (SPE 1500 or SPE 3600); or permission of instructor
 Pre/Corequisite: SPE 4500 or permission of instructor
 This course expands students' knowledge and skills regarding the purposes and principles of diagnostic assessment in communication disorders. Students will learn about different types of tools and methods to assess communicative competence in toddlers and preschool-aged children. Clinical interviewing, test administration, behavior observation and report-writing will be addressed. Students will engage in field observations and assess the speech-language development and hearing status of a child between one and five years of age.
- SPE 4552-1 Early Childhood Communication Intervention (0.5 + 1)**
 Prerequisite: SPE 2890 and (SPE 1500 or SPE 3600)
 Corequisite: SPE 4500 and one of the following: SPE 3580 or SPE 3590 or SPE 4510; or permission of instructor
 This course introduces the student to the principles of intervention planning and services for the preschool child with communication disorders and/or delays. Students will analyze diagnostic data, create goals and objectives and implement intervention using direct and indirect service delivery models. Students will gain experience communicating with parents and professionals in oral and written formats. This course may be repeated for up to 3 credits.
- SPE 4700-3 Communication and the Trainer (3 + 0)**
 Prerequisites: SPE 1010, SPE 1700, SPE 1710, SPE 2710 or permission of instructor
 This course is designed to teach students how to translate their liberal arts background into on-the-job communication training programs using interpersonal and group dynamics skills. Actual demonstrations via video will be used, allowing students the opportunity to practice and evaluate their program design and training communication style in front of real audiences.

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- SPE 4760-3 Communication and the Elderly (3 + 0)**
Prerequisites: SPE 1700 and SPE 1710
This course is designed to investigate the particular communication patterns and problems of the aged. It focuses on culturally communicated attitudes toward elderly persons via media, marketing, and institutions, as well as specific communication issues of the aged such as the communication of intimacy, friendship, control, interaction in work environments, home life, retirement and death.
- SPE 4790-3 Communication Theory Building and Research Methodology (3 + 0)**
Prerequisite: SPE 1700 or SPE 3740; and SPE 2160 or SPE 4160; or permission of instructor
Corequisite: senior standing
This course is designed to provide students with the major trends in communication research including the most frequently used methodologies for conducting research. Students will construct research questions and generate hypotheses for conducting research. They will investigate through literature searches current research conducted on specific topics and learn how to write and report that research using appropriate research tools (technology) and acceptable academic documentation. The course also focuses on the processes for developing a research proposal using students' understanding of generating social science, communication or organizational communication theories. (Senior Experience)

SURVEYING AND MAPPING

- SUR 1510-4 Surveying I (2 + 4)**
Prerequisite: CET 1100 and high school or college trigonometry or MTH 1400 with grades of "C" or better, or permission of instructor
This is an introductory course in elementary surveying. Students acquire a knowledge of the theory of measurements, methods of collecting and recording data, reduction of observations of angles, directions, distances and differences in elevation; the computation and adjustment of traverses; the use of data collectors and interfacing with CAD software; construction stake-out employing coordinate geometry and CAD output; and the methods of computing coordinate geometry and areas. Field work includes use of transits, total stations, electronic distance meters, surveyors' tapes, differential levels and data collectors.
- SUR 1520-4 Construction Surveying (2 + 4)**
Prerequisite: high school or college trigonometry or MTH 1400, CET 1100, all with a grade of "C" or better, or permission of instructor
This is an introductory course designed for the engineering technology student. The course covers surveying instrumentation, utilization of maps and plans, understanding and using working drawings, computing coordinates, areas, earthwork quantities (volumes), monitoring construction for line and grade, performing as-constructed surveys and mapping and introducing boundary and legal surveying.
- SUR 2520-4 Surveying II (2 + 4)**
Prerequisite: MTH 1410 and SUR 1510 with grades of "C" or better, or permission of instructor
This course is designed to cover the introduction to control surveying, state plane coordinate systems, construction surveying, legal and boundary surveying and large scale topographic mapping for engineering and architectural projects. The student is introduced to optical micrometer and electronic theodolites, precise levels, and electronic distancers. Laboratory assignments will cover astronomic azimuth observations, circular and parabolic curves, earthwork surveys, control surveying and topographic mapping.
- SUR 2530-4 Route Surveying (2 + 4) (CET 2530)**
Prerequisites: SUR 1520 for CET majors, SUR 2520 and SUR 2620 for SUR majors, all with a grade of "C" or better, or permission of instructor
This course is designed to expand the concepts on circular and parabolic curves and earthwork introduced in SUR 2520. Included is the mathematics of spirals; unequal tangent vertical curves, mass diagram of earthwork quantities; alignment profile and slope staking; large scale site mapping; alignment and design; and other surveying techniques required for highways, pipelines, tunnels, transmission lines, water lines, sewers and canals, etc. This course will introduce terrain modeling for site development and environmental concerns.