<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>231</td>
<td>Game and Interactive Media Development</td>
<td>3(2-2)</td>
<td>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 Design Specialization. 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.</td>
</tr>
<tr>
<td>239</td>
<td>Digital Footprints: Privacy and Online Behavior</td>
<td>3(0-0)</td>
<td>Spring. 3(0-0) 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.</td>
</tr>
<tr>
<td>241</td>
<td>Filmmaking I</td>
<td>3(2-2)</td>
<td>Fall. Spring. 3(2-2) P: CAS 112 R: Open to students in the Department of Media and Information. Not open to students with credit in CAS 201 or CAS 202. Process of creating a film product. Basic camera operation, sound capture, the editing process and producing a final product.</td>
</tr>
<tr>
<td>247</td>
<td>Three-Dimensional Graphics and Design</td>
<td>3(2-2)</td>
<td>Fall. Spring. 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. SA: TC 247. 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>
</tr>
<tr>
<td>250</td>
<td>Introduction to Applied Programming</td>
<td>3(2-2)</td>
<td>Fall. Spring. 3(2-2) P: 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.</td>
</tr>
<tr>
<td>291</td>
<td>Special Topics</td>
<td>3(0-0)</td>
<td>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.</td>
</tr>
<tr>
<td>301</td>
<td>Bringing Media to Market</td>
<td>3(0-0)</td>
<td>Spring. Summer. 3(0-0) P: (MI 201 or concurrently) or CAS 114 or BUS 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.</td>
</tr>
<tr>
<td>302</td>
<td>Networks, Markets and Society</td>
<td>3(0-0)</td>
<td>Fall. 3(0-0) 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.</td>
</tr>
<tr>
<td>305</td>
<td>Media and Information Policy</td>
<td>3(0-0)</td>
<td>Fall. 3(0-0) 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 Internet.</td>
</tr>
<tr>
<td>311</td>
<td>Introduction to Documentary Production</td>
<td>3(2-2)</td>
<td>Spring. 3(2-2) P: Interdepartmental with Film Studies and Journalism and Writing, Rhetoric and American Cultures. Administered by Media and Information. P: MI 211 R: Open to students in the Documentary Production Minor. SA: TC 233. Introduction to documentary production using accessible and affordable digital technology.</td>
</tr>
<tr>
<td>320</td>
<td>Reasoning with Data</td>
<td>3(2-2)</td>
<td>Fall. 3(2-2) P: MI 220 and MI 250. 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.</td>
</tr>
<tr>
<td>327</td>
<td>Advanced Concept Design for Games, Film, and TV</td>
<td>2(2)</td>
<td>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 Minor. SA: TC 291. Advanced topics in generating concept art and design for games, films, and animations.</td>
</tr>
<tr>
<td>335</td>
<td>Film Directing</td>
<td>3(1)</td>
<td>Fall. 3(1) Interdepartmental with Film Studies. Administered by Film Studies. P: (FLM 230 or concurrently) and (CAS 112 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.</td>
</tr>
<tr>
<td>337</td>
<td>Compositing and Special Effects</td>
<td>3(0-0)</td>
<td>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) R: 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.</td>
</tr>
</tbody>
</table>
341 Filmmaking II
Fall, Spring, Summer. 3(2-2) P: MI 241 R: Open to students in the Department of Media and Information or in the Documentary Production Minor or in the Fiction Filmmaking Minor. SA: TC 341
Film style planning, techniques, and aesthetic principles for cinema and television production.

342 Multi Camera Production for Television
Fall, Spring, Summer. 3(2-2) P: (MI 241) or (CAS 112 and CAS 201 and CAS 202) R: Open to students in the Department of Media and Information or in the Documentary Production Minor or in the Fiction Filmmaking Minor. SA: TC 342
Conceptualizing, designing, planning, producing, directing and evaluating multi-camera video programs.

343 Audio Production
Fall, Spring, Summer. 3(2-2) P: (MI 241) or (CAS 112 and CAS 201 and CAS 202) R: Open to students in the Department of Media and Information or in the Documentary Production Minor or in the Fiction Filmmaking Minor. SA: TC 343
Basic audio production techniques. In-depth audio and radio industry analysis. Media writing.

344 Sound Design for Cinema, Television, and Games
Spring, Summer. 3(2-2) P: (MI 241) or (CAS 112 and CAS 201 and CAS 202) R: MI 343 R: Open to students in the Department of Media and Information or in the Documentary Production Minor or in the Fiction Filmmaking Minor.
Principles, technology, and techniques of sound design for media projects, including film, games, television, animation, and web.

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) R/B: 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.

350 Evaluating Human-Centered Technology
Spring. 3(2-2) P: MI 220 and MI 250
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.
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Type</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Restrictions</th>
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<tbody>
<tr>
<td>442</td>
<td>Design of Cinema and Television Projects (W)</td>
<td>Fall, Spring, Summer</td>
<td>3-2-2 P</td>
<td>MI 341 and Completion of Tier I Writing Requirement</td>
<td>Open to juniors or seniors or graduate students in the Department of Media and Information or the Documentary Production Minor or in the Fiction Filmmaking Minor. SA: TC 442. Develop TV, video and film projects in a group setting. Practice a full production cycle including idea development, budgeting, pitching, teaser, trailer, production, postproduction, distribution and evaluation. Production case studies, advertising, ethics and worldwide media and job trends.</td>
</tr>
<tr>
<td>443</td>
<td>Audio Industry Design and Management (W)</td>
<td>Fall, Spring, Summer</td>
<td>3-2-2 P</td>
<td>MI 343 and Completion of Tier I Writing Requirement</td>
<td>Open to juniors or seniors or graduate students in the Department of Media and Information. SA: TC 443. Advanced audio production specializing in multi-channel techniques. Industry focus on all aspects of the audio field.</td>
</tr>
<tr>
<td>444</td>
<td>Information Technology Project Management</td>
<td>Spring</td>
<td>3-3-0</td>
<td>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.</td>
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<tr>
<td>445</td>
<td>Game Design and Development I</td>
<td>Fall</td>
<td>3-2-2 P</td>
<td>MI 231 or CSE 331 or CSE 335 or STA 360 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.</td>
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<tr>
<td>447</td>
<td>Graphics and Animation Portfolio (W)</td>
<td>Fall</td>
<td>3-2-2 P</td>
<td>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.</td>
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<tr>
<td>449</td>
<td>Advanced Web Development and Database Management</td>
<td>Spring</td>
<td>3-2-2 P</td>
<td>MI 349 R: Open to students in the Department of Media and Information or in the Department of Computer Science and Engineering. SA: TC 445, 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.</td>
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<tr>
<td>450</td>
<td>Creating Human-Centered Technology (W)</td>
<td>Fall</td>
<td>3-2-2 P</td>
<td>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.</td>
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<tr>
<td>452</td>
<td>Media Entrepreneurship and Business Strategies</td>
<td>Fall</td>
<td>3-3-0 P</td>
<td>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.</td>
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<tr>
<td>455</td>
<td>Game Design and Development II</td>
<td>Spring</td>
<td>3-2-2 P</td>
<td>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.</td>
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<tr>
<td>462</td>
<td>Social Media and Social Computing</td>
<td>Fall</td>
<td>3-2-2 P</td>
<td>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.</td>
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<tr>
<td>472</td>
<td>Digital Business and Commerce</td>
<td>Spring</td>
<td>3-2-2 P</td>
<td>(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.</td>
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<tr>
<td>480</td>
<td>Information and Communication Technologies</td>
<td>Fall</td>
<td>3-3-0</td>
<td>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.</td>
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<tr>
<td>482</td>
<td>Building Virtual Worlds</td>
<td>Spring</td>
<td>3-2-2 P</td>
<td>MI 230 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.</td>
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</tr>
<tr>
<td>484</td>
<td>Building Innovative Interfaces</td>
<td>Fall, Spring</td>
<td>3-2-2 P</td>
<td>MI 231 or MI 250 or CSE 320 or CSE 331 or CSE 335 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.</td>
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<tr>
<td>488</td>
<td>Information and Communication Technology Development Project (W)</td>
<td>Spring</td>
<td>3-2-2 P</td>
<td>MI 231 or MI 250 or CSE 320 or CSE 331 or CSE 335 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.</td>
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<tr>
<td>490</td>
<td>Independent Study</td>
<td>Fall, Spring, Summer</td>
<td>3 to 6 credits</td>
<td>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.</td>
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<tr>
<td>491</td>
<td>Special Topics</td>
<td>Fall</td>
<td>3-2-2 P</td>
<td>MI 301 and MI 307 R: Open to juniors or graduate students in the Department of Media and Information. SA: TC 491. Contemporary issues in media and communication technology.</td>
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<tr>
<td>493</td>
<td>Internship</td>
<td>Fall</td>
<td>3-2-2 P</td>
<td>MI 301 and MI 307 R: Open to juniors or graduate students in the Department of Media and Information. SA: TC 493. Supervised professional experience in a media or information institution, business or facility.</td>
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<tr>
<td>497</td>
<td>Game Design Studio</td>
<td>Fall</td>
<td>3-1-4</td>
<td>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.</td>
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</tr>
<tr>
<td>498</td>
<td>Collaborative Game Design (W)</td>
<td>Spring</td>
<td>3-2-2 P</td>
<td>MI 457 or MI 462 or MI 447 R: Open to students in the Department of Media and Information or 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.</td>
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</table>
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.

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 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 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 839
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.

845 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.

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. SA: TC 846
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 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.

851 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.

852 Media and Information Economics
Spring. 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.

861 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.

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. Adresses 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 master's students in the Department of Media and Information. Approval of department; application required. SA: TC 843, 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
Fall, 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 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 designs including validity and reliability, hypothesis formation, sampling, ethics, survey, experimental, ethnographic, observational and mixed methods.

985 Advanced Quantitative Analysis for Media
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.

992 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.

993 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.