

# INTERACTIVE MEDIA

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The Interactive Media Department offers a complete curricular experience in critical understanding and effective design and development of interactive products.

The M.F.A. in Interactive Media program requires that students complete a minimum of 45 credit hours at the graduate level with an average of "B" and no grade lower than a "C-". Prior written approval is required from the chair of the CIM department for transfer of credit hours, for course substitutions, as well as for taking a course at another university.

Interactive Media students are required to register for a capstone project seminar. To register for this course, students must complete all courses with a standing of a 3.0 GPA. The capstone course is designed to help students define and execute their final projects. To graduate, students must complete and present a fully articulated capstone project and related documentation. Students must complete all degree requirements within 6 years.

M.F.A. in Interactive Media (<http://bulletin.miami.edu/graduate-academic-programs/communication/interactive-media/interactive-media-mfa/>)

## **CIM 601. Prototyping Techniques. 3 Credit Hours.**

This course covers accepted prototyping techniques introducing students to a wide variety of approaches for different kinds of user experience design problems and platforms. Students will learn to develop preliminary iteration of a solution to a design problem in order to communicate the essence of their idea without committing to a costly implementation.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall.

## **CIM 602. Designing Innovation. 3 Credit Hours.**

In this course you will be introduced to and will apply human centered design techniques and systems thinking to achieve goal-directed design of interactive systems. Students will work in small teams to iteratively generate and refine design concepts and to thoroughly document their design process.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall.

## **CIM 603. Intro to Creative Coding. 3 Credit Hours.**

This course will introduce students to the building blocks of creative coding within the visual and media environment. Students will learn to create dynamic images, type and interfaces, that can translate into web, mobile and print forms. Students will learn programming fundamentals that translate in virtually all programming platforms.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall.

## **CIM 604. Advanced Systems: Designing Playful Experiences. 3 Credit Hours.**

Students will analyze and design games to gain vocabulary and tools to design playful interactive systems. Students will be exposed to a range of popular game prototyping technologies and will create several mini-projects as well as one final game project created using the platform of their choice.

**Components:** STU.

**Grading:** GRD.

**Typically Offered:** Fall.

## **CIM 605. Technology Trends. 3 Credit Hours.**

This is a foundation course intended to promote a dialogue about the current state of business, art, health, culture, and innovation.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

## **CIM 612. Human Computer Interaction. 3 Credit Hours.**

This course will teach students about the importance human computer interaction (HCI) in the design, implementation, and evaluation of interactive computing systems for human use. The course will provide both practical application and theoretical knowledge of HCI, with practical concerns balanced by discussion of relevant theory from the literature of computer science, human factors, and interaction design.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall.

**CIM 613. Mobile Application Development. 3 Credit Hours.**

This course will provide students the ability to conceptualize, design, and develop a mobile application of their choosing. It covers various approaches to the development of mobile software applications using current development environments, frameworks, and programming paradigms. This course focuses on hands-on learning through which students practice with programming assignments and demonstrate the apps through virtual simulators and physical mobile devices.

Prerequisite: CIM 603.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**CIM 615. Interactive Media Business Essentials. 3 Credit Hours.**

This course takes a comprehensive look at managing interactive media projects from inception to implementation and maintenance.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**CIM 618. Internet and Media Activism. 3 Credit Hours.**

In this course, students will examine the role of media in shaping social reform to document social issues such as poverty, human rights, social inequities, the environment, and powerless groups. We will review the philosophy and history of media as activism ranging from photography, documentary, cinema, the Internet, social media and newer forms of media. Emphasis is placed on developing a critical understanding of current media advocacy practices with a conscious goal; awareness, change minds, to affect policy, and action. At the end of the semester, students will have a fully developed project concept.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**CIM 622. Human Centered Design. 3 Credit Hours.**

This course takes a comprehensive look at human limitations and abilities and how they are key to interaction design and a great user experience. Students will learn about human behavior and how to apply UX gridlines to the design of digital interfaces. Students will also learn how to produce design deliverables for real world practice.

Prerequisite: CIM 601.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**CIM 623. Building Virtual Worlds. 3 Credit Hours.**

The purpose of this course is to explore the construction of virtual environments. Students will learn the principles of constructing interactive 3D environments using a game engine. Students will be responsible for creating a world that can be interacted with on various platforms, including virtual and mixed reality.

Prerequisite: CIM 603 Or CSC 120 Or ECE 118.

**Components:** LAB.

**Grading:** GRD.

**Typically Offered:** Spring.

**CIM 631. Collaborative Innovation Laboratory. 3 Credit Hours.**

In this collaboration studio course, students will form small teams and undertake real-world projects with a partnering organization. Students will be provided a design brief outlining project objectives identified by the partnering organization. Over the course of the semester, students will research, brainstorm, design, and test innovative interactive solutions for this core objective, including proposing ideas and presenting prototypes to the partnering organization. Projects that satisfy the partner's needs may result in on-going work for full implementation and exposure for students' work.

Prerequisite: CIM 601 and CIM 203 and CIM 602 and CIM 603.

**Components:** STU.

**Grading:** GRD.

**Typically Offered:** Fall.

**CIM 633. Augmented Reality. 3 Credit Hours.**

This course will provide students the ability to design and develop augmented reality apps. It covers various approaches to designing and programming augmented reality apps using the latest technologies and devices. Students will be given hands-on programming assignments and learn about the key advantages in each of the approaches via in-class discussions.

Prerequisite: CIM 603 Or CSC 120 Or ECE 118.

**Components:** LAB.

**Grading:** GRD.

**Typically Offered:** Spring.

**CIM 643. Front End Fundamentals. 3 Credit Hours.**

This course focuses on the job-ready skills and production workflow techniques in highest demand for front end web developers. Students will learn, practice and demonstrate the skills and principles needed to make effective use of these technologies.

Prerequisite: CIM 601.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**CIM 644. Designing Games for Impact. 3 Credit Hours.**

In this course students will explore the use of games as a communication tool for social good and will study, play, and also begin designing game-based interventions with the goal of promoting positive social change in areas such as environment, health, or social justice. Students will play existing social impact and other relevant games and will analyze them in order to conceptualize and design their own game concepts, either individually or in small teams. Students should come ready to actively participate in this seminar-size class.

**Components:** STU.

**Grading:** GRD.

**Typically Offered:** Fall.

**CIM 653. Dynamic Data. 3 Credit Hours.**

This course teaches data analysis through the development of interactive web applications. The course focuses on communicating through computer programming. Students will learn to build and use databases as a primary source and explore data as content. For this course students will be required to build custom software solutions through web programming languages that utilize third party APIs to interpret, analyze and manipulate data.

Prerequisite: CIM 601.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall.

**CIM 658. 360° Immersive Filmmaking and Storytelling. 3 Credit Hours.**

A hands-on course dedicated to design and produce VR/360° immersive video. Through a wide selection of materials, including videos, 360° films, articles, and presentations, students will develop a strong foundation on storytelling techniques, technologies (cameras, microphones, VR headsets, software), and best practices used across immersive media.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall & Spring.

**CIM 663. Design with AI. 3 Credit Hours.**

This course will provide students with the ability to understand the purpose, strengths and limitations of artificial intelligence (AI) technologies in order to design smart applications for everyday use. It covers topics including state-of-the-art AI technologies and the design principles for developing applications with such technologies. Issues such as ethics, bias, accountability, and privacy in these applications will also be discussed.

Prerequisite: CIM 603.

**Components:** LAB.

**Grading:** GRD.

**Typically Offered:** Fall & Spring.

**CIM 664. Video Game Spectatorship and Esports. 3 Credit Hours.**

This course covers the historical and contemporary practices of game spectatorship, journalism, and Esports. It teaches the industry and best practices used in sharing video games through traditional media, streaming services, and Esports.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**CIM 669. Internship in Interactive Media. 1-3 Credit Hours.**

The internship is designed to provide valuable career-related work experience in a real - world setting, e.g., institutions, organizations and/or businesses. Students will identify an opportunity, supervisor, and write a proposal as to the relevancy to their goals. The Internship may be paid or unpaid.

Requisite: Sophomore Status, Cumulative GPA 2.5.

**Components:** IND.

**Grading:** GRD.

**Typically Offered:** Fall, Spring, & Summer.

**CIM 674. 2D Character Design. 3 Credit Hours.**

This is a comprehensive course devoted to the development of skills in creating characters for 2D animation and games. Students will develop an understanding of how shape language relates to the characters personality through the creation of weekly exercises. The course will be delivered in the form of studio projects, individual and class critiques, lectures, discussions, workshops and readings.

**Components:** LAB.

**Grading:** GRD.

**Typically Offered:** Spring.

**CIM 679. Practicum in Interactive Media. 1-3 Credit Hours.**

Students will engage in the applied practice of Interactive Media to enhance classroom learning and provide opportunities to gain practical experience. The practicum course offers supervised activity in which interactive graduate students advance their skills and acquire professional experience by working on research and creative projects for various organizations.

**Components:** THI.

**Grading:** GRD.

**Typically Offered:** Fall & Spring.

**CIM 682. UX Research. 3 Credit Hours.**

The course provides a comprehensive overview of User Experience research methods and how they are incorporated into the product development lifecycle. Students will learn about user-centered design and will conduct a wide range of research methods including ethnography, questionnaires, online studies, and usability testing. There will be considerable focus on practicing research skills and reporting findings from these activities.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**CIM 683. Physical Computing. 3 Credit Hours.**

This course explores how to build a bridge between the physical and digital world. Students will learn to develop software and hardware to sense and respond to physical interaction. Through various projects, students will learn how to program sensors and other electronic components to convert the human senses into creative inputs and outputs, such as lights, sounds, and movement. Students will learn the ideation and design process through challenges presented in their assignments and personal projects. In this course students will also learn how to design for and use various digital fabrication tools, such as 3D printing, laser and paper cutting, and CNC milling. Students will have access to work hands on with these fabrication tools to enhance and build their prototypes.

Prerequisite: CIM 603.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**CIM 689. Special Topics in Interactive Media. 3 Credit Hours.**

This course is designed to keep up with the fast-changing world of interactive media allowing for contemporary classes to be periodically added to the curriculum. Special topics classes will be added to the Interactive Media curriculum as electives.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**CIM 694. Game Development Studio. 3 Credit Hours.**

Game Dev Studio is a project-based course devoted to developing a game. In groups, students will start with a concept and create prototypes that will be refined through multiple iterations and playtests. Your final game will either be a well-polished 2D or 3D digital game.

**Components:** STU.

**Grading:** GRD.

**Typically Offered:** Fall.

**CIM 699. Advanced Projects and Directed Research. 1-6 Credit Hours.**

Individual study, involving a project, paper or a program of research designed in consultation with a supervising faculty member. No more than six credits may be counted toward the degree.

**Components:** THI.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**CIM 701. Capstone. 3 Credit Hours.**

The capstone seminar is designed to demonstrate a student's accumulated training in Interactive Media in a single original project of their choice, subject to the instructor's approval and under the additional supervision of a faculty mentor.

Prerequisite: CIM 602 and CIM 603 and CIM 601 and CIM 615 and CIM 631.

**Components:** STU.

**Grading:** GRD.

**Typically Offered:** Spring.