MEDIA AND INFORMATION
MI

Department of Media and Information
College of Communication Arts and Sciences

101 Understanding Media and Information
Fall, Spring, Summer. 3(3-0) SA: TC 100, TC 110, TC 101
Critique and analysis of media including television, radio, film, handhelds, video games, social media and the Internet. Media history, effects and ethics. Technology, business and social developments affecting the media in the information society.

201 Introduction to Information Science
Fall, Spring, Summer. 3(3-0)
Overview and critique of concepts of information, the history of computing and information, uses and effects of information technology, information management, and human-centered approaches to designing information systems.

220 Methods for Understanding Users
Fall, Spring. 3(3-0)
Basics of user research methods, such as interviews, surveys, content analysis, and focus groups. Methods to generate design ideas, solve design problems, and communicate the results.

227 Concept Design for Games, Film, and TV
Fall, Spring. 3(2-2) P: CAS 116 R: Open to students in the Department of Media and Information or in the Game Design and Development Minor or in the Computer Science Major or in the Graphic Design Major or in the Bachelor of Fine Arts in Studio Art or in the Studio Art Major.
Introduction to theories and techniques for generating concept art and design for games, films, TV, and animations.

230 Game Design
Spring. 3(2-2) P: CAS 117 R: Open to students in the Department of Media and Information or in the Department of Computer Science and Engineering or in the Game Design and Development Minor or in the Information and Communication Technology for Development Minor. SA: TC 346, MI 346
Analyze, critique, and design of non-digital and digital games. Overview of game industry.

231 Game and Interactive Media Development
Fall, Spring. 3(2-2) P: (CAS 117) or (CAS 204 and CAS 208) R: Open to students in the Department of Media and Information or in the Computer Science Major or in the Graphic Design Major or in the Bachelor of Fine Arts in Studio Art or in the Studio Art Major. SA: TC 241, TC 331, MI 331
Brainstorming, planning, implementing, and trouble-shooting applications and interfaces for games and interactive media. Basic principles of programming for interactivity.

239 Digital Footprints: Privacy and Online Behavior
Spring. 3(3-0) P: Completion of Tier I Writing Requirement R: Open to undergraduate students.
Exploration of digitization and capture of personal information. Issues of privacy, anonymity, and ownership. Technologies involved in capturing personal information.

247 Three-Dimensional Graphics and Design
Fall, Spring, Summer. 3(2-2) P: (CAS 116) or (STA 110 and STA 113) or (CAS 205 or CAS 206 or CAS 207) R: Open to students in the Department of Media and Information or in the Game Design and Development Minor or in the Computer Science Major or in the Graphic Design Major or in the Bachelor of Fine Arts in Studio Art or in the Studio Art Major. SA: TC 247
Principles of 3D computer graphics applied in cinema, games, illustration, design and sculpture. Use of 3D software to create and manipulate synthetic objects, materials, lights, and cameras.

250 Introduction to Applied Programming
Fall, Spring. 3(2-2)
Creation of software that responds to user input. Introduces variables, control structures, problem decomposition, finding and using existing libraries/APIs, producing user visible output, testing, creating documentation, and using version control.

291 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 MI 291 and MI 491. SA: TC 291
Contemporary issues in media and communication technology.

301 Bringing Media to Market
Spring, Summer. 3(3-0) P: (MI 201 or concurrently) or CAS 114 or ESHP 190 SA: TC 356, TC 381, TC 301
Process of bringing media to market across multiple delivery platforms including broadcast, cable, satellite, Internet and mobile devices. Organization of creative industries, distribution methods, pricing and business models. Creation and repurposing of content. Practical and theoretical models of the behavior of media and information consumers.

302 Networks, Markets and Society
Fall. 3(3-0) P: MI 201 or concurrently
Theories and methods for understanding dynamic systems in which information and communication technology (ICT) and society evolve independently over time. Explores how ICTs shape human experience, and how politics, commercial interests and culture shape how ICTs are designed.

304 Information and Society
Fall, Spring. 3(3-0) P: Completion of Tier I Writing Requirement R: Open to undergraduate students in the Department of Media and Information.
Focus on the historical and emerging potential impact of information on society as a whole. Multidisciplinary approach to explore how information technologies are adopted, and how information is collected, processed and used impacts the well-being of individuals, communities and society.

305 Media and Information Policy
Fall. 3(3-0) P: MI 231 or concurrently SA: TC 200, TC 210
National, international and local policies and private agreements governing traditional, new and emerging media, including radio, television, film, games, social media, mobile communications and the Internet.

320 Reasoning with Data
Spring. 3(2-2) P: (MI 220 and MI 250) or CSE 231
Explore and summarize structured data using simple statistics such as means, standard deviations, contingency tables, and hypothesis tests, and use this data to evaluate arguments and draw conclusions about technology performance and human behavior.

327 Advanced Concept Design for Games, Film, and TV
Spring. 3(2-2) P: MI 227 R: Open to students in the Department of Media and Information or in the Game Design and Development Minor or in the Film Filmmaking Minor.
Advanced topics in generating concept art and design for games, films, and animations.

330 Game Level Design
Spring. 3(2-2) P: MI 230 RB: MI 231 or MI 247 R: Open to undergraduate students in the Department of Media and Information. Exploration of concepts in the planning, implementation, and testing of spaces and environments for games and interactive media.

332 Game Interface Design
Spring. 3(2-2) P: CAS 117 RB: MI 231 R: Open to undergraduate students in the Department of Media and Information. Exploration of concepts in the planning, implementation, and testing of games and interactive media user interfaces.

334 eSports and Online Broadcasting
Fall. 3(2-2) P: (CAS 117) and completion of Tier I writing requirement RB: CAS 112 or concurrently R: Open to undergraduate students in the Department of Media and Information. Understand eSports industries, study esports film and game replays, streaming technologies and implementation, practice techniques essential to competitive play and streaming.

335 Film Directing
Fall. 3(3-1) Interdepartmental with Digital Storytelling and Film Studies. Administered by Film Studies. P: (FLM 230 or concurrently) and [(CAS 112 or concurrently) or (FLM 260 or concurrently)] R: Open to undergraduate students in the Fiction Filmmaking Minor. SA: ENG 335
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.
**MI—Media and Information**

337 **Compositing and Special Effects**

Fall, Spring. 3(2-2) P: (CAS 112) and (CAS 111 or CAS 116) or THR 219 or (CAS 201 and CAS 202) or (CAS 205 or CAS 206 or CAS 207) RB: MI 241 R: Open to students in the Department of Media and Information or in the Department of Theatre. SA: TC 437, TC 337 Not open to students with credit in THR 337.

Conceptual and technical use of animation and compositing software for television, cinema, interactive media, and live performance.

339 **Games and Society**

Fall. 3(3-0) P: Completion of Tier I Writing Requirement R: Open to undergraduate students in the Department of Media and Information or approval of department.


347 **Advanced Three-Dimensional Computer Animation**

Spring. 3(2-2) P: MI 247 R: Open to students in the Department of Media and Information or in the Game Design and Development Specialization. SA: TC 347

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 **Web Design and Development**

Fall, Summer. 3(2-2) P: (MI 220 or MI 231 or CSE 231) or (CAS 204 and CAS 205) RB: MI 231 R: Open to students in the Department of Computer Science and Engineering or in the Design Specialization or in the Information and Communication Technology for Development Minor. SA: TC 349

Preproduction, design and development of web sites, services, and applications that employ primarily web browser technologies.

350 **Evaluating Human-Centered Technology**

Spring. 3(2-2) P: (MI 220 and MI 250) or CSE 231

How to form context-specific inquiry based on user needs and goals, assess fundamental usability problems, conduct lab-based summative evaluation methods, summarize their evaluation results into reports and design suggestions.

355 **Media and Information Research**

Spring. 3(3-0) RB: Completion of University Math Requirement SA: ADV 340, ADV 355, TC 376, TC 355

Applied media and information research methods, practices, techniques and ethics. Data analytics, visualization and online research methods.

360 **Media and Information Management**

Fall. 3(3-0) P: MI 201 or concurrently RB: Completion of Tier I Writing Requirement Basic principles of managing and financing media and information companies, media projects, and information applications.

361 **IT Network Management and Security**

Spring. 3(3-0) P: MI 201 or CSE 231 RB: MI 360 SA: TC 361

Structure, design, and management of data networks with a focus on business settings. Examination of information technology security issues specifically in the context of data networks and new, digital media and ITs.

377 **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.

401 **Topics in Information Science (W)**

Fall, Spring. Summer. 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 RB: MI 304 or concurrently


402 **Topics in Game Studies (W)**

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 RB: MI 339 or concurrently


419 **Projection Design for Live Performance**

Spring. 3(2-2) A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with Theatre. Administered by Theatre. P: (THR 219) or (THR 337 or MI 337 or MI 341) RB: THR 211 or THR 212 or THR 214 or THR 216

Creating projection performance media through script, technology advancements, and production analysis. Practical application through digital rendering, video production and software exploration.

420 **Interactive Prototyping**

Fall. 3(2-2) P: (MI 220 and MI 250) or CSE 231

Creation of iterative and diverse prototypes of computer-based technologies that satisfy user needs. Low-fidelity prototypes that can be used for design feedback and medium-fidelity working prototypes that can be used to assess interactivity and social goals.

425 **Advanced Data Analysis**

Spring. 3(3-0) P: MI 320 RB: Completion of Tier I Writing Requirement R: Open to undergraduate students in the Department of Media and Information.

Conduct research using appropriate statistical models and to communicate their results to both technological and nontechnical audiences. Foundation in probability theory, maximum likelihood, and various types of regression models to investigate and implement a wide range of advanced statistical models. Manipulate data to answer the research questions in the field of Media and Information.

430 **Game Writing (W)**

Fall, Summer. 3(3-0) P: (CAS 117) and completion of Tier I writing requirement RB: Completion of Tier I Writing Requirement R: Open to undergraduate students or master’s students in the Department of Media and Information.

Create game scripts and narrative, character and environment descriptions, dialogue, cut scenes, and pitch documents.

431 **Advanced Game Development**

Fall. 3(2-2) P: MI 231 or CSE 232 R: Open to students in the Department of Media and Information or in the Department of Computer Science and Engineering or in the Game Design and Development Minor. SA: MI 333

Advanced concepts in planning, implementing, and troubleshooting applications and interfaces for games and interactive media.

435A **Creating the Fiction Film I**

Fall. 3(3-1) Interdepartmental with Digital Storytelling and Film Studies. Administered by Film Studies. P: FLM 335 R: Open to undergraduate students in the Fiction Filmmaking Minor or approval of department. SA: ENG 435A

Creation of a short film, including scripting, conceptualization and planning, shooting, and rough editing.

435B **Creating the Fiction Film II (W)**

Spring. 3(3-1) Interdepartmental with Digital Storytelling and Film Studies. Administered by Film Studies. P: (FLM 435A or approval of department) and Completion of Tier I Writing Requirement R: Open to undergraduate students in the Fiction Filmmaking Minor or approval of department. SA: ENG 435B

Finishing a short film, including fine editing, color correction, sound design, and Foley work. Developing web promotion, marketing strategies, and distribution.

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: ITM 311 R: Open to students in the Information Technology Minor. Practical training and experiences in design, testing, and launch of new information technologies and systems.

445 **Game Design and Development I**

Fall. 3(2-2) P: (CAS 117) and (MI 227 or MI 230 or MI 231 or MI 247 or CSE 232 or CSE 331 or CSE 335 or GD 360 or STA 201 or STA 380) and (MI 227 or MI 230 or MI 231 or MI 247 or CSE 232 or CSE 331 or CSE 335 or GD 360 or STA 201 or STA 380) RB: TC 247 or TC 347 R: Open to students in the Game Design and Development Minor 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.
447 Graphics and Animation Portfolio (W)
Fall, 3(2-2) P: (MI 327 or MI 347 or MI 377) and Completion of Tier I Writing Requirement RB: MI 337 R: Open to seniors or graduate students in the Department of Media and Information. SA: TC 447
Development of a portfolio of advanced three-dimensional models, animation, concept design, and technical art to focus skills on a specific profession or industry.

449 Advanced Web Development and Database Management
Spring, 3(2-2) P: MI 349 R: Open to students in the Department of Media and Information or in the Department of Computer Science and Engineering. SA: TC 449, TC 359, MI 359
Learn and apply server-side web technologies and database integration with client-side web technologies, to design, development, and deploy modern web sites, services, and applications.

450 Creating Human-Centered Technology (W)
Fall, Spring, 3(2-2) P: (MI 320 and MI 350 and MI 420 or approval of department) and Completion of Tier I Writing Requirement SA: TC 450
Entire human-centered design process, including assessing needs, forming ideas, designing a solution, building prototypes, evaluating the effectiveness of those solutions, and iterating to improve the solutions. Creation of a portfolio piece to illustrate capabilities.

452 Media Entrepreneurship and Business Strategies
Fall, 3(3-0) P: (MI 301) and completion of Tier I writing requirement SA: TC 452
Entrepreneurship and business strategy options, with their attendant risks and opportunities, available to media firms in an industry that is being dynamically transformed by new information and communication technologies.

455 Game Design and Development II
Spring, 3(2-2) P: MI 445 R: Open to students in the Game Design and Development Minor 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.

462 Social Media and Social Computing
Fall, 3(2-2) P: (MI 349 or MI 361 or approval of department) and Completion of Tier I Writing Requirement R: Open to juniors or seniors or graduate students. SA: TC 462B, TC 462
Social and technological perspectives on how people collaborate using social media and other information and communication technologies. Experience with using multiple collaboration platforms and analysis of differences between enabling technologies.

472 Digital Business and Commerce
Spring, 3(2-2) P: (MI 349 or MI 361) or approval of department) and completion of Tier I writing requirement R: Open to juniors or seniors or graduate students. SA: TC 462C, TC 472
Technologies, business models, and organizational and social implications of electronic commerce. Strategies for designing, managing and marketing in digital commerce contexts.

477 Character Design (W)
Summer, 3(2-2) P: (CAS 116 and MI 227 and MI 247) and completion of Tier I writing requirement) and (MI 347 or MI 377) R: Open to students in the Department of Media and Information.
Theory and workflow of feature characters for games, movies, and television.

480 Information and Communication Technologies and Development
Fall, 3(3-0) Interdepartmental with Engineering. Administered by Media and Information. P: Completion of Tier I Writing Requirement SA: TC 480
Role of information and communications technologies (ICT) in low income countries and in disadvantaged areas in middle and high income countries. Theories and case studies that link ICT and social, political, economic and environmental change.

482 Building Virtual Worlds (W)
Spring, 3(2-2) P: (MI 230) or completion of Tier I writing requirement) or MI 445 RB: MI 247 R: Open to students in the Department of Media and Information or in the Game Design and Development Minor.
Theoretical and practical approaches to the planning, design, and development of virtual worlds for games and simulations.

484 Building Innovative Interfaces (W)
Fall, 3(2-2) P: (MI 231 or MI 250 or CSE 320 or CSE 331 or CSE 335) and completion of Tier I writing requirement R: Open to students in the Department of Media and Information or in the Department of Computer Science and Engineering or in the Game Design and Development Minor.
Designing, implementing and evaluating new interaction devices using mobile and sensor technologies.

486 Serious Game Design (W)
Spring, 3(3-0) P: (MI 230) and completion of Tier I writing requirement R: Open to undergraduate students or graduate students in the Department of Media and Information.
Approaches and techniques to serious games development. Focus on an area of interest resulting in a rough prototype from platforms/forms ranging from analog to digital.

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
Challenges and opportunities of implementing an information and communication technology in a developing country or underprivileged region of the United States. 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 9 credits in all enrollments for this course. A student may earn a maximum of 16 credits MI291 and M491.
R: Open to juniors or seniors or graduate students in the Department of Media and Information. Approval of department; application required. 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 undergraduates 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 497) and completion of Tier I writing requirement R: Open to students in the Game Design and Development Minor. 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.

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 and information with special emphases on applications to current and emerging media, and information and communication technologies viewed from a socio-technical perspective.

830 Foundations of Serious Games
Spring, 3(3-0) R: Open to students in the Media and Information Major or in the Serious Game Design and Research Certificate or in the Educational Technology Major or in the Educational Technology Graduate Certificate 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.
Methods of user-centered research to support transmedia storytelling projects across media projects. Design and development of user and product conceptualization. Iterative cycles of user-centered research to support game, media and interaction design.

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.

Design principles for the creation of transmedia (games, film, websites, etc.). Design and development studio course focused on the creation of fictional storytelling projects across media projects.

Understanding and Managing 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, social media history, social media affordances, effects on individuals, organizations, and society, and best practices for the management and study of social media.

Media and Information Economics
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 dynamics of the digital economy and its implications for businesses and managers. Emphasis on traditional and new media industries, including Internet-based media, mobile communications, social media, and information industries.

Media and Information Technologies in Organizations
Fall. 3(3-0): R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 861
Applications of media and information technologies in business settings. Implications for management of information technologies derived from an examination of effects of media and information technologies from a socio-technical perspective.

Managing Digital Enterprises
Spring. 3(3-0): R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 862
History and current status of e-commerce, e-commerce strategies and approaches, and new directions in e-commerce. Challenges of developing and marketing an online commerce site.

Information and Communication Technology and 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, design and implementation, and critical evaluation of the role of ICTs in development.

841 Understanding Users
Fall. 3(3-0): RB: Direct experience with the creative process in interactive media. R: Open to students in the College of Communication Arts and Sciences or in the Media and Information Major or in the Serious Game Design and Research Certificate or in the Educational Technology Graduate Certificate or approval of department. SA: TC 841
Methods of user-centered research to support game, media and interaction design.

484 Interaction Design
Spring. 3(3-0): RB: MI 841 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.

485 Interactive Usability and Accessibility: Design and Evaluation
Spring. 3(3-0): RB: MI 844 R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 845
Principles and theories of usability and accessibility in interactive media, social and mobile computing, virtual environments and information appliances. Approaches to design and evaluation.

386 Game and Film Design Studio II
Spring. 3(3-0): RB: MI 839 R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. Design principles for the creation of transmedia (games, film, websites, etc.). Design and development studio course focused on the creation of fictional storytelling projects across media projects.

871 Global Media and Communications
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
Comparative and international perspectives on approaches to traditional and new media and their transformations by increased global connectivity. Addresses broadcasting, cable TV, satellite, fixed networks, mobile communications, and the Internet. Political economy of media, economic, institutional and content issues. Interactions and media flows among countries. International governance 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 to graduate students in the Department of Media and Information. Approval of department; application required. SA: TC 890
Individualized study under faculty supervision.

891 Special Topics in Media and Information
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 topics; varied.

893 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.

898 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 graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC 898
Plan B individual project or poster demonstrating master's level professional competence.

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 to graduate students in the Department of Media and Information. Approval of department; application required. SA: TC 899
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 to doctoral students in the College of Communication Arts and Sciences. Qualitative research in mass and specialized communication systems. Topics include documentary, bibliographic, case study and participant observation methods.

921 Theories of Media and Information
Fall. 3(3-0) Interdepartmental with Advertising and Communication Arts and Sciences and Journalism. Administered by Communication Arts and Sciences. R: Open to doctoral students in the College of Communication Arts and Sciences or approval of college. SA: ADV 921 Overview of the relations between information theory, communication theory, and media theory, and an understanding of how these theories have evolved over time and which competing approaches coexist.

960 Media and Technology
Spring. 3(3-0) Interdepartmental with Advertising and Journalism. Administered by Communication Arts and Sciences. A student may earn a maximum of 9 credits in all enrollments for this course. Interdepartmental with Advertising and Communication Arts and Sciences and Journalism. Administered by Communication Arts and Sciences. R: Open to doctoral students in the College of Communication Arts and Sciences or approval of college. Theoretical frameworks concerning media and communication processes, and their interactions with technology. Social, organizational, critical, and economic perspectives.

975 Introductory Methods
Fall. 3(3-0) Interdepartmental with Advertising and Communication Arts and Sciences and Journalism. Administered by Advertising and Communication Arts and Sciences or approval of department. SA: TC 960 A survey of qualitative and quantitative research design including validity and reliability, hypothesis formulation, sampling, ethics, survey, experimental, ethnographic, observational and mixed methods.

985 Advanced Quantitative Analysis for Media
Spring. 3(3-0) Interdepartmental with Advertising and Communication Arts and Sciences and Journalism. Administered by Communication Arts and Sciences. P: ADV 975 RB: Masters-level research course in addition to ADV 975. Multivariate research methods for media and information studies research.