Media Arts and Design

In the early twenty-first century, "media" and "design" have become central terms. Media includes a wide range of storage and communication technologies. Design is no longer a term used simply to describe surface aesthetics or ornamentation, but has become a field that now encompasses a wide range of human interactions with the devices, environments, and communities that shape daily life. Overall, designed digital and networked media inspire feelings of attachment as well as frustration with few rivals in any contemporary cultural sphere. If you consider the number of screens in your immediate vicinity, it becomes evident how substantial an impact media arts and design have on the ways we learn, work, play, think, act, and communicate.

This minor focuses on these rapid developments in media and design that have changed the character of contemporary life, opening these phenomena up to historical study, theoretical critique, and hands-on experimentation. The minor offers pathways through video game design, transmedia puzzle development, digital filmmaking, electronic sound design, digital storytelling, algorithmic theater, podcast development, data visualization, computational imaging, speculative design, and media history and theory.

Minor in Media Arts and Design

Distribution Requirement

The minor is comprised of six courses. Of those six courses, students must take at least one course in each of the following core areas: (1) Media Theory, (2) Media History, and (3) Media Practice and Design.

Courses that qualify for each distribution requirement are listed here.

Electives

Students will also need two elective courses from offerings in such areas as video game design, electronic sound design, computational imaging, or speculative design. Any MAAD course may count; students may use outside courses with approval of the director.

Senior Colloquium and Portfolio

To complete the minor, students must enroll in MAAD 29400 Media Arts and Design Capstone Colloquium. As part of the colloquium, each member of this student cohort prepares a portfolio of digital media artworks and/or historical and theoretical writing that they submit by the end of Winter Quarter of their final year.

Summary of Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Units</th>
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<tr>
<td>One Media Theory course</td>
<td>100</td>
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<tr>
<td>One Media History course</td>
<td>100</td>
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<tr>
<td>One Media Practice and Design course</td>
<td>100</td>
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<tr>
<td>Two electives</td>
<td>200</td>
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<td>MAAD 29400 Capstone Colloquium</td>
<td>100</td>
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<td>Portfolio</td>
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<td>Total Units</td>
<td>600</td>
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Advising and Grading

Prospective minors should meet with the program director as soon as possible to discuss their interests and course plans and to obtain advice and approval. In order to declare the minor, students must complete the Consent to Complete a Minor Program form (https://humanities-web.s3.us-east-2.amazonaws.com/college-prod/s3fs-public/documents/Consent_Minor_Program.pdf) and have the form signed by the program director. This form must then be returned to the student's College adviser by the end of Spring Quarter of the student's third year.

Courses in the minor program may not be (1) double counted with the student's major(s) or with other minors or (2) counted toward general education requirements. Courses in the minor must be taken for quality grades, and more than half of the requirements for the minor must be met by registering for courses bearing University of Chicago course numbers.

Media Arts and Design Courses

**MAAD 10430. Gender, Sexuality, Imagination. 100 Units.**

This course explores the relationships between theories of the imagination and those of gender and sexuality, with a particular emphasis on the relevance of this exploration to cinema and media studies.

Instructor(s): K.Keeling

Terms Offered: Winter

Equivalent Course(s): CMST 20430, GNSE 20430, CMST 30430, GNSE 30430
MAAD 11004. Afrofuturism. 100 Units.
This course focuses on audio-visual cultural productions that have been or might be considered under the rubric of "Afrofuturism," with particular attention to the aesthetic, social, political, and/or cultural contributions and interventions they make.
Instructor(s): K. Keeling Terms Offered: Winter
Equivalent Course(s): CMST 21004

MAAD 11730. Science, Technology and Media via Japan. 100 Units.
This course will explore issues of culture, technology, and environment in Japan through the lens of Science and Technology Studies (STS) and Media Studies. The course is designed for undergraduate students. Its overall aim is to introduce students to some of the fundamental concepts, themes, and problematics in these fields via the particular social and historical circumstances in Japan. Some of the central concerns will be around issues of environment, disaster, gender, labor, media theory, gaming, and animation. In addition, we will devote attention to the recent emergence of the term media ecology as a framework problematizing technologically engineered environments.
Instructor(s): M. Fisch Terms Offered: Winter
Note(s): This course qualifies as a "Discovering Anthropology" selection for Anthropology majors.
Equivalent Course(s): ENST 21730, EALC 21730, ANTH 21730

MAAD 12005. Filming the Police. 100 Units.
Filming the police" as a research topic has been taken up in a range of disciplines and subfields from legal and information studies to surveillance and police studies. In film and media studies, the 1991 George Holliday video of the beating of Rodney King by the LAPD played an important and controversial role in the formation of documentary studies as a subfield and in debates about indexicality, the nature of photographic evidence, and realism-issues at the core of the discipline.
While this course will survey the topic of the filming of police from multiple perspectives, it aims to construct a specifically disciplinary framework for research on police violence. Topics to include dashboard and body cameras; surveillance, sousveillance, and the regime of visibility; investigative and citizen journalism; records management and archiving; evidence in court proceedings and in the public sphere; police, media, and ideology; the ethics and politics of looking at black suffering; art about police violence; filming the police in an international frame.
Instructor(s): S. Skvirsky Terms Offered: Winter
Equivalent Course(s): CMST 37005, HMRT 37005, CMST 27005, HMRT 27005

MAAD 12151. Anthropology of Media. 100 Units.
This course follows a historical arc from the advent of analog media in the early 20th century to the rise of contemporary networked digital culture with the aim of introducing students to major themes and theoretical questions at the intersection of media theory and anthropology of media. We will pay particular attention to transformations of the body, social, individual, and warfare in expressions of the culture of mediation and the mediation of culture as we consider technologies of transportation, communication, production, consumption, distribution, and exchange. Readings from the course will cover a broad intellectual terrain that combines seminal anthropological texts with arguments from media theory and the philosophy of technology. We will also be exploring a number of films.
Instructor(s): Michael Fisch Terms Offered: Autumn, Autumn 2019
Prerequisite(s): This course qualifies as a "Discovering Anthropology" selection for Anthropology majors
Note(s): This course is designed specifically for undergraduate students.
Equivalent Course(s): ANTH 22151

MAAD 12320. Critical Videogame Studies. 100 Units.
Since the 1960s, games have arguably blossomed into the world's most profitable and experimental medium. This course attends specifically to video games, including popular arcade and console games, experimental art games, and educational serious games. Students will analyze both the formal properties and sociopolitical dynamics of video games. Readings by theorists including Ian Bogost, Roger Caillois, Nick Dyer#Witheford, Mary Flanagan, Jane McGonigal, Lisa Nakamura, and Katie Salen will help us think about the growing field of video game studies. This is a 2019-20 Signature Course in the College. (Theory)
Instructor(s): Patrick Jagoda Terms Offered: Autumn
Equivalent Course(s): CMST 27916, GNSE 22320, SIGN 26038, ENGL 12320
MAAD 12351. The Sonic Image. 100 Units.
The Sonic Image offers a unique opportunity to work with three senior researchers exploring the bridge-making and sense delimiting articulations of sound & sight together. We will examine the potency of sound in a world largely understood through its visualization as a world picture. Readings in sound studies, visual studies & media studies explore sound, sounds that evoke pictures, the forensics of sound, sound art, & films including The Conversation, Blow Out & Amour. Each faculty collaborator brings distinct interests to the course. WJT Mitchell’s renowned theorization of images naturally extends to his theorizing the possibility of the sonic image. Artist Lawrence Abu Hamdan’s commitment to the value of earwitnessing asks the listener to extend forensic knowledge to the very core of what it means to be a human being in the world. For the course, Hamdan will develop a workshop comprising a series of practical exercises that experiment with the conditions of testimony or claim making, enabling an exploration of how the law come to its truths and how can we use sonic imagination to trouble & contest established modes of enacting justice. Performance scholar, Hannah B Higgins, examines how musical notation, performance & sound bear on the relationships between sound & vision in recent art practices. An intervention from composer Janice Misurrell-Mitchell will add a dimension of musical testimony to our investigation.
Instructor(s): W.J.T. Mitchell, Hannah Higgins, Lawrence Abu Hamdan Terms Offered: Autumn
Prerequisite(s): Open to all levels with consent of the instructors. All interested students should please email the instructor (wjtm@uchicago.edu) a one page statement of interest, explaining why they want to take the course, and what they will bring to it.
Equivalent Course(s): ENGL 42351, ARTH 22351, CMLT 22351, ARTV 20351, ARTV 40351, ARTH 32351, TAPS 32351, TAPS 22351, ENGL 22351, CMLT 42351

MAAD 12360. Introduction to Video Game Music Studies. 100 Units.
This course will offer an overview of current studies in video game music, a relatively new and interdisciplinary academic field. Through reading, listening, and playing, students will explore how and why music is incorporated into video games, as well as the relationship between games and other kinds of musical multimedia. Students will also have the opportunity to compose their own music. No background in music is required.
Instructor(s): Julianne Grasso Terms Offered: Winter

MAAD 14110. Digital Cinema. 100 Units.
Since the 1970s, movies have become increasingly dependent on digital technologies. This course explores a range of issues related to the digitization of cinema's production, distribution, and exhibition, including the cultural contexts and aesthetic practices surrounding these technological shifts as well as their experiential and political dimensions. In particular, we will explore such topics as digital cinematography's relation to cinematic realism, emerging trends in editing practices, the political implications of digital special effects, and the ways that other digital media influence cinematic techniques. Texts discussed include works by Lev Manovich, Stephen Prince, Kristen Whissel, Hito Steyerl, Steven Shaviro, and Vivian Sobchack. Screenings include works by Lana and Lilly Wachowski, Agnes Varda, Bong Joon-Ho, Michael Bay, Brad Bird, and Leos Carax.
Note(s): This course does not satisfy the general education requirement in the arts.
Equivalent Course(s): CMST 27110

MAAD 14204. Media Ecology: Embodiment & Software. 100 Units.
Media ecology examines how the structure and content of our media environments-online and offline, in words, images, sounds, and textures-affect human perception, understanding, feeling, and value; or alternatively, media ecology investigates the massive and dynamic interrelation of processes and objects, beings and things, patterns and matter. At stake are issues about agency-human or material-and about determinism-how does society or culture interact with or shape its technologies, or vice versa? This course investigates theories of media ecology by exploring systems of meanings that humans embody (cultural, social, ecological) in conjunction with the emerging field of software studies about the cultural, political, social, and aesthetic impacts of software (e.g., code, interaction, interface). In our actual and virtual environments, how do we understand performing our multiple human embodiments in relation to other bodies (organism or machine) in pursuit of social or political goals?
Instructor(s): M. Browning Terms Offered: Winter
Equivalent Course(s): TAPS 28452, CMST 25204, HUMA 25202, LLSO 27801, HIPS 25203

MAAD 14205. Computers, Minds, Intelligence & Data. 100 Units.
How are we co-evolving with our machines? How do we teach ourselves and our computers how to learn? What kinds of human intelligences do we promote in liberal education in comparison with artificial intelligence(s)? Through our distributed cognition with tools of all kinds, as we engage in participatory culture using digital computers and networks, we provide information that generates the basis for big (and small) data. At the crux of our investigation-on the one hand into reading and conversation and on the other hand into algorithms and information theory-are issues about human action and the multifaceted agency of the universal Turing machine as mobile phone, laptop, internet, robot.
Equivalent Course(s): HIPS 25205, HUMA 25205
MAAD 14865. Adaptation: Text and Image. 100 Units.
A course concerned with the marriage of image and text that explores films, illuminated manuscripts, comic books/graphic novels, children's picture books and present day (perhaps local) theater productions that deal at their core with the balance and dance between story and picture. Examples of work studied would be Chris Marker's La jetée, Alice in Wonderland and its many adaptations, the comics of Winsor McCay, Seth, Chris Ware, etc, and William Blake's engraved poems and images. The theatrical collaborations between the instructors themselves ("The Cabinet" and "Cape and Squiggle," both produced by Chicago's Redmoon Theatre) will be discussed as well.
Instructor(s): M. Maher, F. Maugeri Terms Offered: Spring
Equivalent Course(s): ARTV 20215, TAPS 28465

MAAD 15630. Television in an Age of Change. 100 Units.
As streaming options proliferate, we think of television today as a medium in flux, but the history of television-and American television in particular-has been one of change. This course will look at core television concepts both today and in the past, exploring major shifts in television history through its relationships to audiences, technology, and other media.
Instructor(s): Ilana Emmett Terms Offered: Spring

MAAD 16001. Censorship in East Asia: The Case of Colonial Korea. 100 Units.
This course examines the operation and consequences of censorship in the Japanese Empire, with focus on its effects in colonial Korea. It begins with two basic premises: first, both the Japanese colonial authorities' measures of repression, and the Korean responses to them, can be understood as noticeably more staunch and sophisticated when compared to any other region of the Empire; and second, the censorship practices in Korea offers itself as a case that is in itself an effective point of comparison to better understand other censorship operations in general and the impact of these operations across different regions. With a view to probing an inter- and intra-relationship between censorship practices among a variety of imperial/colonial regions, this course studies the institutions related to censorship, the human agents involved in censorship-both external and internal-and texts and translations that were produced in and outside of Korea, and were subject to censorship. Overall, the course stresses the importance of establishing a comparative understanding of the functions of censorship, and on the basis of this comparative thinking we will strive to conceptualize the characteristics of Japanese colonial censorship in Korea.
Instructor(s): K. Choi Terms Offered: Autumn
Equivalent Course(s): EALC 43000, EALC 23001, CRES 33001

MAAD 16210. Media Art and Design Practice. 100 Units.
This studio-based course explores the practice, conventions, and boundaries of contemporary media art and design. This can encompass areas as diverse as interactive installation, app design, and the Internet meme. Through projects and critical discussion, students engage with the problems and opportunities of digitally-driven content creation. Fundamental elements of digital production are introduced, including basic properties of image, video, and the global network. Further topics as varied as though not limited to-web production, digital fabrication, interfaces, the glitch, and gaming may be considered. Sections will vary based on the instructor's fields of expertise. This course counts towards the General Education requirement in Art-Music-Drama.
Instructor(s): J. Satrom Terms Offered: Spring
Prerequisite(s): HUMA 16000 and HUMA 16100 or instructor consent
Note(s): This course meets the general education requirement in the arts. This course may not count toward the Media Arts and Design minor.
Equivalent Course(s): ARTV 16210

MAAD 16312. Reforming Religious Media: Martin Luther and the Protestant Reformation. 100 Units.
The Protestant Reformation began with a carefully orchestrated media event, when Martin Luther posted his 95 theses on the door of a church in Wittenberg. Concurrently, he resorted to the still new medium of print to disseminate more widely his scathing critique of the Catholic Church's use of indulgences to communicate God's grace. This was only the beginning of Luther's sweeping attack on the Church's role as the sole mediator of salvation. No religious medium or communicational practice remained unquestioned, resulting in their comprehensive reform. Soon other reformers joined in, pushing the critique even further by questioning the need and validity of all religious mediation. Approaching the Protestant Reformation as a reform of religious media, this lecture course will give particular attention to the congenial alliance between Martin Luther's religious message and the emerging technology of the printing press, the role of Scripture in legitimating Protestant theologies of communication, controversies around particular religious media, like images or the eucharist, and the role of direct inspiration in radical reformers. This research course will be a combination of lecture and discussion. The course will culminate in an exhibition at the Special Collections Research Center of Regenstein Library, which will first take the form of a virtual web exhibit and then an actual, physical exhibition in the Winter Quarter 2020. All students will contribute to the web exhibition.
Instructor(s): Christopher Wild Terms Offered: Spring
Equivalent Course(s): RLST 22312, HCHR 32312, SIGN 26051, RLVC 32312, GRMN 22312
MAAD 16600. Chance in Performance. 100 Units.
The course will cover the historical, theoretical and practical issues surrounding the use of chance in artistic production, with an emphasis on how these techniques have been used in live performance. We begin with the historical avant-garde, particularly Dada and Duchamp, continue with mid-century experiments by Cage/Cunningham and Fluxus artists, and finish with contemporary work like "No Dice" of Nature Theatre of Oklahoma and "Algorithmic Noir" by Eve Sussman. By creating performance projects using, or responding to, the techniques studied, students will have an opportunity to develop their own critical and practice-based point of view.
Instructor(s): A. Dorsen Terms Offered: Spring
Note(s): Attendance at first class meeting is mandatory.
Equivalent Course(s): TAPS 32600, TAPS 22600

MAAD 16718. Approaches to Live Electronics. 100 Units.
Hand-built circuits, tape loops, feedback, filters, ring modulators, turntables, live-processing software environments, microphones, and human-machine interface designs. In this course, we will study current and historical approaches to the performative use of hardware and software environments in music, and will follow the practice as it continues to redefine music composition and improvisation in the 21st century. Study will be repertoire-based, drawing from the work of artists ranging from David Tudor to Herbie Hancock to Grandmaster Flash to Kajia Saarialho.
Instructor(s): Sam Pluta Terms Offered: Autumn
Equivalent Course(s): MUSI 36718, MUSI 26718

This sequence is required of students majoring in Cinema and Media Studies. Taking these courses in sequence is strongly recommended but not required.

MAAD 18500. History of International Cinema I: Silent Era. 100 Units.
This course provides a survey of the history of cinema from its emergence in the mid-1890s to the transition to sound in the late 1920s. We will examine the cinema as a set of aesthetic, social, technological, national, cultural, and industrial practices as they were exercised and developed during this 30-year span. Especially important for our examination will be the exchange of film techniques, practices, and cultures in an international context. We will also pursue questions related to the historiography of the cinema, and examine early attempts to theorize and account for the cinema as an artistic and social phenomenon.
Instructor(s): A. Field Terms Offered: Autumn
Prerequisite(s): Prior or concurrent registration in CMST 10100 required. Required of students majoring or minorin in Cinema and Media Studies.
Note(s): This is the first part of a two-quarter course.
Equivalent Course(s): CMLT 32400, ARTH 38500, ENGL 29300, ARTH 28500, ARTV 20002, CMST 48500, CMST 28500, ENGL 48700, CMLT 33600, CMLT 22400

MAAD 18600. History of International Cinema II: Sound Era to 1960. 100 Units.
The center of this course is film style, from the classical scene breakdown to the introduction of deep focus, stylistic experimentation, and technical innovation (sound, wide screen, location shooting). The development of a film culture is also discussed. Texts include Thompson and Bordwell's Film History: An Introduction; and works by Bazin, Belton, Stiney, and Godard. Screenings include films by Hitchcock, Welles, Rossellini, Bresson, Ozu, Antonioni, and Renoir.
Instructor(s): Staff Terms Offered: Winter
Prerequisite(s): Prior or concurrent registration in CMST 10100 required. Required of students majoring or minorin in Cinema and Media Studies.
Note(s): CMST 28500/48500 strongly recommended
Equivalent Course(s): MAPH 33700, ENGL 29600, REES 45005, ARTV 20003, CMST 28600, ARTH 38600, ENGL 48900, CMST 48600, CMLT 22500, CMLT 32500, REES 25005, ARTH 28600

MAAD 18700. History of International Cinema, Part III: 1960 to Present. 100 Units.
This course will continue the study of cinema around the world from the late 1950s through the 1990s. We will focus on New Cinemas in France, Czchoslovakia, Germany, the United States, the United Kingdom, and other countries. We will pay special attention to experimental stylistic developments, women directors, and well-known auteurs. After the New Cinema era we will examine various developments in world cinema, including the rise of Bollywood, East Asian film cultures, and other movements.
Instructor(s): J. L. astra Terms Offered: Spring
Note(s): This course follows the subject matter taught in CMST 28500/48500 and CMST 28600/48600, but these are not prerequisites.
Equivalent Course(s): CMST 28700, CMST 38700
MAAD 18600. History of International Cinema II: Sound Era to 1960. 100 Units.
The center of this course is film style, from the classical scene breakdown to the introduction of deep focus, stylistic experimentation, and technical innovation (sound, wide screen, location shooting). The development of a film culture is also discussed. Texts include Thompson and Bordwell's Film History: An Introduction; and works by Bazin, Belton, Sitney, and Godard. Screenings include films by Hitchcock, Welles, Rossellini, Bresson, Ozu, Antonioni, and Renoir.
Instructor(s): Staff Terms Offered: Winter
Prerequisite(s): Prior or concurrent registration in CMST 10100 required. Required of students majoring or minoring in Cinema and Media Studies.
Note(s): CMST 28500/48500 strongly recommended
Equivalent Course(s): MAPH 33700, ENGL 29600, REES 45005, ARTV 20003, CMST 28600, ARTH 38600, ENGL 48900, CMST 48600, CMLT 22500, CMLT 32500, REES 25005, ARTH 28600

MAAD 18700. History of International Cinema, Part III: 1960 to Present. 100 Units.
This course will continue the study of cinema around the world from the late 1950s through the 1990s. We will focus on New Cinemas in France, Czechoslovakia, Germany, the United States, the United Kingdom, and other countries. We will pay special attention to experimental stylistic developments, women directors, and well-known auteurs. After the New Cinema era we will examine various developments in world cinema, including the rise of Bollywood, East Asian film cultures, and other movements.
Instructor(s): J.Lastra Terms Offered: Spring
Note(s): This course follows the subject matter taught in CMST 28500/48500 and CMST 28600/48600, but these are not prerequisites.
Equivalent Course(s): CMST 28700, CMST 38700

MAAD 18703. Video Art: The Analog Years. Theory, Technology, Practice. 100 Units.
The course gives a critical introduction to early video and television art - from the proto-televisual impulses in the historical avant-gardes to the increasing proximity between analog and digital technologies in video art in the late 1970's and early 1980's. We will focus on the various technical aspects of analog video, as well as on artistic practice and early writings on the subject. Topics will include the technics and politics of time; video, feedback systems and ecology; the reconfiguration of the artist's studio; guerilla politics and alternative TV; video and autobiography; the relation between video and painting; the musical history of video; the invention of new machines; and video as a "television viewer".
Instructor(s): I. Blom Terms Offered: Autumn
Equivalent Course(s): CMST 38703, ARTH 31313, CMST 28703, ARTH 21313

MAAD 20500. ARTGAMES. 100 Units.
Reset your expectations of video games! Video games can be political, experimental, and poetic. New media artists have been leveraging unconventional approaches to interactive media for decades. This studio course will playfully explore the methods, tools, and environments used to create artgames and machinima. Develop, hack, mod, and utilize video games as an artistic medium. Challenge the rules, mechanics, and interfaces of existing video games and consider the infinite possibilities of artgames.
Instructor(s): J. Satrom Terms Offered: Winter
Equivalent Course(s): ARTV 25403

MAAD 20810. Sound / Image Mapping. 100 Units.
This class will examine the history and production of "hard" sound-image relationships through the lens of computational form. Through studying the range of digital and mechanical tools that have sought to couple the senses - from 19th century color organs and dreams of synesthesia, through music videos and contemporary new media installations, to recent advances in "machine listening" - students will complete a series of critical essays and sketches leading towards a final project using custom software developed in and for the class.
Instructor(s): M. Downie Terms Offered: Winter
Equivalent Course(s): ARTV 27922, CMST 28010

MAAD 20900. Computers for Learning. 100 Units.
Over time, technology has occupied an increasing role in education, with mixed results. Massive Open Online Courses (MOOCs) were created to bring education to those without access to universities, yet most of the students who succeed in them are those who are already successful in the current educational model. This course covers technology, psychology (e.g., motivation, engagement), and pedagogy (e.g., constructivism) as they apply to educational technology so that students can design and build an educational learning application. Labs focus on developing expertise in technology, and readings supplement lecture discussions on the human components of education.
Instructor(s): D. Franklin Terms Offered: Autumn
Prerequisite(s): CMSC 15400
Equivalent Course(s): CMSC 20900
MAAD 21006. The Zine as Art Theory and Practice. 100 Units.
The Zine as Art Theory and Practice is a seminar/studio hybrid that combines reading, thinking, and making. Embracing the vibrant history and short turn-around time of the artist magazine or zine, course readings are prompts for you to create your own magazines. Rather than slick glossy commercial pages, your projects will be in the lineage of the hand-drawn, the doodle, the monotype, the playbill, the Xerox, and the collage. Your magazines are a space for you to combine thoughts, images, questions, speculations, manifestos, ambivalences, rants, passions, characters and ideas.
Instructor(s): A. Ginsburg Terms Offered: Autumn
Prerequisite(s): ARTV 10100, 10200 or 10300
Equivalent Course(s): ARTV 21006, ARTV 31006

MAAD 21011. Experimental Captures. 100 Units.
This production-based class will explore the possibilities and limits of capturing the world with imaging approaches that go beyond the conventional camera. What new and experimental image-based artworks can be created with technologies such as laser scanning, structured light projection, time of flight cameras, photogrammetry, stereography, motion capture, sensor augmented cameras or light field photography? This hands-on course welcomes students with production experience while being designed to keep established tools and commercial practices off-kilter and constantly in question.
Instructor(s): M. Downie Terms Offered: Winter
Equivalent Course(s): CMST 27011, CMST 37011, ARTV 37923, ARTV 27923

MAAD 21500. Metamedia Design Studio. 100 Units.
Computers dynamically simulate the details of any other medium. This course looks past traditional media and engages with the computer as a “metamedium”; an environment with infinite degrees of representation. Relationships between form and content will be explored and exploited through editing, augmenting, and deconstructing the data that makes up digital media. Students will digitally improvise with experimental and expanded approaches to creating new media art. Topics surveyed will include: aesthetics as filters, algorithms as art, metadata as content, glitches as tools, and historical dream machines. In addition to making new media art, we will consider our relationship to contemporary media and the politics of digital agency in an increasingly connected world.
Instructor(s): J. Satrom Terms Offered: Autumn
Equivalent Course(s): ARTV 25402

MAAD 21900. Climate Change in Media and Design. 100 Units.
If meteorological data and models show us that climate change is real, art and literature explore what it means for our collective human life. This is the premise of many recent films, novels, and artworks that ask how a changing climate will affect human society. In this course, we will examine the aesthetics of climate change across media, in order to understand how narrative, image, and even sound help us witness a planetary disaster that is often imperceptible. Rather than merely analyzing or theorizing various futures, this course will prepare students in hands-on methods of “speculative design” and “critical making.” Each Tuesday, we will study how art and literature draw on the specific capacities of written and visual media to represent climate impacts, and how new humanities research is addressing climate change. Each Thursday, we will participate in short artistic exercises that explore futures of each area. These exercises include future object design, bodymapping and story circles, tabletop gameplay, and serious game design. Throughout the quarter, guest speakers from across the humanities, sciences, and social sciences will visit the class to speak about how their disciplines are working to understand and mitigate climate impacts. The most substantial work of the quarter will be an ambitious multimedia or transmedia project about one of the core course topics to be completed in a team.
Instructor(s): P. Jagoda, B. Morgan Terms Offered: Winter
Prerequisite(s): Third- or fourth-year standing
Equivalent Course(s): ENST 27900, ENGL 27904, BPRO 27900, CMST 27814

MAAD 22500. Computational Imaging. 100 Units.
This studio course introduces fundamental tools and concepts used in the production of computer-mediated artwork. Instruction includes a survey of standard digital imaging software and hardware (i.e., Photoshop, scanners, storage, printing, etc.), as well as exposure to more sophisticated methods. We also view and discuss the historical precedents and current practice of media art. Using input and output hardware, students complete conceptually driven projects emphasizing personal direction while gaining core digital knowledge.
Instructor(s): J. Salavon Terms Offered: Winter
Prerequisite(s): ARTV 10100, 10200, or 10300
Equivalent Course(s): ARTV 32500, ARTV 22500, CMST 28800

MAAD 22911. Augmented Reality Production. 100 Units.
Focusing on experimental moving-image approaches at a crucial moment in the emerging medium of augmented reality, this class will explore and interrogate each stage of production of AR works. Students in this production-based class will examine the techniques and opportunities of this new kind of moving image. During this class we'll study the construction of examples across a gamut from locative media, journalism, and gameplay-based works to museum installations. Students will complete a series of critical essays and sketches towards a final augmented reality project using a custom set of software tools developed in and for the class.
Instructor(s): M. Downie Terms Offered: Autumn
Equivalent Course(s): CMST 37911, CMST 27911, ARTV 37921, ARTV 27921
MAAD 23220. Inventing, Engineering and Understanding Interactive Devices. 100 Units.
A physical computing class, dedicated to micro-controllers, sensors, actuators and fabrication techniques. The objective is that everyone creates their own, custom-made, functional I/O device.
Terms Offered: Spring
Prerequisite(s): CMSC 15400
Equivalent Course(s): CMSC 23220

MAAD 23631. Introduction to Internet Art. 100 Units.
This studio course examines the Internet as an artistic medium (computers, networks and code), as an environment (media ecology) and as “the masterpiece of human civilization” (à la Virginia Heffernan). Our focus will be on producing creative contributions to this collaborative space by learning the core coding languages of the web, HTML and CSS. While we will occasionally be discussing the contributions of self-identified artists (from the net.art movement of the 1990s for example) we will generally be taking a broader cultural view, exploring the histories, philosophies and practices of various online cultural niches. We will learn how hackers use the command line to break into networks and how the open source community use special tools that facilitate large scale collaborations. We’ll learn about AI praised by singularity evangelists in the “age of spiritual machines” as well as the digital rights activists who protest against the algorithms of surveillance capitalism. Throughout this journey, we will be learning the craft of the Internet, and in particular browsers and the web. We will be borrowing techniques from demoscensters, meme-makers, cyberpunks and web designers as we learn to produce work with the web’s generalized media format (HTML and CSS) as well as how to distribute that work online (deploying web sites).
Instructor(s): Nick Briz Terms Offered: Winter

MAAD 23632. Intermediate Internet Art. 100 Units.
The web browser is a blank canvas, through code we can conjure up any kind of preexisting and not yet invented screen based media. It is also an art studio, equipped with tools for making hypertext, interactive video, 2D and 3D animation, electronic music, sound sampling and synthesis, mixed reality (AR/VR), artificial intelligence and so much more. The browser is also a place to share our work, collaborate with others and explore all manner of interesting cultural activity. In this course we will produce artware (software art) for any kind of Internet connected device (mobile phones, laptops, VR headsets, Raspberry Pi, IoT, etc) by learning to code in the Internet’s de facto programming language: JavaScript. After examining (through screenings, readings and interaction) the work of artists, designers and developers who both celebrate and criticize the promises and perils of our digital age, students will conceive and pitch project concepts to each other. Students will then form groups to collaborate on open-source artware (software art) leveraging the same tools (git, GitHub) and processes (Agile, Scrum) used by professionals. We will learn how to properly document and present software projects online as well as how to maintain a professional creative code portfolio. We will also learn to use libraries/APIs (for virtual reality, artificial intelligence, hypermedia, etc) pertaining to the specific type of project we choose to work on.
Instructor(s): Nick Briz Terms Offered: Spring
Prerequisite(s): Mandatory pre-reqs: MAAD 23631 or CMSC 10100. Students who have taken other CMSC programming courses (10500, 10600, 10200, 11500, 15100) are also welcome to enroll.

MAAD 23640. Embodied Data and Gamified Interfaces. 100 Units.
We produce caches of data within our networked lives, from social media interactions to mass surveillance systems, mostly to the benefit of corporate or state entities. The aesthetics of many of these interfaces uses gamification as a guise to data collection, relying on dopamine rushes from "winning" likes, shares, and views to keep us coming back. Through a combination of lectures and workshops, we will explore data and games as artistic mediums and how they interface and exchange with each other. We will look at how the physical body is reduced to data, surveilled and analyzed through our online behavior, mobile devices, computer vision and machine learning algorithms. Students will learn how to incorporate the aesthetics of this embodied data into 2D and 3D gaming spaces, while considering how the physical body fits into the increasingly digitally connected world.
Instructor(s): Jon Chambers Terms Offered: Winter

MAAD 23801. Video. 100 Units.
This is a production course geared towards short experimental works and video within a studio art context.
Instructor(s): S. Wolniak Terms Offered: Autumn
Prerequisite(s): ARTV 10100, 10200 or 10300
Equivalent Course(s): ARTV 33801, ARTV 23801

MAAD 23805. Minimalist Experiment in Film and Video. 100 Units.
This multilevel studio will investigate minimalist strategies in artists’ film and video from the late 1960s to the present day. Emphasis will be placed on works made with limited means and/or with “amateur” formats such as Super-8 and 16mm film, camcorders, Flip cameras, SLR video, and iPhone or iPad. Our aim is to imagine how to produce complex results from economical means. Important texts will be paired with in class discussion of works by artists such as Andy Warhol, Yoko Ono, Kurt Kren, Jack Goldstein, Larry Gottheim, Bruce Baillie, James Benning, John Baldessari, Morgan Fisher, Stan Douglas, Matthew Buckingham, Sam Taylor-Wood, and others.
Instructor(s): D.N. Rodowick Terms Offered: Autumn
Equivalent Course(s): ARTV 23805, CMST 28006, CMST 38006, ARTV 33815
MAAD 23808. Introduction to 16mm Filmmaking, 100 Units.
The goal of this intensive laboratory course is to give its students a working knowledge of film production using the 16mm gauge. The course will emphasize how students can use 16mm technology towards successful cinematography and image design (for use in both analog and digital postproduction scenarios) and how to develop their ideas towards constructing meaning through moving pictures. Through a series of group exercises, students will put their hands on equipment and solve technical and aesthetic problems, learning to operate and care for the 16mm Bolex film camera; prime lenses; Sekonic light meter; Sachtler tripod; and Arri light kit and accessories. For a final project, students will plan and produce footage for an individual or small group short film. The first half the class will be highly structured, with demonstrations, in-class shoots and lectures. As the semester continues, class time will open up to more of a workshop format to address the specific concerns and issues that arise in the production of the final projects. This course is made possible by the Charles Roven Fund for Cinema and Media Studies.
Instructor(s): T. Comerford Terms Offered: Winter
Equivalent Course(s): CMST 28921, CMST 38921, ARTV 33808, ARTV 23808

MAAD 23809. Experimental Animation: Digital and Camera-less Production, 100 Units.
Through digital and camera-less production techniques such as scanning, signal manipulation, and appropriation, this course will emphasize image construction, digital effects, and post-production for creation of animated art. It can function as a continuation of Experimental Animation: Exploring Manual Techniques or be a stand alone course. Early video effects and image processing, and a wide variety of digital and abstract animation will be presented as formal and technical examples.
Instructor(s): S. Wolniak Terms Offered: Spring
Prerequisite(s): ARTV 10100, 10200 or 10300.
Equivalent Course(s): ARTV 23809, ARTV 33809

MAAD 23820. The Mind as Stage: Podcasting, 100 Units.
Audio storytelling insinuates itself into the day-to-day unlike other narrative forms. People listen to podcasts while they do the dishes, drive to work, or walk the dog. This hands-on course will explore the unique opportunities that this intimate relationship with an audience affords the storyteller. Documentary techniques and practices will form the basis of the course, with assignments from audio fiction and non-fiction, oral history, documentary theater, and comedy. Students will complete several short audio exercises and one larger podcast project.
Instructor(s): S. Geis Terms Offered: Winter
Note(s): Attendance at first class session is mandatory.
Equivalent Course(s): TAPS 38320, TAPS 28320

MAAD 23860. Screendance: Movement and New Media, 100 Units.
This course will explore the evolving relationship between moving bodies and video technologies. From early filmmakers using dancers as test subjects, to movie musicals and contemporary dance for the camera festivals, mediatization of the body continues to challenge the ephemerality of live dance performance. This course focuses on the growing field of screendance, videodance, or dance-on-camera, working to define this hybrid genre and to understand the collaborative roles of choreographer, director, dancer, cameraman, and video editor. This course is both a practical and scholarly approach to the genre of screendance, each component essential to a full understanding and mastery of the other. Course work will be divided between the studio and the classroom. For the studio component, students will learn basic video editing and filming techniques. For the classroom component, students will be asked to watch screendance and read a cross-section of criticism. Assignments will be both technological and choreographic (making screendance) and scholarly (written reflections and a seminar paper).
Instructor(s): L. Leopold Terms Offered: Spring
Note(s): Attendance at first class is mandatory.
Equivalent Course(s): TAPS 28360, CMST 28360

MAAD 23930. Documentary Production I, 100 Units.
Documentary Video Production focuses on the making of independent documentary video. Examples of various modes of documentary production will be screened and discussed. Issues embedded in the genre, such as the ethics, the politics of representation, and the shifting lines between "the real" and "fiction" will be explored. Story development, pre-production strategies, and production techniques will be our focus, in particular-research, relationships, the camera, interviews and sound recording, shooting in available light, working in crews, and post-production editing. Students will work in crews and be expected to purchase a portable hard drive. A five-minute string-out/rough-cut will be screened at the end of the quarter. Students are strongly encouraged to take Doc Production 2 to complete their work.
Instructor(s): J. Hoffman Terms Offered: Autumn
Note(s): Prior or concurrent enrollment in CMST 10100 recommended for undergraduate students.
Equivalent Course(s): ARTV 33930, HMRT 25106, ARTV 23930, CMST 23930, HMRT 35106, CMST 33930
MAAD 23931. Documentary Production II. 100 Units.
Documentary Video Production II focuses on the shaping and crafting of a non-Fiction video. Enrollment will be limited to those students who have taken Documentary Production I. The class will discuss issues of ethics, power, and representation in this most philosophical and problematic of genres. Students will be expected to write a treatment outline detailing their project and learn about granting agencies and budgeting. Production techniques will concentrate on the language of handheld camera versus tripod, interview methodologies, microphone placement including working with wireless systems and mixers, and lighting for the interview. Post-production will cover editing techniques including color correction and audio sweetening, how to prepare for exhibition, and distribution strategies.
Instructor(s): J. Hoffman Terms Offered: Winter
Prerequisite(s): CMST 23930, HMRT 25106, or ARTV 23930
Equivalent Course(s): ARTV 23931, HMRT 35107, HMRT 25107, CMST 23931, CMST 33931, ARTV 33931

MAAD 24410. Transmedia Puzzle Design & Performance. 100 Units.
This course will introduce students to the burgeoning field of immersive puzzle design. Students will develop, implement and playtest puzzles that are suited for a range of experiences: from the tabletop to the immersive, from online puzzle hunts to broad-scope alternate reality games (ARG). Students in this course will work directly with master puzzler, Sandor Wiesz, the commissioner of The Mystery League.
Instructor(s): H. Coleman Terms Offered: Winter
Equivalent Course(s): TAPS 24410, TAPS 34410

MAAD 24415. Games & Performance. 100 Units.
This experimental course explores the emerging genre of "immersive performance," "alternate reality," and "transmedia" gaming. For all of their novelty, these games build on the narrative strategies of novels, the performative role-playing of theater, the branching techniques of electronic literature, the procedural qualities of videogames, and the team dynamics of sports. Throughout the quarter, we will approach new media theory through the history, aesthetics, and design of immersive games, while working in labs with three Chicago-area companies including The House Theater, Mystery League, and Humans vs. Zombies.
Instructor(s): H. Coleman Terms Offered: Winter
Note(s): Attendance at first class session is mandatory.
Equivalent Course(s): TAPS 24415, TAPS 34415

MAAD 24515. Contemporary Political Strategies in Performance. 100 Units.
The emphasis of the course is on strategies-in the words of curator Florian Malzacher, "artistic strategies in politics, and political strategies in art." In moments of political struggle, what can art DO, and what can it not? We will be combining case studies with theoretical background, examining strategies like occupation, participation, parafiction, 'technologies of care,’ détournement and the art strike. Students will have the opportunity to put some of these approaches to the test by designing one or more local interventions according to the interests of the group.
Instructor(s): A. Dorsen Terms Offered: Spring
Equivalent Course(s): TAPS 35515, TAPS 25515, ARTV 30213, ARTV 20213

MAAD 24530. Staging the Internet. 100 Units.
The theater has often been used as a means to embody psychic spaces, from Medieval mystery plays and other allegorical works to Richard Foreman's attempt to give theatrical form to consciousness itself. This practice-based lab class will propose to 'stage the internet' - what techniques and strategies can we develop to give tangible shape to the virtual world? Our explorations will be catalyzed by readings on data and interfaces, networks and protocols, procedural/algorithmic art, digital labor, and competing notions of the virtual.
Instructor(s): A. Dorsen Terms Offered: Spring
Prerequisite(s): Course is designed for advanced undergraduates and graduates. Previous coursework in theater & performance studies or related fields required.
Note(s): Attendance at first class meeting is mandatory.
Equivalent Course(s): ARTV 30214, TAPS 26530, TAPS 46530, ARTV 20214

MAAD 24817. Electronic Music II: Introduction to Computer Music. 100 Units.
Electronic Music II is an introduction to computer-based sound art and live electronic music performance. Our primary tool for this course will be SuperCollider, a computer music programming language designed for composition and real-time music applications. Through this language we will explore the foundations of computer music, including digital instrument design, sequencing, live processing, sound diffusion, and various approaches to algorithmic music generation.
Equivalent Course(s): MUSI 36817, MUSI 26817

MAAD 24850. Topics in Scientific Computing. 100 Units.
This course covers a selection of advanced topics in Scientific Computing.
Instructor(s): Scott Terms Offered: Autumn
Prerequisite(s): Consent of department counselor and instructor
Equivalent Course(s): CMSC 34900
MAAD 24910. Short Form Digital Storytelling: Creating a Web Series. 100 Units.
This course examines the short form storytelling of the digital web series. Through lectures, viewings and discussions in weekly meetings students will determine what makes a strong web series and apply the findings to writing and polishing the pilot episode of their own web series. Students will write weekly 4-5 page assignments building toward the creation of a 5-6 episode series.
Instructor(s): T. Brown Terms Offered: Spring
Note(s): Attendance at first class session is mandatory.
Equivalent Course(s): TAPS 25910

MAAD 24920. Virtual Reality Production. 100 Units.
Focusing on experimental moving-image approaches at a crucial moment in the emerging medium of virtual reality, this class will explore and interrogate each stage of production for VR. By hacking their way around the barriers and conventions of current software and hardware to create new optical experiences, students will design, construct and deploy new ways of capturing the world with cameras and develop new strategies and interactive logics for placing images into virtual spaces. Underpinning these explorations will be a careful discussion, dissection and reconstruction of techniques found in the emerging VR "canon" that spans new modes of journalism and documentary, computer games, and narrative "VR cinema."
Film production and computer programming experience is welcome but not a prerequisite for the course. Students will be expected to complete short "sketches" of approaches in VR towards a final short VR experience.
Instructor(s): M. Downie Terms Offered: Autumn
Equivalent Course(s): CMST 37920, CMST 27920, ARTV 37920, ARTV 27920

MAAD 25010. Anthropology of the Future. 100 Units.
Two major subfields of anthropology - archaeology and ethnography - have traditionally been oriented around the human past and the human present. But what about the future? Conceptions of the future and future-oriented behavior have long been understood to be a critical plane of difference between political economies, religions, and cultural groups, yet they have rarely been an explicit focus of study. When we shift the temporal frame to the future, questions that arise include: do all cultures have theories of the future? how much about human societies are intentional? how does ideology shape future possibilities? what role do imagined futures play in political life? We will consider theories of temporality, past futures (Aztec, Polynesian, Italian), and movements such as millenarianism, messianic religions, Marxism, Dadaism, utopian communities, Afro-futurism, transhumanism, and today's neo-futurist movements that deploy radical technology and speculative design in response to looming climate change. We will also explore the intimate relationship between speculative fiction (e.g., Ursula K. LeGuin, Kurt Vonnegut) and anthropology.
Instructor(s): S. Dawdy Terms Offered: Autumn
Prerequisite(s): PQ: This course qualifies as a Discovering Anthropology selection for Anthropology majors.
Equivalent Course(s): ANTH 20010

MAAD 25612. Comics as Medium. 100 Units.
In a climate in which the borders differentiating media continue to collapse into something now referred to as "transmedia," what does it actually mean for us to move between mediums-particularly mediums that raise familiar issues of representation, temporality, and narrative? The objective of this course is to provide the necessary tools to enable critical reflection on the respective values and mutual relationships of comics, art and film. To achieve this, the course is divided into two units. The first weeks will be spent acquiring the technical and historical context that will enable us to begin to recognize the breadth and depth of word/image narrative practices. After developing a core vocabulary for thinking about comics as a medium we will then look at how artists and directors have drawn on that vocabulary in a range of different contexts. Retaining a sense of the specificity of both comics and film as artistic mediums, we will consider topics ranging from cross-cultural translation, ontologies of otherness, and modes of mediated history. Beyond questions of fidelity, we will look at what it means to adapt particular stories at particular moments. How does an X-Men comic from 1982 adapt to meet the historical needs of its film adaptation in 2002? What do we mean when we say a particular adaptation is "good" or that another attempt "failed"? The works this course will consider are meant to challenge our understanding of what the art of comics can be.
Instructor(s): J. Rosenow Terms Offered: Spring
Prerequisite(s): CMST 10100 or permission of instructor.
Equivalent Course(s): CMST 25612

MAAD 26720. Musical Robotics. 100 Units.
Musical Robotics is a skills and discussion-based class for students interested in learning analog and digital electronics to build robotic musical instruments or sound art installations. Discussions will be organized around readings related to art and technology with a special focus on sound-based works. Students will learn to program Arduinos to control DC motors, solenoids, and servos with music applications like Logic Pro and Max/MSP. As a final project students will present a new instrument they've created or plans for an art installation featuring a kinetic sculpture element.
Instructor(s): Bryan Jacobs (Lecturer Autumn 2019) Terms Offered: Autumn. Visiting Lecturer, Autumn 2019
Equivalent Course(s): MUSI 26720, DIGS 30015, DIGS 20015, MUSI 36620
MAAD 26819. Video Game Music as Play and Discipline (1980s to Present) 100 Units.
How do we engage with music in video games? What does this music mean—both in games and beyond? And what is the status of such music within broader notions of popular music culture? The emerging status of video game music qua music runs in parallel with the growing field of “Ludomusicology,” the study of music and/in/as play, which has lately turned its focus to video games. In this course, we will engage directly with video game music through play and listening, discussing what defines this particular repertoire of music within this particular media form. We will also step outside of games to discuss contextual and sociocultural issues that surround such music and those who engage with it—particularly in ways that traverse the spectrum of serious to trivial. In doing so, we will interrogate the notion of "seriousness" more generally, thinking critically about how we build a "disciplined" academic field around a popular entertainment genre.
Instructor(s): Julianne Grasso Terms Offered: Spring
Equivalent Course(s): MUSI 26819

MAAD 27915. Introduction to Videogame Studies: Art, Play, and Society. 100 Units.
This course is intended as an introduction to the study of videogames in the humanities. Topics include videogame form (visual style, spatial design, sound, and genre); videogames as a narrative medium; embodiment and hapticity in videogame play; issues of identity/identification, performance, and access related to gender, sexuality, race and ethnicity, ability, and class; and rhetorical, educational, and political uses of videogames. Just as the videogame medium has drawn from older forms of art and play, so the emerging field of videogame studies has grown out of and in conversation with surrounding disciplines. With this in mind, readings and topics of discussion will be drawn both from videogame studies proper and from other fields in the humanities—such as English, art history, and cinema and media studies. Undergraduates should be prepared for an MA-level reading load but will write final papers of the standard length for upper-level undergraduate courses (8-10 pages versus 12-15 for MA students). MA students interested in pursuing a particular research topic in-depth will be given supplemental readings. This course will also be designed to take advantage of the University of Chicago’s videogame collection, and will require game play both individually and as part of group play sessions.
Instructor(s): Christopher Carloy Terms Offered: Spring
Note(s): Email for instructor consent
Equivalent Course(s): MAPH 34515, DIGS 20010, ENGL 34515, CMST 37915, CMST 27915, ENGL 24515, DIGS 30010

MAAD 28300. Disability and Design. 100 Units.
Disability is often an afterthought, an unexpected tragedy to be mitigated, accommodated, or overcome. In cultural, political, and educational spheres, disabilities are non-normative, marginal, even invisible. This runs counter to many of our lived experiences of difference where, in fact, disabilities of all kinds are the “new normal.” In this interdisciplinary course, we center both the category and experience of disability. Moreover, we consider the stakes of explicitly designing for different kinds of bodies and minds. Rather than approaching disability as a problem to be accommodated, we consider the affordances that disability offers for design. This course begins by situating us in the growing discipline of Disability Studies and the activist (and intersectional) Disability Justice movement. We then move to four two-week units in specific areas where disability meets design: architecture, infrastructure, and public space; education and the classroom; economics, employment, and public policy; and aesthetics. Traversing from architecture to art, and from education to economic policy, this course asks how we can design for access.
Instructor(s): M. Friedner, J. Iverson Terms Offered: Winter
Prerequisite(s): Third or fourth-year standing
Equivalent Course(s): CHDV 28301, BPRO 28300, HLTH 28301, MUSI 25719

MAAD 29400. Media Arts and Design Capstone Colloquium. 100 Units.
In this capstone colloquium, students will prepare a portfolio of digital media artworks and/or historical and theoretical writing that reflect their interests.
Instructor(s): J. Satrom Terms Offered: Winter
Prerequisite(s): Consent of instructor.
Note(s): This course is required for students completing a minor in Media Arts and Design and must be completed no later than Winter Quarter of the fourth year. The course will meet weekly throughout the quarter.

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Font Notice

This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts. Specifically:

- Times was used instead of Trajan.
- Times was used instead of Palatino.

The editor may contact Leepfrog for a draft with the correct fonts in place.