<table>
<thead>
<tr>
<th>Course Title</th>
<th>Description</th>
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<tr>
<td>101 Understanding Media in the Information Age</td>
<td>Critique and analysis of media including television, radio, film, handhelds, video games, social media and the Internet. Media history, policy, industry structure, and ethics. Technology, industry and social trends affecting the media in the information society.</td>
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<tr>
<td>201 Introduction to Media and Information Technologies and Industries</td>
<td>Operational principles and applications of media and information technologies. Overview of the media and information industries.</td>
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<tr>
<td>211 Documentary History and Theory</td>
<td>Documentary history and theory form its origins to the present.</td>
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<tr>
<td>247 Three-Dimensional Modeling and Design</td>
<td>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.</td>
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<td>291 Special Topics</td>
<td>Contemporary issues in media and communication technology.</td>
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<tr>
<td>300 Media Policy and Economics</td>
<td>Economics and public policy related to traditional, new and emerging media, including radio, television, cinema, telephony, mobile communications, interactive media, and the Internet.</td>
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<td>301 Bringing Media to Market</td>
<td>Process of bringing media to market across multiple delivery platforms including broadcast, cable, satellite, internet and mobile devices. Industry structure of creative and distribution methods, pricing and repurposing of content. Practical and theoretical models of the behavior of media consumers.</td>
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<tr>
<td>311 Introduction to Documentary Production</td>
<td>Introduction to documentary production using accessible and affordable digital technology.</td>
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<tr>
<td>331 Introduction to Interactive Media Development</td>
<td>Basic principles of programming for interactivity.</td>
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<td>337 Compositing and Special Effects</td>
<td>Conceptual and technical use of animation and compositing software for television, cinema, interactive media, and live performance.</td>
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<tr>
<td>341 Film Style Production for Cinema and Television</td>
<td>Advanced film style planning, techniques, and aesthetic principles for cinema and television production.</td>
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<tr>
<td>342 Multi Camera Production for Television</td>
<td>Conceptualizing, designing, planning, directing and evaluating multi-camera video programs.</td>
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<tr>
<td>343 Basic Audio Production</td>
<td>Basic audio production techniques. In-depth audio and radio industry analysis. Media writing.</td>
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<tr>
<td>344 Sound Design for Cinema, Television, and Games</td>
<td>Principles, technology, and techniques of sound design for media projects, including film, games, television, animation, and web.</td>
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<tr>
<td>346 Introduction to Game Design</td>
<td>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.</td>
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<tr>
<td>347 Advanced Three-Dimensional Computer Animation</td>
<td>Advanced techniques for manipulation of light and image characteristics in film and television settings.</td>
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<tr>
<td>348 Advanced Lighting and Camera Techniques</td>
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</table>
Critical examination of empirical research concerning industries for media. Conventional and media. Current and historical genres, content, audiences. Cultural, technological, and design evolution of businesses that develop the infrastructure. Technologies and organizations that support data applications that employ both browser and server-side development of advanced Web sites, services, and applications that employ both browser and server-side technologies.

Information and Communication Technology Management
Fall, 3(3-0) P: MI 201 or CSE 231 SA: TC 361
Technologies and organizations that support data communications infrastructure. Case studies of businesses that develop the infrastructure.

Web Administration
Spring, 3(2-2) P: MI 331 or MI 349 or CSE 232 RB: (MI 349 or concurrently) or (MI 361 or concurrently) R: Open to students in the Department of Media and Information or in the Department of Computer Science and Engineering or in the Information and Communication Technology for Development Specialization or in the Information Technology Minor. SA: TC 362
Administration of Web servers and the services necessary to support modern information applications.

Advanced 3D Modeling
Fall, 3(2-2) P: MI 247 R: Open to students in the Department of Media and Information. Learn advanced techniques in 3D modeling and texturing for games, movies, television, and motion graphics.

Topics in Media Impacts on Society
Fall, Spring, 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P: MI 101 and Completion of Tier I Writing Requirement R: Open to undergraduates or graduate students in the Department of Media and Information. SA: TC 239, TC 339, TC 375, TC 401

Collaborative Documentary Design and Production (W)
Spring, 3(2-2) Interdepartmental with English and Journalism and Writing, Rhetoric and American Cultures. Administered by Media and Information P: Completion of Tier I Writing Requirement R: Open to students in the Department of Media and Information. SA: TC 411
Design and development of documentaries in a team setting using video and audio, still photography, web design, and print media. Participation in a production cycle including idea generation, research, design, production, and distribution.

Design of Cinema and Television Projects (W)
Fall, Spring, Summer, 3(2-2) P: MI 341 and Completion of Tier I Writing Requirement R: Open to juniors or seniors or graduate students in the Department of Media and Information. SA: TC 442
Design and development of television and cinema projects in a team setting. Participation in a production cycle including planning, budgeting, design, proposal writing, production, testing, and evaluation. Issues of professionalism, ethics, and communication.

Audio Industry Design and Management (W)
Fall, Spring, 3(2-2) P: MI 343 and Completion of Tier I Writing Requirement R: Open to juniors or seniors or graduate students in the Department of Media and Information. SA: TC 445
Advanced audio production specializing in multi-channel techniques. Industry focus on all aspects of the audio field.

Game Design and Development I
Fall, Spring, 3(2-2) P: (MI 331 or CSE 331 or CSE 335 or STA 360) and Completion of Tier I Writing Requirement RB: TC 247 or TC 347 R: Open to students in the Game Design and Development Specialization and open to graduate students in the Department of Media and Information. SA: TC 445
Design, architecture, and creation concepts related to the development of interactive digital games.

Three-Dimensional Modeling and Animation Workshop (W)
Fall, 3(1-4) P: (MI 347 or MI 377) and Completion of Tier I Writing Requirement RB: MI 337 R: Open to juniors or seniors or graduate students in the Department of Media and Information or in the Game Design and Development Specialization or approval of department. SA: TC 447
Design of advanced three-dimensional models and animation.

Human Computer Interaction and User Experience Design (W)
Fall, Spring, 3(2-2) P: (MI 331 or MI 349 or MI 349) and Completion of Tier I Writing Requirement R: Open to juniors or seniors or graduate students in the Department of Media and Information or in the Department of Computer Science and Engineering. SA: TC 450
Development, formalization, and communication of information designs. Gathering and structuring information and requirements to meet technological, personal, and business communication goals. Systematic usability evaluation of information designs.

Media Strategy (W)
Fall, 3(3-0) P: (MI 300 and MI 301) and Completion of Tier I Writing Requirement R: Open to juniors or seniors or graduate students in the Department of Media and Information. SA: TC 452
Strategic options, with their attendant risks and opportunities, available to media firms in an industry that is being transformed by new information and communication technologies.

Game Design and Development II
Spring, 3(2-2) P: MI 445 and Completion of Tier I Writing Requirement R: Open to students in the Game Design and Development Specialization and open to graduate students in the Department of Media and Information. SA: TC 455
Advanced design, architecture, and creation concepts related to the development of real-time interactive 3D design for gaming, simulation, and immersive virtual environments.

Project Management (W)
Spring, 3(3-0) P: (MI 301) and completion of Tier I writing requirement R: Open to juniors or seniors or graduate students in the Department of Media and Information or in the Applied Engineering Sciences Major. SA: TC 458 R: Open to students with credit in MI 499.
Managing complicated and multidisciplinary projects. Organizing projects into manageable elements: scope, time, cost, quality, human resources, communication, risk, procurement, and integration. Communicate with stakeholders. Analyze organizations. Develop a budget. Identify roles and responsibilities during the critical planning, deployment, and evaluation stages.

Social Computing (W)
Fall, Spring, 3(2-2) P: MI 349 or MI 361 and Completion of Tier I Writing Requirement R: Open to juniors or seniors or graduate students in the Department of Media and Information or in the Information and Communication Technology for Development Specialization. SA: TC 462B, TC 462
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.

Electronic Commerce (W)
Spring, 3(2-2) P: (MI 349 or MI 361) and completion of Tier I writing requirement RB: MI 359 or concurrently R: Open to juniors or seniors or graduate students in the Department of Media and Information or in the Information and Communication Technology for Development Specialization. SA: TC 462C, TC 472
Technologies, business models, and organizational and social implications of electronic commerce. Design of e-commerce sites.
482 Building Virtual Worlds (W)  
Fall, 3(2-2) P: (MI 331 and MI 346) and completion of Tier I writing requirement RB: MI 247 R: Open to students in the Department of Media and Information. 
Theoretical and practical approaches to the planning, design, and development of virtual worlds for games and simulations.

484 Building Innovative Interfaces (W)  
Spring, 3(2-2) P: (MI 331) and completion of Tier I writing requirement R: Open to students in the Department of Media and Information. 
Designing, implementing and evaluating new interaction devices using mobile and sensor technologies.

488 Information and Communication Technology Development Project (W)  
Spring, Summer. 3 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with Engineering. Administered by Media and Information. P: Completion of Tier I Writing Requirement RB: MI 480 SA: TC 488 
Students will learn about the challenges and opportunities of implementing an information and communication technology in a developing country or underprivileged region of the United States. Students will gain hands-on experience conducting 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: Open to undergraduate students in the Department of Media and Information. Approval of department; application required. SA: TC 490 
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 MI 291 and MI 491. R: Open to juniors or seniors or graduate students in the Department of Media and Information. SA: TC 491 
Contemporary issues in media and communication technology.

493 Internship  
Fall, Spring, Summer. 1 to 7 credits. A student may earn a maximum of 7 credits in all enrollments for this course. RB: MI 101 and MI 201 and MI 301 R: Open to undergraduate students in the Department of Media and Information. Approval of department; application required. SA: TC 493 
Supervised professional experience in a media or information institution, business or facility.

497 Game Design Studio  
Fall. 3(1-4) P: MI 455 R: Open to students in the Game Design and Development Specialization and open to graduate students in the Department of Media and Information. SA: TC 497 
Conceptualization, design documentation, planning, prototyping, and distribution of games.

498 Collaborative Game Design (W)  
Spring. 3(2-2) P: (MI 445 and MI 455 and MI 497) and completion of Tier I writing requirement R: Open to students in the Game Design and Development Specialization and open to graduate students in the Department of Media and Information. SA: TC 498 
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.

499 Media and Information Capstone (W)  
On Demand. 3(2-2) P: (MI 331 or MI 341 or MI 360) and Completion of Tier I Writing Requirement R: Open to juniors or seniors in the Department of Media and Information. SA: TC 499 Not open to students with credit in MI 458. 
Design and development of comprehensive media and information projects 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.

803 Introduction to Quantitative Research Methods  
Fall, Summer. 3(3-0) Interdepartmental with Advertising and Communication and Journalism. Administered by Communication. SA: ADV 875, COM 800, JRN 817, TC 802 
Introduction to quantitative social science research methods and applied analyses for understanding research reports and developing graduate level research projects.

820 Theories of Media and Information  
Fall. 3(3-0) R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 820 
Classic and contemporary theories of communication with special emphasis on applications to telecommunication, extant and emerging media, and technology.

830 Foundations of Serious Games  
Spring. 3(3-0) R: Open to students in the Educational Technology Major or in the Educational Technology Graduate Certificate or in the Serious Game Design and Research Certificate or in the Media and Information Major or approval of department. SA: TC 830 
Rationales, principles, processes, and pedagogies for serious game design. Applications of serious game genres and simulations. Funding and distribution.

831 Theories of Games and Interaction Design  
Fall. 3(3-0) R: Open to students in the Educational Technology Major or in the Educational Technology Graduate Certificate or in the Serious Game Design and Research Certificate or in the Media and Information Major or approval of department. SA: TC 831 
Theories of interaction in games and other mediated contexts including communication, learning, health, global and local development, and social justice to inform the design of social systems, games and other interactive media products.

839 Implementing Interactivity  
Fall. 3(2-2) R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 839 
Foundational visual design principles and theories for interactivity. Implementation of user interfaces. Current industry practices.

841 Understanding Users  
Fall. 3(3-0) R: Direct experience with the creative process in interactive media R: Open to students in the Educational Technology Major or in the Educational Technology Graduate Certificate or in the Serious Game Design and Research Certificate or in the Media and Information Major or approval of department. SA: TC 841 
Methods of user-centered media and interaction design. Iterative cycles of user and product conceptualization.

842 Design and Development of Media Projects  
Spring. 3(2-2) RB: Strongly recommended to be taken in final or near-final semester of graduate studies, so that majority of graduate degree program coursework has already been completed and can serve as relevant background. R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 842 
Team projects in Human Computer Interaction and Media and Information Management. Proposal development, team building, project management and workflow methods.

844 Interaction Design  
Spring. 3(2-2) RB: Basic familiarity with computers and Internet. R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 844 
Design of user interactions in information and media systems. Prototyping and presentation tools. Example topics include information architecture, task analysis, use cases, wire frames, scenarios.

845 Human Computer Interaction  
Spring. 3(3-0) R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 845 
Principles and theories of how humans and technical systems interact in traditional media, networked environments, social and mobile computing, virtual environments and information appliances.

850 Media and Information Policy  
Spring. 3(3-0) R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 810, TC 850 
Analysis of major public and private media and information policies, including Internet governance. Applying concepts and data from law, political science, economics, communication, technology and general social science.

851 Understanding Social Media  
Spring. 3(3-0) R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 851 
Overview of social media applications and services and their effects on individuals, organizations, and society.
### Economic Structure of Telecommunication Industries
Fall, 3(3-0) R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 852

Economic aspects of telecommunication and information industries. Emphasis on market structure, conduct, performance. Content diversity, new technologies, recent regulatory policies, and antitrust.

### Economics of Media Markets and Strategies
Spring of odd years. 3(3-0) RB: MI 852 or concurrently R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 854

Conceptual tools and analytical perspectives on economic forces and incentives underlying structure, conduct, and responses to new technologies in media markets.

### Information Networks and Technologies
Fall, 3(3-0) RB: Academic or professional background in telecommunication field. R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 861

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.

### Information Networks in Organizations and Commerce
Spring, 3(2-2) RB: MI 861 or concurrently R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 862

Design and management of electronic commerce strategies and the telecommunications infrastructures. Impact of information and communication technology on organizations and markets.

### Information and Communication Technology for Development
Spring, 3(3-0) R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 875

Information and communication technology in developing areas, cases studies, implementation, international and domestic contexts.

### Comparative and International Telecommunication
Fall of even years. 3(3-0) R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 877

Comparison of various national approaches to broadcasting, cable, satellite, telephone, mobile communications, and the Internet. Policy, economic, institutional and content issues. Interactions and media flows among countries. International governance bodies.

### 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 to graduate students in the Department of Media and Information. Approval of department; application required. SA: TC 890 Individualized study under faculty supervision.

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### 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 to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 891

Contemporary issues. Topics vary.

### Media and Information Internship
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 893

Internships in media and information industries.

### Master's 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 to master's students in the Department of Media and Information. Approval of department; application required. SA: TC 898, TC 899

Plan B individual project demonstrating master's level professional competence.

### 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 to graduate students in the Department of Media and Information. Approval of department; application required. SA: TC 899

Master's thesis research.

### 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.

### Media and Technology
Spring, 3(3-0) Interdepartmental with Advertising and Journalism. Administered by Media and Information. R: Open to doctoral students in the Communication Major or in the Media and Information Studies Major or approval of department. SA: TC 960

Theoretical frameworks concerning media and communication processes, and their interactions with technology. Social, organizational, critical, and economic perspectives.

### 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 to doctoral students.

Survey, experimental and content-analytic techniques applied to the study of media. Academic and applied research methods. Univariate and multivariate techniques.

### Advanced Quantitative Analysis for Media
Spring, 3(3-0) Interdepartmental with Advertising and Journalism. Administered by Media and Information. P: ADV 975 RB: Master's-level research course in addition to ADV 975.

Multivariate research methods for media and information studies research.