343 Basic Audio Production
Fall, Spring, Summer. 4(2-4) P:M: TC 201 and TC 240: R: Open to seniors in the Department of Telecommunication, Information Studies and Media. Approval of department: application required.
Basic audio production techniques. In-depth audio and radio industry analysis. Media writing.

346 Basic Interactive Media Design
Fall. 4(2-4) P:M: TC 201 and TC 240: R: Approval of department; application required.
Basic design and development of interactive digital media, particularly related to Internet applications.

352 Broadcast and Cable Programming and Audience Promotion
Spring of even years. 3(3-0) RB: TC 200 and TC 240: R: Not open to freshmen or sophomores.
Evaluation, selection and scheduling of cable and broadcast programming. Audience promotion strategies and techniques.

361 Data Communication
Fall. Spring. 3(3-0) P:M: ((TC 200 and TC 201) and (MTH 106 or MTH 110 or MTH 116 or MTH 124 or MTH 132 or MTH 152H or MTH 201 or STT 200 or STT 201)
Data communication concepts and applications. Basic data communications protocols and local area network approaches. Fundamentals of databases.

375 New Media, Old Media
Fall. 3(3-0) P:M: TC 100: RB: or approval of department.
Uses and social effects of the Internet and the other New Media of communication. Conventional theories of mass media and emerging theories of interactive media processes and effects. Critical examination of empirical social science research concerning the role played by the media, old and new, in society.

391 Special Topics in Telecommunication
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Approval of department.
Contemporary issues in telecommunications.

410 Advanced Telecommunication Policy
Spring of even years. 3(3-0) P:M: TC 310: RB: TC 100 and TC 200 and TC 201
Information and communication industries policy in the network of networks of the information society.

443 Audio Industry Design and Management (W)
Fall, Spring. 4(2-4) P:M: TC 342 and TC 343) and completion of Tier I writing requirement R: Open only to juniors or seniors in the Department of Telecommunication, Information Studies and Media. Approval of department; application required.
Advanced design and production techniques in multimedia. Industry focus on the aspects of the audio field.

444 Information Technology Project Management
Spring. 3(3-0) Interdepartmental with Computer Science and Engineering and Information Technology Management. Administered by Information Technology Management. P:M: ITM 311: R: Open only to seniors in the Specialization in Information Technology. Practical training and experiences in design, testing, and launch of new information technologies and systems.

445 Digital Game Design (W)
Spring. 4(2-4) P:M: (TC 240 and TC 346) and completion of Tier I writing requirement R: Approval of department; application required.
Design, architecture, and creation concepts related to the development of interactive digital games.

446 Advanced Interactive Media Design (W)
Spring. 4(2-4) P:M: TC 201 and TC 240 and TC 346) and completion of Tier I writing requirement R: Approval of department; application required.
Advanced design and development of interactive digital media, particularly related to CD-ROM, DVD, computer kiosks, and advanced Internet applications.

447 Three Dimensional Graphics Design (W)
Spring. 4(2-4) P:M: (TC 346) and completion of Tier I writing requirement RB: A course in basic script writing and programming is required. R: Approval of department; application required. SA: TC 847
Design of objects and environments for use as 3-D graphic artwork, computer animation, and real-time, interactive virtual environments: 3-D modeling, texturing, lighting, object and basic human animation.

449 Special Topics in Digital Media Arts and Technology
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 15 credits in all enrollments for this course. P:M: TC 240 and (TC 342 or TC 343 or TC 346): RB: Approval of department; application required.
Emergent topics in digital media arts and technology.

452 Telecommunication and Information Industries (W)
Spring. 4(4-0) P:M: (TC 100 and TC 200 and TC 201) and completion of Tier I writing requirement Telecommunication and information industry issues including economic dynamics, market structures, business practices, and interfaces with other industries.

455 3D Game and Simulation Design (W)
Fall. 4(2-4) P:M: (TC 445) and completion of Tier I writing requirement R: Approval of department; application required.
Advanced design, architecture, and creation concepts related to the development of real-time interactive 3D design for gaming, simulation, and immersive virtual environments.
456 Multichannel and Broadband Telecommunication (W) Fall. 4(4-0) P.M: Completion of Tier I writing requirement. R: Open only to juniors or seniors in the Department of Telecommunication, Information Studies and Media. Television and internet video in a multichannel/broadband environment. Developments in broadcasting, cable, satellite, and multipoint distribution systems, telephone, internet and home video applications.

458 Telecommunication Management (W) Spring. 3(3-0) P.M: (TC 310) and completion of Tier I writing requirement R: Not open to freshmen or sophomores. Theoretical and practical aspects of telecommunication management including case studies.

462A Wireless Networks and Applications Fall of even years. 3(2-2) P.M: TC 361 R: Not open to freshmen or sophomores. 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 Teleconferencing and Computer Supported Cooperative Work Spring of even years. 3(2-2) P.M: TC 361 RB: TC 201 and TC 240 R: Not open to freshmen or sophomores. Methods of teleconferencing including assessing requirements for teleconferencing, system design and implementation, and system evaluation.

462C Introduction to Electronic Commerce Spring of odd years. 3(2-2) P.M: TC 361 RB: TC 100 and TC 201 R: Not open to freshmen or sophomores. Technologies, business models, and organizational and social implications of electronic commerce. Design of e-commerce sites.

463 Network Design and Implementation I Fall. Spring. 3(3-0) P.M: TC 361 R: Not open to freshmen or sophomores. Operation and management of telecommunications systems. Overview of the different systems, network configurations, current market forces and how they factor into business plans for public telecommunications networks.

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

465 Network Design and Implementation II (W) Spring. 3(2-2) P.M: (TC 361 and TC 463) and completion of Tier I writing requirement R: Not open to freshmen or sophomores. Techniques for analyzing organizational requirements for private voice data and video systems. Preparing a request for proposals and bids.

476 Telecommunication Research Methods (W) Spring. 4(4-0) P.M: Completion of Tier I writing requirement. RB: TC 100 R: Not open to freshmen or sophomores. Telecommunication research methods including content analysis, sampling, experiments, surveys, statistics, ratings, polling and qualitative research.

477 Global Media (W) Fall. 4(4-0) P.M: Completion of Tier I writing requirement. RB: (TC 100) R: Not 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.

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: Open only to juniors or seniors in the Department of Telecommunication, Information Studies and Media. Approval of department; application required.

491 Special Topics in Telecommunication Fall. Spring. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Approval of department. Contemporary issues in telecommunication.

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. R: Approval of department; application required.

498 Collaborative Game Design (W) Spring. 4(2-4) P.M: (TC 339 or concurrent) and TC 445 and TC 465) and completion of Tier I writing requirement R: Open only to students in the Game Design and Development Specialization. Approval of department; application required.

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, Information, Society and Technology Fall. 3(3-0) SA: TC 820 Classic and contemporary theories of communication with special emphasis on applications to telecommunication, new media, and technology.
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.M: (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 topics 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.M: 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. Fundamental characteristics, 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.M: 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.

872 Telecommunication and National Development
Fall of odd years. 3(3-0) Role of electronic mass media and telecommunication in facilitating national development in Asia, Africa, Latin America, the Caribbean and the Middle East. Examples from agriculture, health, family planning, nutrition, and education.

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, Summer. 1 to 3 credits. A student may earn a maximum of 6 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. R: Open only to graduate students in the College of Communication Arts and Sciences or approval of department. 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 and Journalism. 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 only 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 and Journalism. R: Open only to doctoral students in the College of Communication Arts and Sciences or the Department of Communication. Process and effects of mediated communication. Audiences, socialization, and persuasion. Macrosocietal, and intercultural perspectives. Theory construction.

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 College of Communication Arts and Sciences or approval of department. 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 College of 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 College of 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.
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.