

atom. These models will be studied as they relate to spectroscopic properties of atoms and molecules. In addition, computational methods in chemistry will be investigated. Students keep a journal-style laboratory notebook and submit reports consistent with American Chemical Society style guidelines.

**CHEM 428 INDIVIDUAL RESEARCH IN CHEMISTRY (1-6)** *Prerequisites: Junior or senior standing; consent of supervising instructor.* This independent opportunity to conduct a field, laboratory, or literary study project culminates in a formal paper and/or presentation as directed by the supervising instructor. Credit is dependent on the nature of the work but may not exceed three credit hours per semester.

**CHEM 441 CHEMISTRY SEMINAR (1)** *Prerequisite: Senior standing.* Two hours lecture. This capstone course focuses on advanced scientific written and oral communication skills, scientific philosophy, research methodology, and scientific reasoning.

### COMMUNICATION COURSES (COMM)

**COMM 101 ARGUMENTATION AND PRACTICAL REASONING (3)** This course in oral argumentation emphasizes student ability to support and refute claims, master linear organization, and deliver arguments confidently and effectively. In creating and delivering arguments across topics and disciplines, students are introduced to such basics of critical thinking as inductive and deductive reasoning, recognition of fallacies, and argument analysis.

**COMM 104 INTRODUCTION TO MEDIA TECHNOLOGY (3)** This course will introduce basic technologies that are vital to success in communication courses requiring video and multi-media production and will serve as a foundation for the advanced study of media production techniques. Students will receive instruction in the aesthetics and hands-on application of various technologies related to the communication field including video camera operation, digital video editing, and media presentation software.

**COMM 112 INTERPERSONAL COMMUNICATION (3)** This course focuses on traditional and contemporary theory and research in interpersonal communication in formal and informal settings. Practical application with attention to communication concepts and behaviors such as self-concept, perception, verbal and non-verbal codes, relational development, maintenance, and termination are included.

**COMM 114 SMALL GROUP COMMUNICATION (3)** This course focuses on theory and research relevant to the communication process in formal and informal small group settings. It provides practical application through participation in structured and unstructured group simulations, and effective group participation, including group influence, leadership, role behavior, attraction, cohesiveness, interaction networks, decision making, problem solving, and discussion agenda systems.

**COMM 171 MEDIA AND CULTURE (3)** Mass media play a prominent role in our lives, conveying cultural meaning that impacts us on many levels, from the global to everyday. This course examines the dynamic relationship between mass media and culture. Students will also explore the history, structure, and regulation of mass media industries.

**COMM 180 STAGE AND STUDIO TELEVISION (3)** This course introduces the aesthetics, technology, and practices of working in a television studio environment. Critical analysis of directing techniques and directorial problem solving are included. Students will engage in a series of training exercises and larger projects that develop basic skills in all the major duties associated with conducting a studio production. Additionally, they will be introduced to standard audio studio practices.

**COMM 201 MEDIA WRITING I (3)** A study of the principles and practices of writing for print, broadcast, and online media. The emphasis is on acquiring skills in reporting, writing, and the presentation of information.

**COMM 202 MEDIA WRITING II (3)** *Prerequisite: COMM 104 and 201.* While writing for publication or broadcast in campus media, students will gain skills in news style and form. Students expand on the principles of media writing introduced in COMM 201 through classroom exercises, lectures, and critiques of student writing.

**COMM 206 ADVERTISING AND PRODUCTION DESIGN (3)** *Prerequisites: COMM 104 and 201.* This course focuses student activity on the development of planning, writing, and production techniques for promotional media including commercials and public service announcements for radio and television, as well as other forms of promotional electronic media. Students will analyze professional examples of promotional media, formulate scripts based on desired client messages, and then design and execute productions of their scripts.

**COMM 228 PUBLIC PRESENTATION (3)** *Prerequisite: COMM 101, 112, or 114.* This course moves beyond the basics of argument and persuasion to develop theoretical and strategic understanding and skill in the various forms of public address. Students may engage in a combination of any of the following: oral interpretation, persuasion, informative speaking (with Power Point), broadcast presentation, ceremonial address, and business presentation.

**COMM 229 INTRODUCTION TO FILM (3)** For over a century, film has played an important role in both American and global popular culture. In this course, that role is examined through screenings of films and through the study of film aesthetics, theories, and genres.

**COMM 230 PERSUASION (3)** *Prerequisite: COMM 101, 112, or 114.* This course examines theory and practice in understanding persuasion as a means of advocacy and social influence. Persuasion theory will be applied to the areas of politics, advertising and public relations, media, and interpersonal and other communication settings.

**COMM 232 DEBATE AND FREEDOM OF SPEECH (3)** *Prerequisite: COMM 101.* This performance course examines the substantive structure, strategic bases and freedom of speech issues associated with public forms of debate. Students examine political, constitutional and collegiate forms of debate. Students participate in formal debates.

**COMM 251 INTERCULTURAL COMMUNICATION (3)** *Prerequisite: COMM 101, 112, or 114.* Students develop the knowledge and intercultural thinking approach necessary for today's global society. Emphasis is on conceptual tools needed to understand culture, communication theory, how culture influences communication, and the process of communication between people from different cultures, including the rules and norms relating to verbal and nonverbal language. Values and communication systems of the U.S. are compared and contrasted with those of other countries and world religions. Diversity and identity within the U.S. is explored.

**COMM 260 INTRODUCTION TO PUBLIC RELATIONS (3)** *Prerequisite: COMM 201.* This course focuses on principles and practice in the major forms of writing used in public relations: news releases; broadcast publicity and public service announcements; planning and publicity for special events; feature stories; in-house publications; and institutional advertising. Learning activities include case studies of public relations problems and projects for College and community groups.

**COMM 275 VISUAL RHETORIC (3)** *Prerequisite: COMM 101, 112, or 114.* Visual Rhetoric is the study of visual representation, the rhetorical nature of the visual, and the theories that explain how visual images construct meaning. This course emphasizes making the student an informed reader/consumer of visual images and their symbolic content. Students will use critical methods to analyze visual images as they occur in photos, cartoons, memorials, television (particularly news), film (particularly documentary), and the internet.

**COMM 301 RHETORICAL CRITICISM (3)** *Prerequisite: COMM 230.* This course analyzes various forms of public address including speeches, advertising, political communication, business communication, and ceremonial address according to classical and contemporary methodologies. Emphasis is placed on developing analytical and critical thinking skills.

**COMM 302 STRATEGIC PUBLIC RELATIONS WRITING (3)** *Prerequisite: COMM 260.* This course engages a specialized writing curriculum developed for the contemporary public relations student. Assignments work toward cultivating relationships among a variety of audiences using traditional, organizational and social/digital media. Students will build upon theoretical public relations knowledge and further develop writing skills for clarity of message dissemination and evaluation.

**COMM 303 RESEARCH METHODS IN COMMUNICATION (3)** *Prerequisites: COMM 112, 171.* This introduction to communication research methodologies emphasizes the areas of documentation and writing as well as information retrieval, organization, and management.

**COMM 304 DIGITAL EDITING AND MOTION GRAPHICS (3)** *Prerequisite: COMM 104.* This course introduces students to the technology of digital video manipulation and motion graphics. While learning basic image layering and control, students will engage in critical analysis of professional work.

**COMM 316 AMERICAN PUBLIC ADDRESS (3)** *Prerequisite: COMM 101, 112, or 114.* This course introduces the rich diversity of American oratory, past and present, emphasizing the historical and critical study of principal speakers and speeches and of their relationship to American political, social, and intellectual life.

**COMM 322 ADVANCED REPORTING AND WRITING (3)** *Prerequisite: COMM 202.* This course provides rigorous in-depth instruction and critiques of students' news and feature assignments for campus publication with emphasis on public affairs. Writing uses different reporting methodologies: interviewing, official records research, direct and participant observation, and survey research.

**COMM 341 PROFESSIONAL AND ORGANIZATIONAL COMMUNICATION (3)** *Prerequisite: COMM 101, 112, or 114.* This course introduces organizational theories and communication networks as they function in today's human organizations. Emphasis is on internal communication of the organization within itself and also on the abilities one needs in that environment, such as interviewing, group discussion techniques and decision-making, and public presentation in a business setting.

**COMM 350 POLITICAL COMMUNICATION (3)** *Prerequisite: COMM 101, 112, or 114.* This course focuses on the theory, research, and practice of political communication. Students are involved in understanding the theories regarding political and campaign rhetoric including local levels of political rhetoric, state levels of political rhetoric and presidential rhetoric. Students locate and discuss candidate and office holder strategies through commercials, speeches, debates, print materials, and appearances on television. Students serve as mock communication advisors to candidates and office holders and make recommendations on matters involving rhetorical style and content.

**COMM 362 CRISIS COMMUNICATION (3)** *Prerequisites: COMM 171, 260.* This course offers students the opportunity to study crisis communication theory applied to a variety of contexts including the significance of crisis communication in businesses, politics, entertainment, and social advocacy. Course content includes the components of crisis communication, forming a crisis management team, communication responses to crisis, effectively employing crisis communication strategies, and structuring organizational crisis communication.

**COMM 372 MEDIA CRITICISM (3)** *Prerequisite: COMM 171.* As both future producers and consumers of mass media texts, students face the challenge of creating and determining meaning in our society. By applying critical theory to popular culture texts, this course develops analytical skills needed to determine how meaning is placed in and taken from texts and to understand the cultural contexts of media messages.

**COMM 377 STUDY ABROAD (1-6)** *Prerequisite: Consent of instructor.* This course provides students with the opportunity to study principles of communication in foreign settings.

**COMM 381 CONVERGENCE MEDIA: BROADCASTING IN AN INTERNET WORLD (3)** *Prerequisites: COMM 202, 206.* This course is a study of reporting, writing, and producing radio, television, and internet-based media. Attention is given to the preparation of audio and video news reports. The history of broadcast news and legal aspects of broadcast communication are discussed in the context of evolving cultural interests, changing business paradigms, and emerging technologies.

**COMM 382 DOCUMENTARY DESIGN AND PRODUCTION (3)** *Prerequisites: COMM 201 and 202 or 206.* This course provides students with the opportunity to examine documentary film, video, and audio forms while researching and producing projects in those fields. Projects will blend field taping and editing with studio production.

**COMM 395 CULTURAL IMPACT OF POPULAR MEDIA (3)** *Prerequisite: COMM 171.* Mass media has a rich and varied history. In this course, students will explore the historical and cultural dimensions of particular genres and/or media. Students will also examine the role of popular memory through the study of media audiences and their experiences with media.

**COMM 397 INDEPENDENT STUDY IN COMMUNICATION (1-3)** *Prerequisites: Approval of faculty sponsor and school dean; junior or senior standing.* This course provides students the opportunity to pursue individual study of topics not covered in other available courses. The area for investigation is developed in consultation with a faculty sponsor and credit is dependent on the nature of the work. May be repeated for no more than six credits.

**COMM 398 SPECIAL TOPICS IN COMMUNICATION (1-3) [credit depends on topic]** *Prerequisite: A background of work in the discipline.* This course will focus on an aspect of the discipline not otherwise covered by the regularly offered courses. The topic will vary according to professor and term; consequently, more than one may be taken by a student during his/her enrollment.

**COMM 399 INTERNSHIP IN COMMUNICATION (1-12)** *Prerequisites: Juniors or seniors with a 2.25 minimum QPA; approval of written proposal by internship coordinator, supervising faculty, and School dean prior to registration.* This internship provides application of historical, critical, and/or theoretical knowledge under direct supervision of a practicing professional. Interns may work in radio and television stations, newspapers, advertising and public relations agencies, and other areas approved by the faculty advisors. (See "Internships.")

**COMM 401 ADVANCED COMMUNICATION THEORY AND SENIOR THESIS (3)** *Prerequisites: Minimum of 82 credit hours of coursework, COMM 303, and 301 or 372.* This course examines the process of theory creation and recent developments in communication theory and research. Emphasis is placed on important theories in the areas of rhetoric, media, and speech communication. Students will design, implement, and present in correct written form an original research study that serves as their senior thesis.

**COMM 404 ADVANCED DIGITAL EDITING AND MOTION GRAPHICS (3)** *Prerequisite: COMM 304.* This course continues student progress in advanced digital media composition with particular emphasis on developing problem solving skills. The ability to deconstruct a creative idea into manageable components allows students to go beyond imitation and repetition and develop new creative projects.

**COMM 405 COMMUNICATION LAW AND ETHICS (3)** *Prerequisites: COMM 101, 112 or 114, and 201.* This course examines both legal responsibilities and ethical decisions in communication. Key principles and court rulings will be examined that define our First Amendment responsibilities and our rights to speak, publish, and dissent. Content includes libel, privacy, free press/fair trial, fighting words, obscenity, advertising and broadcast regulations, symbolic dissent, and prior restraint. This course also examines ethical theories and moral responsibilities for communication choices in personal relationships, politics, advertising and public relations, organizations, and media.

**COMM 411 SUPERVISED PRACTICUM - CRITOGRAPH (1-3)** *Prerequisite: COMM 202.* Enrollment in these courses is limited to students holding positions of responsibility on the *Critograph* staff. Requirements and review criteria are established between instructor and student and the course is open to any Communication Studies major.

**COMM 412 COMMUNICATION AND LEADERSHIP (3)** *Prerequisite: COMM 341.* The study of principles, methods, and theories of effective leadership and its relationship to communication practices and organizational culture. Leadership is examined from both the professional or business environment and as applied to daily life through the study of classic films.

**COMM 440 PUBLIC RELATIONS MEDIA AND CAMPAIGNS (3)** *Prerequisites: COMM 302.* This course is an intensive experience in "real world" public relations problems. Students will draw on communication theory and engage in experiential learning while they produce "authentic" public relations campaign (or communication) materials and proposals for practical analysis. It also serves as the capstone course for the Public Relations track within the major.

**COMM 450 PRODUCING AND EDITING ACROSS MEDIA (3)** *Prerequisites: COMM 381, 405.* This course provides study and practice in multimedia production and news-flow oversight. Students gain practical experience working across a range of media while applying analytical and theoretical approaches to fact-based digital storytelling. Audience, legal and ethical considerations are also emphasized. Student work will be assessed through a semester long e-portfolio that includes projects in text, photography, video and audio.

**COMM 477 SENIOR PROJECT (3)** *Prerequisite: Permission of instructor.* This course allows journalism students to gain practical experience in the field of public relations or newspaper, magazine, or broadcast reporting. Independent study on or off campus is usually required. The nature of the project determines the credit given.

**COMM 480 ADVANCED STAGE AND STUDIO TELEVISION (3)** *Prerequisites: COMM 104, 180.* This course examines advanced studio practices including programming of major studio components such as the broadcast switcher and live graphics workstations. Additionally, students will gain experience in the integration of studio, multi-camera field production, and multimedia elements. Critical analysis of directing techniques and directorial problem solving are also included.

**COMM 485 PRODUCING AND DIRECTING FOR ELECTRONIC MEDIA (3)** *Prerequisites: COMM 104, 206.* Students in this course will develop and execute advanced productions ranging from live broadcasts to multimedia presentations. Emphasis will be on the organizational processes unique to producing and directing media projects. The course will also include seminar discussions of the media industry. Students will develop material for professional portfolios.

**COMM 499 DONOVAN MEDIA DEVELOPMENT CENTER PRACTICUM (3-6)** *Prerequisites: COMM 104, 206.* This practicum provides for the application of multimedia production knowledge and skills to produce work commissioned by the Donovan Media Development Center under the direct supervision of a faculty member. The Donovan Center solicits projects from non-profit clients and others to create video and audio productions, PowerPoint presentations, and graphic designs that promote the aims of those organizations. Students create portfolios of their work for these clients that may be used for evaluation purposes and in their search for employment upon graduation.

## COMPUTER SCIENCE COURSES (C S)

**C S 100 INTRODUCTION TO COMPUTER CONCEPTS (3)** Two hours lecture and one hour lab. This hands-on computer literacy course is designed to introduce students to computer concepts and applications in today's world. Topics include word processing, spreadsheet software, database management, computer communications, and networking. Important historical, moral, and social issues related to computing are covered.

**C S 105 INTRODUCTION TO COMPUTATION (3)** Three hours lecture. This course introduces students to the true nature of computer science, what computer scientists really do, how they think, and what they accomplish. The focus is on using computation and logical thought techniques to solve problems. Many of the most interesting and significant topics in computer science will be covered. Selected topics may include, but are not limited to, artificial intelligence, digital logic, fractals, Gödel's theorem, NP-complete problems, parallel computing, probability, random number sequences, Turing machines, and scientific visualization.

**C S 115 USING THE INTERNET (1)** Combined one-hour lecture/laboratory. This five-week hands-on course will teach non-computer professionals basic use of the Internet. Topics may include use of E-Mail, use of a World Wide Web browser, telnetting, file transfer protocol (FTP), and HTML authoring to create home pages on the World Wide Web.

**C S 131 FUNDAMENTALS OF PROGRAMMING IN BASIC (3)** Three hours lecture. This course is an introduction to the high-level programming language BASIC. Students learn fundamentals of programming, including use of variables, arrays, various control structures, subroutines, and file I/O. (Strongly recommended before C S 141 for students with no previous programming experience who are considering a major in computer science.)