

INTERACTIVE MEDIA (I M)

I M 101 - User Experience Design Orientation (1.0 hour)

Provides an overview of the functions, responsibilities, design thinking, and culture of the User Experience Design discipline.

Prerequisite: User Experience Design major; or consent of Department Chair.

I M 110 - Introduction to Game Development (3.0 hours)

Core Curriculum: QR

An introduction to the process of game development with an emphasis on iterative design.

Prerequisite: Interactive Media Major or consent of Department chair.

I M 111 - Intro to Game Development for Non Majors (3.0 hours)

An introduction to the process of game development with emphasis on iterative design and scripting basics.

I M 113 - Introduction to Interactive Media (3.0 hours)

Tools and aesthetics of media production: word processing, photography, audio production, videography. Visual literacy. The desktop computer interface. Desktop publishing, presentation software, multimedia documents. Internet navigation and page production. Credit by examination available.

I M 120 - Concepting and Storytelling for Interactive Media (3.0 hours)

Process of narrative structure development. Writing, pre-visualization, presentation, and production of animation, game design, and user interface projects.

Prerequisite: Interactive Media Major or consent of Department Chair.

I M 130 - Game Art Fundamentals (3.0 hours)

This course is an introduction to the foundational concepts, tools, and techniques needed to create artwork for video games. Topics include: 3D modeling, Digital Sculpting, creating textures and materials, and how to present digital artwork.

Prerequisite: Game Art major; or permission from Department Chairperson

I M 140 - Storytelling for Animation (3.0 hours)

Process of narrative structures development, storyboarding techniques, and the digital tools and applications necessary for the creation of animation. Writings, pre-visualization, presentation, and pre-production for many different types of media.

Prerequisite: Animation major, User Experience Design major, or consent of Department chair

I M 141 - Principles of Animation (3.0 hours)

Introduction to the twelve principles and techniques of animation.

Projects will vary from hand-made to computer-computer made forms.

Prerequisite: Animation major, User Experience Design major, or consent of Department chair

I M 150 - Fundamentals of Interactive Design (3.0 hours)

Principles of design for digital devices. Emphasis is on user interfaces and experiences.

Prerequisite: Animation, Game Art, Game Design, Interactive Media, or User Experience Design major; Game Design minor; or consent of Department Chair.

I M 160 - Introduction to Scripting for Games (3.0 hours)

Introduction to scripting languages and their application in creating games.

Prerequisite: Game Design Major; or consent of Department Chair

I M 161 - Intro to Web Design (3.0 hours)

Front-end development techniques and practices for website user interfaces and experiences. The course will be taught through lectures, demonstrations, and exercises using applications and scripting languages.

Prerequisite: User Experience major or minor; or consent of Department Chair

I M 162 - Intro to Scripting for Animators (3.0 hours)

Core Curriculum: QR

Introduction to the use of various scripting languages in different animation software environments.

Prerequisite: Animation Major, I M 141, I M 150; or consent of Department chair.

I M 175 - Game Project Management I (3.0 hours)

Game project management and software development from a leadership perspective. Use of industry leading project management tools.

Prerequisite: Sophomore standing, Animation, Game Art, Game Design, or User Experience Design major, or consent of Department Chair.

I M 180 - Survey of Games (3.0 hours)

This course establishes a baseline for game discourse through lectures on play histories, genres, and mechanics, and by direct engagement with a number of types of games including tabletop and video games.

Prerequisite: Game Design major; or consent of Department Chair.

I M 191 - Comics Appreciation (3.0 hours)

Core Curriculum: MI

This course investigates the history of comics, their formal characteristics, and their contributions as vital expressions of humanity and culture.

I M 226 - Interactive Media Practicum I (0.0-1.0 hours)

Presentations by faculty, alumni, and other professionals in the field allow students to make connections serving their academic and professional pursuits. Students will also engage in additional career development activities including portfolio creation, resumé authoring, career research, networking, and engagement in public festivals and presentations of their works. Repeatable for up to a maximum of 8 credit hours. Crosslisted with I M 426.

Prerequisite: Freshman/Sophomore Status, Animation major or Game Art major or Game Design major or Interactive Media major, or User Experience Design major; or consent of Department Chair.

I M 230 - Game Art Development (3.0 hours)

Building on the foundational skills developed in IM 130 Game Art Fundamentals, this course is an exploration into more advanced concepts, tools, and techniques needed to create optimized and visually appealing artwork for video games. Topics include: asset creation for game engines, art workflows and pipelines, art styles in games, and asset optimization.

Prerequisite: Game Art major, IM 130; or consent of Department Chair

I M 233 - 2D for Game Art (3.0 hours)

This course is an introduction to the foundational concepts, tools, and techniques needed to create 2D artwork for video games. Topics include: digital painting for concept art, 2D asset creation for game engines, sprite design and animation, and matte painting.

Prerequisite: Game Art major; or consent of the Department Chair.

I M 235 - Environment Art (3.0 hours)

Expanding on skills developed in IM 230 Game Art Development, this course will be an artistic and technical exploration in the requirements necessary for designing and developing environments for real-time engines. Topics include: concepting for environments, Modular kit construction, kitbashing, photogrammetry, procedural texturing, environment VFX and terrain generation.

Prerequisite: IM 230, IM 233; or consent of the Department Chair.

I M 238 - Anatomy for Digital Artists (3.0 hours)

This course is an introduction to the concepts, tools, and techniques needed to sculpt human anatomy in a digital environment. Topics include: Digital Sculpting in ZBrush, Human anatomy, and creating dynamic poses.

Prerequisite: I M 110 or I M 140, ART 101; or consent of Department chair.

I M 240 - Two-Dimensional Animation I (3.0 hours)

Art and techniques of computer-based 2D animation, motion graphics, and compositing. Study of various digital animation techniques using multiple applications

Prerequisite: Animation Major, I M 141 and I M 150; or consent of Department Chair.

I M 243 - History of Animation (3.0 hours)

Study of the historical, cultural, economic, political, and social forces that helped shape the evolution of animation as an art form. Written and oral discussions focused on the attitudes and influences of race, gender, technology, culture, and the conflict between art and industry.

Prerequisite: Animation Major; or consent of I M Department Chair.

I M 260 - User Interface Design & Development (3.0 hours)

Fundamental principles and practices of user interface design and data visualization. Emphasis on the design of 2D graphical user interfaces and the development of applications that use them.

Prerequisite: User Experience Design major or minor, IM 161; or consent of the Department Chair.

I M 261 - User Research & Usability (3.0 hours)

Core Curriculum: WI

Introduction to user-centered design based upon usability research and testing. Topics include defining audiences, heuristic evaluations, and effective reporting.

Prerequisite: User Experience Design major or minor, IM 260; or consent of the Department Chair.

I M 285 - Introduction to Video for Interactive Media (3.0 hours)

Fundamental principles and practices of professional video cameras, microphones, and lights for multimedia production. Interviewing procedures plus aesthetics and visuals. Non-linear editing.

Prerequisite: IM 110 or IM 113, sophomore standing; or consent of Department Chair.

I M 287 - Game Development I (3.0 hours)

Introduction to additional game production tools and game engines. Game production lifecycle, workflow pipeline, group dynamics, and communication skills will all be major components of the course.

Prerequisite: I M 110, I M 160

I M 288 - Game Design I (3.0 hours)

Core Curriculum: WI

Gameplay, storytelling, challenges, interface and information design, and world interaction. Construction of experiences, including rule design, play mechanics, game balancing, social game interaction, and the integration of interactive media. Playtesting and game design documentation.

Prerequisite: Game Design Major, IM 180; or Game Design Minor, IM 113, IM 150; or consent of Department Chair.

I M 289 - Game Production I (3.0 hours)

Interactive game production using advanced development tools.

Game production lifecycle and workflow pipeline. Group dynamics and communication skills. Integration and Design and development documentation.

Prerequisite: Game Design Major, I M 160, IM 288; or Game Production Minor, IM 113, CS 101, CS 102; or consent of Department Chair.

I M 330 - Game Art for Non-Majors (3.0 hours)

This course provides insight into the process of creating game art for non-game art majors. Topics include digital painting for concept art, asset creation for game engines, art workflows/ pipelines, and how to present digital artwork.

Prerequisite: Sophomore standing; Animation, Game Design, Interactive Media, or User Experience Design Major or consent of Department Chair

I M 331 - Real-Time Visualization (3.0 hours)

This course provides an in-depth exploration of creating real-time visualizations using game engine technology. Students will gain hands-on experience with visual scripting tools and develop intractable experiences. This course emphasizes the creation of visually stunning experiences through advanced material blueprints, UI elements, and real-time lighting techniques.

Prerequisite: I M 110, or I M 130, or I M 330, or consent of Department Chair.

I M 332 - Real-Time VFX (3.0 hours)

This course provides an in-depth exploration of real-time visual effects (VFX) creation, focusing on the core concepts, workflows, and techniques necessary for producing dynamic, interactive VFX in a real-time environment. Students will learn how to design and implement particle systems, fluid simulations, and other effects that respond to user input and game mechanics. Emphasis is placed on developing visually compelling experiences through advanced VFX principles, while maintaining performance optimization and scalability.

Prerequisite: I M 110, or I M 130, or I M 330, or consent of Department Chair.

I M 333 - Character Art (3.0 hours)

Expanding on skills developed in IM230 Game Art Development, this course will be an artistic and technical exploration in the requirements necessary for designing and developing characters for real-time engines. Topics include: concepting for character art, sculpting anatomy, character rigging and animation, and character VFX.

Prerequisite: IM 235; or consent of the Department Chair.

I M 334 - Level Design (3.0 hours)

This course provides an in-depth exploration of level design, focusing on the key concepts, workflows, and techniques used to create engaging, interactive environments for games and other real-time applications. Students will learn how to design levels that balance gameplay mechanics, narrative elements, and player experience. Emphasis is placed on spatial design, environmental storytelling, and the iterative design process to create immersive, functional game worlds.

Prerequisite: I M 110, or I M 130, or I M 330, or consent of Department Chair.

I M 335 - Advanced Game Art (3.0 hours)

This course will explore a variety of the latest tools and techniques relevant to game art, also, there will be a focus on digital portfolio and reel development. Topics include: advanced tools and techniques in game art, Portfolio development, communication skills, industry networking opportunities, business cards, cover letters, and resumes.

Prerequisite: Game Art major, IM 235, IM 333; or consent of the Department Chair.

I M 340 - Three-Dimensional Animation I (3.0 hours)

Fundamental principles of three-dimensional computer animation and modeling. Creation of basic models using polygonal modeling, texturing, lighting, and rendering for various animation projects.

Prerequisite: Animation Major, I M 162, I M 241; or consent of Department chair

I M 341 - Three-Dimensional Animation II (3.0 hours)

Further explorations of the art and techniques of 3D computer animation. Emphasis on traditional principles of animation in addition to camera manipulation, rigging, and character animation core mechanics including walk cycles, expressions, and lip sync.

Prerequisite: Animation Major, I M 340; or consent of Department chair

I M 342 - Three-Dimensional Animation III (3.0 hours)

This course will equip students with the means to combat personal inhibitions involving acting. It will also provide skills in motion capture acquisition and usage, nonlinear animation workflows, and a greater understanding of body mechanics. Learning will occur in team-based projects, critiques, and lectures.

Prerequisite: Animation Major, I M 341; or consent of Department chair

I M 344 - Environmental Storytelling (3.0 hours)

Core Curriculum: EL

This course covers the basics of environmental storytelling, visual narrative, creation of a cohesive world, intuitive player communication, emotional level design, and immersive player education as well as identification of and analysis of the same in existing media.

I M 345 - Two-Dimensional Animation II (3.0 hours)

Art and techniques of computer-based 2D animation. Study of various digital animation techniques using multiple applications

Prerequisite: Animation major, I M 340; or consent of Department chair

I M 346 - Two-Dimensional Animation III (3.0 hours)

Advanced study of two-dimensional animation, utilizing a variety of techniques and software packages.

Prerequisite: Animation Major, I M 345, or consent of Department Chair

I M 347 - Experimental Animation (3.0 hours)

Animation projects made from an artistic point of view. Students will engage in wide variety of techniques and mediums to make movie images which may be narrative or non-narrative.

Prerequisite: IM 341 or IM 345; or consent of Department chair

I M 348 - Hand Drawn Animation (3.0 hours)

Art and techniques of hand-drawn animation. Immersion in a variety of techniques exploring founding principles of animation, storytelling, drawing, and design

Prerequisite: Animation Major, Sophomore standing, or consent of Department chair

I M 349 - Pre-Production for Animation (3.0 hours)

Initial planning for the production of an animated short film including storyboarding, concept art, script development, color scripts, research, and development.

Prerequisite: IM 341 or IM 345; or consent of Department chair

I M 355 - Interactive Media Theories, Concepts, and Practices (3.0 hours)

Core Curriculum: WI

Examines scholarly concepts, theories, and practices about human communication, mass media, and computational digital technologies. Develops conceptual foundations derived from the cultural and commercial dimensions of media histories, technological innovation, professional practice, and contemporary/everyday phenomena. Provides increased and improved technical vocabularies and develops students' critical examinations of taken-for-granted media phenomena. Posits informed speculations concerning the future of media with particular attention to the roles of citizens, consumers, and producers. Applies intensive writing skills combining reading, study, and discussion with analysis and thinking via diverse written assignments.

Prerequisite: IM 110, IM 120 and 36 earned credit hours; or consent of Department Chair.

I M 360 - Advanced Interaction Design (3.0 hours)

Advanced and experimental interaction design strategies as applied to web & mobile/responsive application development.

Prerequisite: IM 110, IM 160, IM 120, IM 150, IM 260, IM 261, PSY 205 or MTH 111 or equiv; or consent of Department chair.

I M 361 - Advanced User Experience Design (3.0 hours)

Studio course focused on further developing core skills of UX design, information and visual/communications design, and advanced wireframing techniques.

Prerequisite: User Experience Design major, IM 261; or consent of the Department Chair.

I M 363 - Topics in User Experience (3.0 hours)

Focuses on the innovative and pioneering tools, techniques, and methodologies used in designing user experiences. This course teaches the best practices and principles of human/computer interaction.

Prerequisite: User Experience major, I M 110, I M 120, I M 150, I M 161, I M 260 or consent of Department Chair.

I M 365 - Web Design (3.0 hours)

A studio course exploring typography and visual layout principles of interactive website design. Survey of theory, history, and methods of web design solutions. Discussion of transitional strategies in response to developing technologies. Cross-listed as ART 365.

Prerequisite: IM 113, ART 105, ART 205; or consent of instructor.

I M 366 - Advanced Web Design (3.0 hours)

Development techniques and practices for websites and mobile application user interfaces and experiences. The course will be taught through lectures, demonstrations, and exercises using applications and scripting languages.

Prerequisite: User Experience Design major or minor, IM 361; or consent of the Department Chair.

I M 380 - Critical Game Studies (3.0 hours)

Criticism, analysis, and history of electronic and non-electronic games. Articulation of game aesthetics. History of computers and digital games and toys, construction and critique of significant and influential games, and game criticism and journalism.

Prerequisite: ENG101, IM 180, Game Design Major; or consent of Department Chair.

I M 387 - Game Development II (3.0 hours)

Advanced game development tools and game engines. Emphasis on latest technologies available for video game creation as well as industry standard knowledge share practices.

Prerequisite: I M 287

I M 388 - Game Design II (3.0 hours)

Advanced game design with an emphasis on prototyping for video games.

Prerequisite: Junior standing. Game Design Major, IM 288, IM 289; or Game Design Minor, IM 288; or consent of Department chair.

I M 389 - Game Production II (3.0 hours)

Application of Interactive game production techniques. Emphasis on refining and developing art, sound, and game mechanics as well as marketing and game release.

Prerequisite: Game Design major, IM 388; or Game Art major, IM 235; or Game Production Minor, IM 289; or consent of Department chair.

I M 426 - Interactive Media Practicum II (0.0-1.0 hours)

Course is repeatable for up to a maximum of 8 credit hours. Crosslisted with I M 226.

Prerequisite: Animation, Game Art, Game Design, Interactive Media, or User Experience Design major; Game Design, Game Production, or User Experience Design Minor; or consent of Department Chair.

I M 440 - Animation Capstone I (3.0 hours)

Core Curriculum: EL

Advanced pre-production techniques used in the creation of an original animated short. Narrative structure development, research, conceiving, time management, and technique development.

Prerequisite: Animation Major, I M 347 or I M 240; or consent from department chair.

I M 441 - Animation Capstone II (6.0 hours)

Core Curriculum: EL

Advanced production processes and techniques for creating an original animated short.

Prerequisite: Animation Major, I M 440; or consent of Department chair

I M 450 - Critical Issues in Interactive Media (3.0 hours)

Core Curriculum: WI

Topics course, with varying subjects, examining contemporary issues and problems in new media theory and the interactive media environment.

Current topic/title in current schedule of classes. May be repeated three times under different topics.

Prerequisite: Junior standing and Animation, Game Art, Game Design, Interactive Media, or User Experience Design major; or consent of the Department Chair.

I M 452 - Computer Game Modification (3.0 hours)

Software development and programming aspects of computer games, game engine modification, and virtual reality simulations, including event loops, execution threads, collision detection, multi-threading, performance analysis, multi-user games and networking. Cross-listed with IM 552, CIS 452, CIS 552.

Prerequisite: junior standing, CS 101, CS 102, CS 140; or consent of instructor.

I M 455 - Computer Graphics (3.0 hours)

Introduction to the theory and implementation of computer graphics with 2D and 3D applications in computer gaming, including 2D and 3D graphic primitives and objects, OpenGL, geometric transformations, image synthesis, rendering and lighting, and virtual environments. Cross-listed with IM 555, CIS 455, CIS 555.

Prerequisite: junior standing; CS 101, CS 102, CS 140; or consent of instructor.

I M 456 - Game Engine Programming (3.0 hours)

Advanced techniques and technologies for programming computer game engines, multi-user games, virtual environments, and virtual reality simulations. Cross listed with IM 556, CIS 456, CIS 556.

Prerequisite: junior standing, CIS 452, CIS 455; or consent of instructor.

I M 458 - Sound Design (3.0 hours)

Theoretical and practical sound design. Music composition, field sound recording, studio tracking, aesthetic analysis of music, electronic sound generation. Digital game technologies, 3D sound processing and generative audio structures. Mixing in non-linear environments and final mastering. Cross-listed with IM558, CIS458, CIS558.

Prerequisite: Junior standing; Animation, Game Art, Game Design, Interactive Media, or User Experience Design Major; or consent of Department Chair

I M 459 - Game Capstone Project I (3.0 hours)

Core Curriculum: EL,MI

Game development within multi-disciplinary teams. Project work includes advanced game design, software development, art asset creation, and game production concepts. Cross-listed with IM 559, CIS 459, CIS 559.

Prerequisite: I M 389, Game Design or Game Art major or Game Design minor or Game Production minor; or completion of all other coursework in computer game technology minor or concentration; or consent of Department Chair

I M 460 - User Experience Design Capstone 1 (3.0 hours)

Core Curriculum: EL

Research and exploration of traditional and non-traditional human-computer interaction. Students study, plan, design, and produce applications that seek out new or refine current trends in interactivity.

Prerequisite: User Experience Design major, IM 366; or consent of the Department Chair.

I M 461 - User Experience Design Capstone 2 (6.0 hours)

Core Curriculum: EL

The second in a two-part User Experience Design capstone course where students build, test, and release the interactive designed in User Experience Design Capstone 1. Agile methodologies and a tight feedback loop will be used to ensure a user-centered experience. Students will present their work in the Interactive Media showcase.

Prerequisite: User Experience Design major, IM 460; or consent of the Department Chair.

I M 475 - Game Project Management II (3.0 hours)

Advanced course dedicated to the process of producing game projects.

Advanced use of industry leading project management tools.

Prerequisite: Junior standing, Animation, Game Art, Game Design, or User Experience Design major, I M 175; or consent of Department Chair.

I M 488 - Prototyping for Capstone (3.0 hours)

Concepting and prototyping of games that might be fully realized in IM 459 Computer Game Capstone Project and IM 489 Advanced Game Capstone.

Prerequisite: Game Design major, IM 389; or consent of the Department Chair.

I M 489 - Game Capstone Project II (6.0 hours)

Core Curriculum: EL

A continuation of the project began in IM 459 Game Capstone Project I with an emphasis on the production and post-production phases of game development.

Prerequisite: IM 459, Game Design major or Game Art major or Game Production Minor; or consent of Department Chair.

I M 490 - Independent Study (3.0 hours)

Individual scholarly research or advanced creative production investigating aspects of interactive media. May be repeated under different topics for a maximum of six hours. Requires application available from department chair or faculty.

Prerequisite: Junior standing and consent of department chair and faculty member.

I M 491 - Special Topics in Interactive Media (1.0-4.0 hours)

Topics of special interest which may vary each time course is offered. May be repeated under different topics. Topic and prerequisites stated in current Schedule of Classes.

Prerequisite: Sophomore standing, 9 hours of Interactive Media courses.

I M 499 - Exhibit Production (0.0-3.0 hours)

Core Curriculum: EL

This course covers the development of interactive projects for exhibition as well as the preparation and execution of exhibition events.

Prerequisite: Permission of instructor or department chair.

I M 526 - Practicum (0.0-2.0 hours)

Presentations by faculty, alumni, and other professionals in the field.

Repeatable to a maximum of 2 credits.

Prerequisite: Graduate standing in the Game Design & Development program

I M 580 - Game Seminar (0.0-6.0 hours)

An exploration of issues and contemporary critical approaches to games through study and discussion. Topics might include feminism, semiotics, cultural criticism, and poststructuralism. Repeatable to a maximum of 6 credits.

Prerequisite: Graduate standing in the Game Design & Development program

I M 588 - Game Prototyping & Pre-Production (3.0-6.0 hours)

Brainstorming, concepting and prototyping of core gameplay concepts followed by a proof of concept stage fleshing out the core gameplay.

Repeatable to a maximum of 12 credits.

Prerequisite: Graduate standing in the Game Design & Development program

I M 589 - Game Production (3.0-6.0 hours)

Game development within a multidisciplinary team. Project work includes advanced game design, scope control and reduction, software development, art asset creation, and game production concepts.

Repeatable to a maximum of 12 credits.

Prerequisite: Graduate standing in the Game Design & Development program

I M 590 - Game Post-Production (3.0-6.0 hours)

Post production development and publication within a multidisciplinary team. Project work includes final asset integration, testing best practices, change management and final publication. Repeatable to a maximum of 12 credits.

Prerequisite: Graduate standing in the Game Design & Development program