100  The Information Society  
Fall, Spring, Summer. 3(3-0) 
Technological, industry and social trends in the information society. Media and communication technology industries. Social policy involving information technologies and information services, including television, radio, cable TV, telephone, the Internet, and new Media.

110  Understanding Media  
Fall, Spring. 3(3-0) 
Knowledge needed to critique and analyze various media. History of media content, basic research methods with practical applications, and the ethics of media production.

191  Special Topics  
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. A student may earn a maximum of 16 credits in TC 191, TC 291, TC 391 and TC 491.

Contemporary issues in media and communication technology.

201  Introduction to Media and Communication Technology  
Fall, Summer. 3(3-0) P: (TC 100 or concurrently) and (CSE 101 or concurrently) or (CSE 131 or concurrently) or (CSE 231 or concurrently).

Operational principles and applications of media and communication technologies.

210  Media and Communication Policy  
Spring, 3(3-0) P: TC 100 or concurrently SA: TC 310

Overview of public policies affecting media, information and communication in the United States and abroad, such as regulation of network platforms, content, intellectual property rights, and media ethics.

233  Documentary Technologies and Problems of Reality-Based Arts  
Fall, 3(2-2) Interdepartmental with English and Writing, Rhetoric and American Cultures. Administered by Telecommunication. R: Open to students in the Documentary Studies Specialization.

Introduction to theoretical, historical, and methodological issues concerning documentary expression and reality-based art forms in a range of media.

239  Science Fiction, Communication, and Technology  
Spring, 3(3-0) Science fiction films and novels as a source of new ideas for creators and critics of new communication technologies and new media content.

242  The Digital Image  
Fall, Summer. 3(2-2) P: (TC 100 or concurrently) or (TC 110 or concurrently) R: Open to students in the Department of Telecommunication, Information Studies and Media. Production and meaning of media images. Conceptual and technical use of the computer as a tool for the creation, acquisition and manipulation of media images. Development of a critical vocabulary for thinking and talking about media images.

243  Story, Sound, and Motion  
Spring, Summer. 3(2-2) P: (TC 100 or concurrently) or (TC 110 or concurrently) or (STA 110 and STA 113) R: Open to students in the Department of Telecommunication, Information Studies and Media or in the Design Specialization or approval of department.

Storytelling in a digital environment. Sound and music recording and manipulation. Recording, processing, and editing moving images.

247  Three-Dimensional Design of the Virtual Form  
Fall, Spring. 3(2-2) P: TC 242 or (STA 110 and STA 113) R: Open to students in the Department of Telecommunication, Information Studies and Media or in the Design Specialization.

Principles of 3D of computer graphics applied in cinema, games, illustration, design and sculpture. Use of 3D software to create and manipulate synthetic objects, materials, lights, and cameras.

291  Special Topics  
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in TC 191, TC 291, TC 391, and TC 491.

Contemporary issues in media and communication technology.

300  Economics of Media  
Fall, Spring. 3(0-0) P: TC 210 or concurrently SA: TC 200

Economics of traditional, new and emerging media, including radio, television, cinema, telephony, mobile communications, and the Internet.

331  Introduction to Interactive Media Design  
Fall, Spring. 3(2-2) P: (TC 201 or TC 242) and (CSE 101 or CSE 131 or CSE 231) R: Open to students in the Department of Telecommunication, Information Studies and Media or in the Design Specialization. SA: TC 241

Brainstorming, planning, implementing, and trouble-shooting applications and interfaces for interactive media. Basic principles of programming for interactivity.

335  Film Directing  
Fall, 4(2-4) Interdepartmental with English. Administered by English. P: (ENG 230 and TC 243) and completion of Tier I writing requirement R: Approval of department; application required.

Concepts and techniques for directing in styles most associated with the art of film. Studies of innovative film directors. Skills of film directing, including script and shot breakdown. Directing actors and crew. Directing on location.

340  Introduction to Video and Audio  
Fall, Spring. 3(2-2) P: TC 201 or TC 243 R: Open to students in the Department of Telecommunication, Information Studies and Media or in the Design Specialization.

Professional video and audio techniques, technologies, standards, aesthetics, and procedures.

341  Film Style Production for Cinema and Television  
Fall, Spring. 4(2-4) P: TC 340 R: Open to students in the Department of Telecommunication, Information Studies and Media or in the Design Specialization.

Advanced film style planning, techniques, and aesthetic principles for cinema and television production.

342  Multi Camera Production for Television  
Fall, Summer. 4(2-4) P: TC 340 R: Open to students in the Department of Telecommunication, Information Studies and Media or in the Design Specialization.

Conceptualizing, designing, planning, producing, directing and evaluating multi-camera video programs.

343  Basic Audio Production  
Fall, Spring. 4(2-4) P: TC 340 R: Open to students in the Department of Telecommunication, Information Studies and Media.

Basic audio production techniques. In-depth audio and radio industry analysis. Media writing.

346  Web-Based Interactive Media  
Fall. 4(2-4) P: TC 331 RB: TC 242 R: Open to students in the Department of Telecommunication, Information Studies and Media or in the Design Specialization. Design and development of informational, educational, and entertainment interactive digital media, particularly related to Internet applications.

347  Three-Dimensional Computer Animation  
Fall. 4(2-4) P: TC 247 R: Open to students in the Department of Telecommunication, Information Studies and Media or in the Design Specialization.

How aesthetic skill, technical competency, and engaging performance are woven together to create compelling animation using 3D computer graphics. Use of industry standard software to create, manipulate and render synthetic characters and their environments.

349  Client-Side Web Development  
Fall. 4(2-4) P: TC 331 R: Open to students in the Department of Telecommunication, Information Studies and Media. Development of basic web sites, services, and applications that employ primarily client-side technologies.
Ancient ruins are found to be
situated along the
coastline of the island.

The ancient city
was destroyed by
an earthquake.

A modern structure
is built on the
site of the ancient city.
462A Wireless Networks and Applications (W)
Fall of even years. 4(2-4) P: (TC 361) and completion of Tier I writing requirement R: To open to juniors or seniors in the Department of Telecommunication, Information Studies and Media or in the Information Technology Specialization. Technologies and services in the wireless telecommunications industry. Applications of wireless communications for voice and data communications, including cellular telephony and mobile data applications.

462B Social Computing (W)
Spring of even years. 3(2-2) P: (TC 331 or TC 361) and completion of Tier I writing requirement RB: TC 375 R: To open to juniors or seniors in the Department of Telecommunication, Information Studies and Media or in the Information Technology Specialization. Social and technological perspectives on how people collaborate using information and communication technology. Experience with using multiple collaboration platforms and analysis of differences between enabling technologies.

462C Electronic Commerce (W)
Spring of odd years. 3(2-2) P: (TC 361) and completion of Tier I writing requirement RB: TC 349 R: To open to juniors or seniors or graduate students in the Department of Telecommunication, Information Studies and Media or in the Information Technology Specialization. Technologies, business models, and organizational and social implications of electronic commerce. Design of e-commerce sites.

464 Network Security (W)
Spring. 3(3-0) P: TC 361. Network security issues and how network security is maintained in voice data and video networks.

465 Advanced Network Management (W)
Spring. 3(2-2) P: (TC 365) and Completion of Tier I Writing Requirement R: To open to juniors or seniors or graduate students in the Department of Telecommunication, Information Studies and Media. Techniques for analyzing organizational requirements for private voice data and video systems. Preparing a request for proposals and bids.

476 Advanced Media Research (W)
Spring. 4(4-0) P: Completion of Tier I Writing Requirement RB: TC 376 R: To open to freshmen or sophomores. Media and communication technology research methods including content analysis, sampling, experiments, surveys, statistics, ratings, polling and qualitative research.

477 Global Media (W)
Fall. 4(4-0) P: Completion of Tier I writing requirement. RB: (TC 100) R: To open to freshmen or sophomores. Comparison of national approaches to use of television, radio, cable, telephone, data and satellite communication, and the Internet. Development, international commerce, data flows, propaganda, impact on cultures.

480 Information and Communication Technologies for Development
Fall. 3(3-0) P: TC 201 or approval of department R: To open to juniors or seniors in the College of Engineering or in the Department of Telecommunication, Information Studies and Media or in the Information and Communication Technology for Development Specialization. Role of information and communication technologies in facilitating social, political, economic, and environmental change in developing nations.

488 Information and Communication Technology Global Corps Field Study
Spring. Summer. 3 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: TC 361 R: To open to juniors or seniors in the College of Engineering or in the Department of Telecommunication, Information Studies and Media or in the Information and Communication Technology for Development Specialization. Implementation of an information and communication technology project in a developing country, rural region of the U.S., or low-income urban area. Includes on-campus preparation followed by field work on location.

490 Independent Study
Fall. Spring. Summer. 1 to 7 credits. A student may earn a maximum of 7 credits in all enrollments for this course. R: To open to juniors or seniors in the Department of Telecommunication, Information Studies and Media. Approval of department; application required. Directed study under faculty supervision.

491 Special Topics
Fall. Spring. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. A student may earn a maximum of 16 credits TC191, TC291, TC391 and TC491.

493 Telecommunication Internship
Fall, Spring, Summer. 1 to 7 credits. A student may earn a maximum of 7 credits in all enrollments for this course. P: (TC 100 and TC 200 and TC 201 and TC 240) and (TC 310 or TC 361) R: To open only to juniors or seniors in the Department of Telecommunication, Information Studies and Media. Approval of department; application required. Supervised professional experience in a telecommunication institution, business or facility.

498 Collaborative Game Design (W)
Spring. 4(2-4) P: (TC 339 or concurrently) and TC 445 and TC 455 and completion of Tier I writing requirement R: To open to students in the Game Design and Development Specialization. Design and development of comprehensive digital games in a team setting working with a client. Participation in a design cycle including specification, design, prototyping, implementation, testing, and documentation. Issues of professionalism, ethics, and communication.

802 Research Methods in Telecommunication
Spring. 3(3-0) SA: TC 876. Social science research methods in telecommunication and Internet services assessing content, consumption and social effects. Design, sampling, data collection, analyses, presentation and ethics for content analysis, ethnographies, focus groups, case studies, surveys and experiments. Market research and segmentation including new product introductions.

820 Introduction to Theory in Telecommunication
Fall. 3(3-0) SA: TC 821. Classic and contemporary theories of communication with special emphasis on applications to telecommunication, new media, and technology.

830 Foundations of Serious Games
Fall. 3(3-0) R: To open to graduate students in the Department of Telecommunication, Information Studies and Media. Approval of department. Rationales, principles, processes, and pedagogies for serious game design. Applications of serious game genres and simulations. Funding and distribution.

831 Serious Game Theories
Fall. 3(3-0) Interdepartmental with Advertising. Administered by Telecommunication. R: To open to graduate students in the Department of Telecommunication, Information Studies and Media or approval of department. Theories and research on effects of serious games on cognition, affect, engagement, learning, and persuasion. Creating effective serious games.

832 Serious Game Design and Development
Spring. 3(2-2) R: To open to graduate students in the Department of Telecommunication, Information Studies and Media. Approval of department. Design and development. Design documentation, storyboarding, prototyping, playtesting, implementation, and summative research. Management of interdisciplinary project teams.

840 Foundations of Digital Media Arts and Technology
Fall. 3(2-2) RB: Basic familiarity with computers and Internet. R: Approval of department. Foundational technology and design concepts and skills unique to and common across video, audio, multimedia, and 3-D animation/virtual reality.
841 Design Research for Digital Media Arts and Technology
Spring. 3(3-0) Interdepartmental with Communication. Administered by Telecommunication. RB: Direct experience with the creative process for one or more digital media arts and technologies areas including audio, video, multimedia, and 3-D animation/virtual reality. SA: TC 824
Research methods used by design teams for asking and answering questions related to digital media arts and technology, before, during, and after design of creative work. The design goals and the design prototype are tested to guide development and evaluate effectiveness.

842 Design and Development of Media Projects
Fall. 3(2-2): P: TC 840 and (TC 442 or TC 443 or TC 446 or TC 847) R: Open only to graduate students in the Department of Telecommunication, Information Studies and Media or approval of department. Design of digital media arts projects in video, audio, multimedia, 3-D animation/virtual reality and other new media. Proposal development, team building, project management and workflow methods, production techniques and evaluative methods in the creation of media projects.

843 Digital Media Project
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to master’s students in the Department of Telecommunication, Information Studies and Media. Digital media arts and technology individual student project.

848 Special Topics in Digital Media Arts and Technology
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 12 credits in all enrollments for this course. P: (TC 840 or concurrently) and TC 841) and (TC 442 or concurrently) or (TC 443 or concurrently) or (TC 446 or concurrently) or (TC 447 or concurrently) R: Approval of department. Current issues at the cutting edge of digital media arts and technology.

850 Telecommunication and Information Policy
Spring, 3(3-0): R: Open only to graduate students in the Department of Telecommunication, Information Studies and Media or approval of department. SA: TC 810
Analysis of major public and private telecommunication and information policies. Applying concepts and data from law, political science, economics, communication, technology and general social science.

852 Economic Structure of Telecommunication Industries
Fall. 3(3-0): R: Open only to graduate students in the Department of Telecommunication, Information Studies and Media or approval of department. Economic aspects of telecommunication and information industries. Emphasis on market structure, conduct, performance. Content diversity, new technologies, recent regulatory policies, and antitrust.

853 Information Technology and Organizations
Spring. 3(3-0): RB: Knowledge of communication industries and technologies that might be acquired either academically or through professional experience. Develops basic perspectives for analyzing the impact of information technologies on organizational structures, the allocation and performance of tasks within organizations, organization members, and organizational strategies and effectiveness, and relationships among firms in a market economy.

854 Economics of Media Markets and Strategies
Spring of odd years. 3(3-0) P: TC 852 RB: Intermediate microeconomics class. Conceptual tools and analytical perspectives on economic forces and incentives underlying structure, conduct, and responses to new technologies in media markets.

861 Information Networks and Technologies
Fall. 3(3-0): RB: Academic or professional background in telecommunication field. Fundamentals of network components, standards and applications of information networks and services. Local and wide area network technologies, fundamentals of the Internet, and private network technologies and services from a management perspective.

862 Information Networks and Electronic Commerce
Spring. 3(2-2): P: TC 840 or TC 861 RB: Academic or professional background in telecommunication field. Design and management of electronic commerce strategies and the telecommunications infrastructure. Impact of electronic commerce on organizations and society.

863 Electronic Information and Entertainment Media Management
Spring of even years. 3(3-0) R: Open only to graduate students in the Department of Telecommunication, Information Studies and Media. SA: TC 856
Management, programming, advertising, and promotion issues in broadcast television, multichannel television, interactive television, and Internet and broadband data service programming.

877 Comparative and International Telecommunication
Fall of even years. 3(3-0)
Comparison of various national approaches to broadcasting, cable, satellite and telephone systems. Policy, economic, institutional and content issues. Interactions and media flows among countries. International regulatory bodies.

890 Independent Study
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students in the Department of Telecommunication, Information Studies and Media. Approval of department; application required. Individualized study under faculty supervision.

891 Special Topics in Telecommunication
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to graduate students in the College of Communication Arts and Sciences or approval of department. Contemporary issues. Topics vary.

893 Telecommunication Internship (N)
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. Internships in information industries.

899 Master’s Thesis Research
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students in the Department of Telecommunication, Information Studies and Media. Master’s thesis research.

900 Theory Building in Media and Information Studies
Fall. 3(3-0) Interdepartmental with Advertising and Journalism. Administered by Advertising. Concepts and issues relating explanation, scientific inquiry, theory building and applications to interdisciplinary studies in media and information.

912 Information Technology Transactional Perspectives
Spring of even years. 3(3-0) Interdepartmental with Information Technology Management. Administered by Information Technology Management. RB: Graduate level microeconomics course. R: Open to doctoral students. Multiple perspectives on relationships between organizations and information technology. Information processing, communications and management strategy approaches. Economic perspectives.

916 Qualitative Research Methods
Spring. 3(3-0) Interdepartmental with Advertising and Journalism. Administered by Journalism. R: Open only to doctoral students in the College of Communication Arts and Sciences or Department of Communication.
Qualitative research in mass and specialized communication systems. Topics include documentary, bibliographic, case study and participant observation methods.

921 Media Theory
Fall. 3(3-0) Interdepartmental with Advertising and Journalism. Administered by Advertising. R: Open only to doctoral students in the College of Communication Arts and Sciences or Department of Communication.

930 Law and Public Policy of the Media
Fall. 3(3-0) Interdepartmental with Advertising and Journalism. Administered by Journalism. R: Open only to doctoral students in the Media and Information Studies major. Philosophical, legal, political, and statutory principles underlying law and public policy applied to media. Selected issues involving constitutional law, common law, statutes, and administrative policy.
960 Media and Technology
Spring, 3(3-0) Interdepartmental with Advertising and Journalism. Administered by Telecommunication. R: Open only to doctoral students in the Communication Arts and Sciences-Media and Information Studies major or Communication major or approval of department.
Theoretical frameworks concerning media and communication processes, and their interactions with technology. Social, organizational, critical, and economic perspectives.

965 Media Economics
Spring, 3(3-0) Interdepartmental with Advertising and Journalism. Administered by Telecommunication. R: Open only to doctoral students in the Communication Arts and Sciences-Media and Information Studies major or Communication major or approval of department.
Economic theory and analysis relevant to the mass media. Economic structure and performance of mass media and advertising industries. Competition among media and within related industries.

975 Quantitative Research Design
Fall, 3(3-0) Interdepartmental with Advertising and Journalism. Administered by Advertising. RB: One graduate-level research design or statistics course. R: Open only to doctoral students in the Media and Information Studies major.
Survey, experimental and content-analytic techniques applied to the study of media. Academic and applied research methods. Univariate and multivariate techniques.