MEDIA AND INFORMATION ΜI

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

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 troubleshooting 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

Exploration of digitization and capture of personal information. Issues of privacy, anonymity, and ownership. Technologies involved in capturing personal in-

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: Ópen 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.

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.

Networks, Markets and Society 302

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 interdependently 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 indi-, viduals. communities and society.

305 **Media and Information Policy**

Fall. 3(3-0) P: MI 201 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 Inter-

320

Reasoning with Data Spring. 3(2-2) P: (MI 220 and MI 250) or CSF 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 Fiction Filmmaking

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 Infor-

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.

Cultural, technological, and design evolution of games. Current and historical game genres, content, audience, and industries for games. Critical examination of empirical research concerning social im-

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 envi-

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 Media and Information or 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.

Evaluating Human-Centered Technology Spring. 3(2-2) P: (MI 220 and MI 250) or 350 CSF 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.

Media and Information Research 355

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.

Media and Information Management 360

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.

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

Cultural, technological, and design evolution of information. Conventional and emerging theories of information processes and effects. Critical examination of empirical research concerning social impacts of media, information technologies, and the internet.

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

Cultural, technological, and design evolution of games. Current and historical genres, content, audience, and industries for games. Conventional and emerging theories of game processes and effects. Critical examination of empirical research concerning social impacts of games.

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 211L or THR 212 or THR 212L or THR 214 or THR 214L or THR 216 or THR 216L

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

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 technical 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

Advanced Game Development 431

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.

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 edit-

Creating the Fiction Film II (W) 435B

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 distri-

Information Technology Project 444 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 sys-

Game Design and Development I 445

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 interaction 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 (V

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 MI491. 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 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

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

MI—Media and Information

831 Theories of Games and Interaction Design

Fall. 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

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 Game and Film Design Studio I

Fall. 3(3-0) R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC

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.

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 Major 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. Iterative cycles of user and product conceptualization.

844 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.

Interactive Usability and Accessibility: Design and Evaluation 845

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.

846 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.

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

Discusses major public and private media and information policies, including Internet governance, and their relevance and implications for businesses, professionals in the field, and users of advanced communications. Applies concepts and data from media and information studies, management, technology. law, and political science.

Understanding and Managing Social 851 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 so-

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

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 861 Organizations

Fall. 3(3-0) R: Open to graduate students in the College of Communication Arts and Sciences or approval of department. SA: TC

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.

862 **Managing Digital Enterprises**

Spring. 3(3-0) RB: MI 861 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.

875 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

877 **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.

Media and Information Internship 893

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 898

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 843, TC

Plan B individual project or poster 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.

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.

Qualitative Research Methods 916

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

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.

Media and Technology 960

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.

975 Introductory Methods
Fall. 3(3-0) Interdepartmental with Advertising and Communication Arts and Sciences and Journalism. Administered by Communication Arts and Sciences.

RB: One graduate-level research design or statistics course. R: Open to doctoral students.

A survey of qualitative and quantitative research design including validity and reliability, hypothesis formation, sampling, ethics, survey, experimental, ethnographic, observational and mixed methods.

985 **Advanced Quantitative Analysis for**

Spring. 3(3-0) Interdepartmental with Advertising and Journalism. Administered by Media and Information. P: ADV 975 RB: Masters-level research course in addition to ADV 975.

Multivariate research methods for media and information studies research.

990 Independent Study

Fall, Spring, Summer. 1 to 3 credits. 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.

Independent research under faculty direction.

991

Ways of Knowing Fall, Spring. 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.

Ways humans acquire, convey, organize and shape knowledge and information, and are shaped and influenced by it. Neurological, psychological linguistic, philosophical, cultural, and logical dimensions of human knowledge.

Doctoral Seminar

Fall, Spring. 3(3-0) A student may earn a maximum of 15 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.

Topics on theoretical and research issues in communication and mass media.

Research Practicum in Information and Media

Fall, Spring, Summer. 1 to 3 credits. 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.

Directed research collaboration with a faculty member or a team of students/faculty.