Digital Media and Design (DMD)

dmd.uconn.edu

5000. Creative Digital Fundamentals

Three credits. Online course. Prerequisite: Open to graduate students in the Digital Media and Design online graduate certificate program or non-degree graduate students; not open to full-time Digital Media and Design graduate students; instructor consent required.

Introduces core concepts for developing skills to create and implement digital graphics utilizing a combination of techniques and effects working with the applications: Photoshop, PowerPoint, After Effects and Premiere. Acquisition of these skills will prepare students to create their own animated promotional videos, edit raw video, manipulate graphic elements for posting to websites, the production of infographics and for insertion of digital elements into PowerPoint presentations.

5001. Digital Media Graduate Colloquium

Three credits. Prerequisite: Open only to Digital Media and Design graduate students.

This course orients Digital Media and Design graduate students in their first semester to the opportunities and resources available to them within the Department, the School of Fine Arts, and the University of Connecticut.

5010. Digital Culture

Three credits. Prerequisite: Instructor consent.

Development and use of digital media and technology in different social and cultural contexts. Digital technology is treated as a cultural construct, the characteristics and impact of which are analyzed through social science theories of the interplay between technology and society. Ethnographies of digital media used in different parts of the world and in different digital environments will be used to examine issues such as culture, identity and social networks. Examination of different ethnographic research methods for digital anthropology.

5015. MFA Studio Critique

Three credits. Prerequisite: Open only to Digital Media and Design graduate students. May be repeated for a total of 12 credits.

Directed studio research and analysis, group discussions, and related readings connecting current studio work to contemporary trends in digital media, art, and design.

5020. Design Thinking

Three credits. Prerequisite: Instructor consent.

Exploration of the nature of design thinking about how a process that employs immersion, empathy, ideation, definition, prototyping and testing can lead to innovative discovery. We will explore the ways in which diversity of culture, experience and thought lead to innovation while examining the value of a human based design process on the growth and direction of culture and society at large and how can we as designers participate in driving that process.

5021. Design Lab

Three credits. Prerequisite: Open only to Digital Media and Design graduate students; instructor consent required.

The theory, principles and practices of digital screen-based visual communication. Through a multi-disciplinary perspective involving art, design, art history, and media studies, students will address how culture visualizes screen-based communication through both image and type.

5025. Portfolio and Professional Development - Putting It All Together

Two credits. Prerequisite: Instructor consent.

Preparation for the transition to work by developing a professional grade portfolio, website, social media presence and communications collateral and skills. Intended for advanced students.

5030. Narrative Workshop

Three credits. Prerequisite: Instructor consent.

Designed for students to "workshop" their own narratives and works-in-progress for animation, short/long films, commercial media, interactive media, game creation, graphic novels, and short or long form pieces of writing (novels, children's books, short stories, etc.). Open forum/roundtable where students can bring pieces of writing or media into the class and share with other students, using each other as editors, collaborators, ideators while incorporating guest artists, writers, scientists and media makers to visit, help critique and weigh in on how their work and process has evolved given the cultural shift from printed page to e-readers, apps and the invention of viral marketing or internet video shorts, for example.

5035. Interaction Design

Three credits. Prerequisite: DMD 5070; open only to Digital Media and Design graduate students; instructor consent required.

Provides a critical overview of interaction design (including usability, evaluation, and cultural aspects) and a practical program of website and computer software interface creation.

5040. UConn Student Agency

Three credits. Prerequisite: Instructor consent. May be repeated for a total of nine credits.

Exposes students to and builds an understanding of the principles necessary to communicate the essence of a commercial brand through the ideation and creation of digital and social media structures and artifacts. Based on the principles of experiential learning promoting effective ideation, development, production, and implementation of digital and social media marketing strategies and artifacts.

5070. Introduction to Web Design

Three credits. Prerequisite: Instructor consent.

Survey of the concepts and methodologies of Web design. Introduction to the key concepts of Web design and development as well as the software that facilitates it. No prior experience in Web design is necessary, but students must be willing to embrace a new perspective on the design process as it pertains to the creation of functioning, interactive sites. Both technically and conceptually demanding. Will require, in addition to design time, many hours of self-initiated software exploration. Comprised of a series of exercises and projects beginning with basic HTML and increasing in complexity to include multiple pages sites using CSS and simple scripting.

5075. MFA Final Project

Three credits. Prerequisite: Instructor consent. To be taken twice in two consecutive semesters in the student's final year. To fulfill the graduation requirement for MFA, students must pass with a grade of C or better. May be repeated for a total of six credits.

Development of a project in the student's area of concentration that demonstrates vigorous and consistent thematic engagement and articulates both technical and conceptual sophistication.

5086. MFA Thesis in Digital Humanities

Three credits. Prerequisite: Instructor consent.

Preparation and presentation of a thesis that demonstrates vigorous and consistent intellectual engagement and articulates technical, conceptual, and scholarly sophistication. To be taken twice in two consecutive semesters in the student's final year.

5095. Special Topics

Variable (1-6) credits. Prerequisite: Instructor consent. May be repeated for a total of nine credits with a change of content.

5099. Independent Study

Variable (1-6) credits. Prerequisite: Instructor consent. May be repeated for a total of 15 credits.

Independent study in a Digital Media area of concentration.

5200. Introduction to Motion Graphics

Three credits. Prerequisite: Instructor consent.

Provides to digital filmmakers instruction and guidance in the technique and critical understanding of motion effects, animation, and compositing. The technical instruction will be focused around the use of Adobe After Effects CS in the handling of both animated still and motion imagery. Students will create visual effects and animated graphics for television, film, web, and other types of multimedia productions using software including Adobe After Effects, Final Cut, Photoshop. The course will involve weekly technical exercise projects, practicing techniques covered in class, as well as a self-proposed midterm and final project.

5201. Advanced Motion Graphics

Three credits. Prerequisite: DMD 5200 and instructor consent.

Allows digital animators and filmmakers to fully develop advanced skills and large scale/longer format projects, drawing from a combination of techniques including: green screen, 2D particle systems, mattes, rotoscoping, sound sync, 2D character set up and animation, hand-drawn/frame-by-frame, 3D integration, digital cut-out animation, and/or live-action compositing. Relies primarily on After Effects, particularly exploring its 2D/3D/effects capabilities; Maya; Photoshop; Final Cut; Toon Boom and other programs may also be utilized as necessary. Draws upon a canon of films to observe successful techniques that can be applied in computer work, and also to develop sensitivity to the artistry of moving images, cinema and storytelling.

5205. History of Animation

Three credits. Prerequisite: Instructor consent.

Survey of animation. From the early magic lantern shows of the late nineteenth century to current and emerging digital animation technologies. Series of discussions, lectures, assignments, as well as viewing and evaluating animated work. Exploration of this subject from various perspectives: by chronology, from its prehistory before the invention of film to the present day; by form, including method and medium; by culture, comparing the US to Japan, Russia, Europe and others; by subject; and by personality, concentrating on the figures who have shaped the art form and continue to influence it through their example. Students are expected to bring an enthusiastic interest in the medium, and to devote serious effort to reading about, viewing, researching and discussing animation and the artists who have created it.

5210. Moving Image and Sequence (Editing)

Three credits. Prerequisite: Instructor consent.

The ability to create a high-quality audiovisual experience that has the potential to reach millions of people is critical to your success and is more possible now than ever before. Video Editing with Final Cut Pro/Adobe Premiere teaches all the steps and tools necessary to create and deliver compelling music video, montages, trailers, and much more- including how to assemble, enhance, and maximize the use of video, audio, and graphic content. Geared toward media makers who would like to create and produce their own videos, instructional videos, or anyone wanting to create and assemble video content and share it online.

5211. Experimental and Alternative Techniques

Three credits. Prerequisite: DMD 5200 and instructor consent.

Explores non-traditional techniques/mediums for creating motion graphics and animation. Some common forms of experimental techniques include: stop motion (photographing physical models), pixilation (stop motion with people), collage, direct-to-film, filming with/out a lens, tilt-shift, mixed media compositing, the exquisite corpse, digital cell animation, among others.

5220. Broadcast Graphics and Title Sequence

Three credits. Prerequisite: Instructor consent.

Survey of broadcast design and title sequences made for film, games and television. Students will develop a deep understanding of the evolution of broadcast television and film graphics, as well as a command of several methods of producing graphics.

5230. Cinematic Storytelling

Three credits. Prerequisite: DMD 5200 and instructor consent.

A survey of film and media, in particular, the close analysis of graphic storytelling techniques in television, animation, shorts, and movies. Alternates between explanation of specific filmmaking techniques (such as continuity editing) and discussion of the ways in which media implicitly reflect and subtly influence cultural attitudes and values. Requires a research paper to be submitted for midterm evaluation, and a project component - or demonstration of the craft - for your Final Project.

5300. Introduction to 3D Animation

Three credits. Prerequisite: Instructor consent.

Introduction to 3D animation emphasizing traditional animation principles as applied to 3D animation. Topics will include principles of animation, transformations and deformations of 3D objects, rigging, and rendering. Its purpose is to familiarize the students with working in a 3-D environment and build a working knowledge of the basic tools used in 3D animation. This course will be required for future advanced 3D related classes. Students will develop their skills using key-frame animation and the graph editor. Students will also learn techniques for researching & using reference. Students can apply skills learned in this class in other areas including game art, motion graphics and 2D Animation.

5301. Advanced 3D Animation

Three credits. Prerequisite: DMD 5300 and instructor consent.

Students bring characters to life, applying core animation principles learned in DMD 5300 to visually convey weight, force, self-impulse, and emotion to bipedal CG characters. Students leverage principles of human mechanics and classic animation process to analyze and interpret reference footage. Best practices are learned using industry standard 3D software, resulting in appealing character animation that is mechanically sound and communicates emotion.

5305. History of Computer Graphics

Three credits. Prerequisite: Instructor consent.

History of computer-generated imagery (CGI) from its beginnings to present. Students will learn how CGI began and the problems that existed in its infancy. Trends and future of computer animation and visual effects.

5310. Introduction to 3D Modeling

Three credits. Prerequisite: Instructor consent.

Creation of polygonal 3D models using industry standard modeling tools. The aesthetics of simplicity are important as it relates to edge flow and geometry construction for both software and real-time rendering application. Comprised of in class labs and take home tests. Labs and tests will assess and inform both the instructor and the student of their progress and overall modeling skill level.

5311. Advanced Modeling, Lighting and Rendering

Three credits. Prerequisite: Instructor consent.

Illumination of the connection between the audience and the image on screen. Students learn how lighting creates mood in a scene and the technical ways in which CG lighting is achieved. Students will learn what types of lights to use, how and when to use them, and techniques to achieve realistic lighting while being resource savvy. Lighting in theater as well as in traditional film will be studied to give students a solid understanding of why certain lighting choices are made and why they work, whether in live action or CG applications.

5315. Character Rigging

Three credits. Prerequisite: Instructor consent.

Rigging concepts with a specific emphasis on animated props and characters. Techniques for using and creating bones, constraints, skeletons, skinning, and weight painting. Students will come to understand the connection between animation and rigging, and specifically, how rigging increases quality and productivity in animation production.

5320. Introduction to Lighting and Rendering

Three credits. Prerequisite: Instructor consent.

Explanation of the connection between the audience and the image on screen. Students learn how lighting creates mood in a scene and the technical ways in which CG lighting is achieved. Students will learn what types of lights to use, how and when to use them, and techniques to achieve realistic lighting while being resource savvy. Lighting in theater as well as in traditional film will be studied to give students a solid understanding of why certain lighting choices are made and why they work, whether in live action or CG applications.

5340. Compositing for Visual Effects

Three credits. Prerequisite: Instructor consent.

Working with Film Students, students shoot plates on HD that fulfill the desire and needs another. Will work with "client" to achieve the desired effect on time, and on-budget. The students hone their effects skills, as they learn to track the motion of on-set cameras, objects and elements. They will learn that the best way to do an effect isn't always to pick up a computer mouse, but might be to go out and shoot elements to be manipulated in 2D after the fact.

5350. Simulation and Technical Directing

Three credits. Prerequisite: Instructor consent.

Art and science of creation of physical simulations using particle systems and collision detection. Creation of complicated rendering and compositing setups that make their animations both easier to render and more flexible within the bounds of any animation or VFX sequence.

5420. Wearable Electronics and Interactive Objects

(Also offered as DRAM 5420.) Three credits. Prerequisite: Instructor consent.

Provides a basic understanding of electronics, key components, function, construction, and project design.

5440. Mobile Application Development 1

Three credits. Prerequisite: DMD 5070; open only to Digital Media and Design graduate students; instructor consent required.

Provides an introductory experience into mobile application development. Through lecture and hands-on exercises, students will be introduced to the progresses, technologies, an environment or mobile applications. Emphasis will be on building simple android applications with the MIT App inventor to gain introductory knowledge of programming concepts and design.

5470. Advanced Web Design and Development

Three credits. Prerequisite: DMD 5070; open only to Digital Media and Design graduate students; instructor consent required.

Explores intermediate and advanced web design and development techniques, covering Cascading Style Sheets, XML, dynamic HTML with JavaScript, common frameworks, and the principles of site management. Through projects, the course will also cover more advanced design concepts in Website creation, such as efficient navigation design, designing or portability and accessibility, separating content from presentation for easy site updating and maintenance, planning interactivity, and search engine optimization.

5500. Introduction to Digital Game Design

Three credits. Prerequisite: Instructor consent.

Introduction to the principals of video game design and development. Exploration of the history of the industry, investigation of the theory of story, game mechanics and level progression, development of creativity skills that can be applied through an ideation process, and design and develop a 2D video game. Participation is conducted in a game-based environment.

5522. The Story in Video Games

One credit. Prerequisite: Instructor consent.

Focusing toward story and character development, students are challenged to generate an idea for a Role-Playing Video Game. Participants examine the relationship of story, character and player, investigate a selection of popular RPGs, and explore ways to visualize and communicate their story and game idea to a group of would be investors.

5530. 3D Virtual World and Simulations

Three credits. Prerequisite: Instructor consent.

Students are challenged to design and develop a virtual simulation that will train, educate or replicate a historical, military or scientific event. Participants investigate a selection of different virtual environments, simulations and serious games, explore some of the basic principles of 3D modeling, and examine how game engines can be used to generate a three-dimensional computer-based environment.

5531. Game System Design

Three credits. Prerequisite: DMD 5500; open only to Digital Media and Design graduate students.

Students will be challenged to create a new game system within an existing game engine. This system will expand and change existing gameplay based on an in-class prompt. They will utilize their knowledge of player psychology and their analysis of other gameplay systems to develop a deeper understanding of the internal mechanics of games

5536. Disruptive Technologies in Games

Three credits. Prerequisite: DMD 5500 and 5542; open only to Digital Media and Design graduate students; instructor consent required.

Exploration of emerging interactive technologies, creating rapid-fire prototypes utilizing experimental hardware and software. These skills enable students to develop interactive installations and unique gameplay scenarios.

5540. Multiplayer Game Development

Three credits. Prerequisite: DMD 5531; open only to Digital Media and Design graduate students.

Students examine an array of gameplay interactions and how different types of interactions create a different experience for players. Students create a multiplayer map based in a relevant game engine that adheres or modifies the core mechanics to create a new game experience.

5542. Introduction to Scripting for Games

Three credits. Prerequisite: Open only to Digital Media and Design graduate students; instructor consent required.

Introduction to the fundamentals of gameplay scripting utilizing a current game engine. At the end of this course students will have a basic understanding of scripting concepts, constructs like numbers, strings, assignment, loops, functions, arrays and available engine commands.

5550. Game Production

Three credits. Prerequisite: DMD 5500; open only to Digital Media and Design graduate students; instructor consent required.

A practical examination into the successful management of video game products. Students in the class will be required to develop budgets, asset management plans and evaluate risk of game development options. As part of the design process, participants will explore relationship management, team management, investigate the business aspect of the video game industry, and deliver a series of documents as part of the development of video game project.

5560. Advanced Digital Game Design and Development

Three credits. Prerequisite: Instructor consent.

Practical examination into the development of three-dimensional video games. Students are required to design and develop a video game and extensive game design document. Participants explore a selection of advanced game engines, share and critique ideas, investigate the business aspect of the video game industry, and deliver a series of progress reports as part of the development of a video game project.

5610. Digital Humanities Methods

Three credits.

Digital methods in humanities research, pedagogy, and public practice drawing on current work in History, English, Classics, Media Studies, Library Science, and related disciplines.

5700. Digital Media Strategies for Business

Three credits. Prerequisite: Instructor consent.

Introduction to digital media concepts and platforms that are being used in companies' marketing strategies and plans.

5710. Social Media Business Applications

Three credits. Prerequisite: DMD 5700 and instructor consent.

An introduction to social media marketing, focusing on the platforms and strategies being employed by brands.

5720. Digital Media Analytics

Three credits. Prerequisite: DMD 5700 and instructor consent.

Provides a working knowledge of the array of metrics and analytics needed to understand the digital consumer and measure the effectiveness of digital media marketing.

5730. Digital Consumer Behavior

Three credits. Prerequisite: Instructor consent.

Exploration and analysis of the changes in consumer decision-making and behavior in today's digital world.

5900. M.F.A. Thesis Exhibition

Three credits. Prerequisite: Open only to Digital Media and Design Master of Fine Arts students in their final semester; departmental consent required. Students taking this course will be assigned a final grade of S (satisfactory) or U (unsatisfactory).

Preparation and installation of Master of Fine Arts thesis exhibition. Requirements include: design and production of artworks for final exhibition, written statement, promotional material design and distribution, exhibition design, installation and documentation, and faculty review.

5998. Variable Topics

Variable (1-6) credits. Prerequisites and recommended preparation vary. May be repeated for credit with a change of content.