EMERGENT DIGITAL PRACTICES (EDPX)

Courses

EDPX 2000 Imaging in Emergent Digital Practices (4 Credits)
This course introduces digital imaging and digital illustration. Foundational technical methods and semiotics are introduced as ways to explore contemporary visual language. Students gain understanding in the digital creation and deciphering of images in 2D space. The essential language and concepts concerning representation and digital reproduction are developed through critical study and making. Lab fee. No prerequisites.

EDPX 2100 Coding in Emergent Digital Practices (4 Credits)
This course provides the fundamental concepts of digital interactive software, including the study of how the computer processes information and can be leveraged to create relationships with and between people. Students learn programming fundamentals in ways that are applicable across all types of programming. The basic ideas of Human Computer Interface are introduced and put into practice. Lab fee. No prerequisites.

EDPX 2200 Systems in Emergent Digital Practices (4 Credits)
This course introduces students to the historical, economic, legal and social contexts of emergent digital practices and explores the various ways technology shapes and is shaped by culture. The rapid growth of participatory culture online through, for example, social networking sites, interactive news sites, gaming, mobile apps, and blogging has significant social implications and brings up issues of privacy, intellectual property, and the nature of community and public engagement. This class will explore these issues through various theoretical lens and concrete cases including politics, youth culture, activism, news and art. Particular emphasis will be placed on the question of how new media differs from mass media across various fields of cultural production (music, news, advertising, for example) and on what influence new digital products and practices might have on these industries and on cultures and societies more generally. This course counts towards the Analytical Inquiry: Society and Culture requirement. Cross-listed with MFJS 2200.

EDPX 2300 Time in Emergent Digital Practices (4 Credits)
This course introduces the fundamental concepts of time-based media, with an emphasis on audio and video production. Basic recording, capturing, editing and manipulation of time are covered. Students gain understanding on how to utilize, analyze, and manipulate time in digital media. Students learn the basic language and critical analysis techniques needed to understand when and how to take advantage of each time-based media for their practice. Lab fee. No prerequisites.

EDPX 2901 Computing and Society (4 Credits)
This class examines the computing and communication antecedents of digital media and the critical underpinnings of digital media studies. Starting with historical overview of the development of the computing machine, the class progresses to an examination of the effects of digital technologies on work, social life, the business world and the arts. We investigate the developments of the digital computer through the twentieth century as well as the development and growth of the software industry and the Internet. This course counts toward the Analytical Inquiry: Society and Culture requirement. Cross listed with COMP 2901. No prerequisites.

EDPX 3000 Programming for Play (4 Credits)
This course offers an introduction to the creation of games and playful interactive objects. Students explore the space of socially conscious and humane games as well as investigate the creation of compelling interfaces and interactive opportunities. Specific topics will vary each time the course is taught, and the course is repeatable up to two times. Lab fee. Cross listed with EDPX 4100. Prerequisite: EDPX 2100 or permissions of the instructor.

EDPX 3100 Rapid Game Design and Prototyping (4 Credits)
This course is a rigorous investigation into games, rules, systems, interaction, and the iterative design methodology through the rapid creation of paper-based and physical game prototypes. The ambition is for each student to create one new game per week in response to varying material and conceptual constraints. Participants both create and constructively critique games created by classmates. Participants are expected to become reflective in their play. Class time is devoted to play-testing and discussion. Lab fee. Cross listed with EDPX 4110. Prerequisite: EDPX 2300 or permission of the instructor.

EDPX 3110 Rapid Physical Game Design & Prototyping (4 Credits)
This course is a rigorous investigation into games, rules, systems, interaction, collaboration, and the iterative design methodology through the rapid creation of large, human scale, "Big Games." The ambition is for students, working in changing collaborative groupings, to rapidly create games in response to varying material and conceptual constraints. Participants will both create and constructively critique games created by classmates. Participants are expected to become reflective in their play. Class time will be devoted to play-testing and discussion. Prerequisite: EDPX 2300. Lab fee.
EDPX 3120 Making Critical Games (4 Credits)
Students are challenged to create games (board, physical, video-, and hybrid games) that respond to social conditions in a critical manner while still maintaining an essential ludic quality. Public good and civic engagement projects are welcomed. The course may be repeated with instructor permission when projects vary. Specific topics will vary each time the course is offered, and the course is repeatable up to 3 times. Lab fee. Prerequisites: EDPX 3100 or COMP 1671, and EDPX 3110, or permission of the instructor. Cross listed with EDPX 4120.

EDPX 3200 Data Visualization (4 Credits)
This course explores the creation of informational graphics for the visual unpacking of relationships within and among data sets. Students learn to visualize large data sets as a means of revealing and exploring patterns of information. Creating interactive visualizations are also covered, allowing for deep and participatory engagement with information. The resulting mediums include print and web. Lab fee. Cross listed with EDPX 4200. Prerequisites: EDPX 2000 and EDPX 2100, or permission of the instructor.

EDPX 3210 Typographic Landscapes (4 Credits)
This class is a rigorous investigation of the expressive potential of typography as a crucial element of visual expression and electronic media. This class presumes no background in typography. Students are guided through project-based explorations that range from hand-rendered inter-letter spatial relationships to the typesetting of modest sets of pages for paper and e-books. Lab fee. Prerequisite: EDPX 2000 or permission of the instructor.

EDPX 3250 Making Networks (4 Credits)
This course provides students with the skills necessary to establish network presence across a range of platforms and technologies. Current web technologies and standards are covered but an emphasis is placed on identifying emerging platforms and developing innovative methodologies for critical engagement with emergent digital practices. Technologies studied may include content management and delivery systems, web APIs, big data, digital mapping platforms, data visualization, augmented reality and locative media. Prerequisite: EDPX 2300 or instructor permission. Lab fee. Crosslisted with EDPX 4250.

EDPX 3270 Making Networked Art (4 Credits)
In this course networked art is understood in the broadest sense from art that natively exists on digital networks to art that critiques and engages with the concept of the network in contemporary society. This course aims to develop a critical understanding of and response to the social, cultural, aesthetic and technical contexts of network culture, building on a deep understanding of contemporary and historical networked art practices. Students will engage with network architectures and platforms developing experimental approaches to user interface and interaction, deploying a range of digital materials from data to rich multimedia content to create work that produces new understandings of the role of the network in a post digital age. Prerequisite: EDPX 2400 and EDPX 3250, or permission of the instructor. Lab fee. Crosslisted with EDPX 4270.

EDPX 3310 Tangible Interactivity (4 Credits)
Explores methods and devices for human-computer interaction beyond the mouse and keyboard. Students learn to create and hack electronic input and output devices and explore multi-touch augmented reality, and other forms of sensor-based technologies. Lab fee. Prerequisite: EDPX 2300 or permission of the instructor.

EDPX 3320 Interactive Art (4 Credits)
This course expands the concepts, aesthetics, and techniques critical to the exploration and authoring of interactive art. It explores human computer interactions; user/audience interface design/development; interactive logic, author-audience dialogue; meta data/multimedia asset acquisition and authoring environments. While utilizing student skills in numerous media forms, the class focuses on sensing, interactive scripting techniques, and emerging forms of digital narrative. Emphasis is on the development of interactive media deployment and distributions ranging from screen media to physical environments. Lab fee. Cross listed with EDPX 4320. Prerequisite: EDPX 3310 or EDPX 3450, or permissions of the instructor.

EDPX 3340 Designing Social Good (4 Credits)
This course focuses on interdisciplinary approaches to artistic, scholarly and cultural methods for creating change in contemporary societal mindsets for a more sustainable and equitable future. Our objectives are to understand how current practices are reinforced and then to make experiences that encourage new ideas in the personal and global sphere. Lab fee. Cross-listed with EDPX 4340. Prerequisite: EDPX 2300 or permission of the instructor.

EDPX 3350 Sustainable Design (4 Credits)
This course surveys and functionally implements the foundations of sustainable design strategies as a praxis intersecting the domains of digital media design, dissemination, community organization and networking. The course builds upon the basic paradigms that have coalesced in the organizational and critical platforms of the sustainable design movement including ecology/environment, economy/employment, equity/equality and education/philosophy/dissemination. The class reviews a wide spectrum of sustainable design strategies including: mapping of consumptive origin-thru-fate, green materials usage, creative commons, open source software/hardware movements, collaborative design, predictive complexity modeling, biomimicry, evolutionary design methods, and greening infrastructure among others. Lab fee. Prerequisites: EDPX 2300 and EDPX 2400 or permission of instructor.

EDPX 3400 Video Art (4 Credits)
This course continues the investigation of theories and practice of electronic media and expands into an exploration of video art, providing the basic principles of video technology and independent video production through a cooperative, hands-on approach utilizing various video formats. The course may be repeated for credit with permission of the instructor and when projects vary. Lab fee. Prerequisite: EDPX 2400 or permission of the instructor. Cross listed with EDPX 4400.
EDPX 3410 Advanced Video Art (4 Credits)
This course continues the investigation of theories and practices of electronic media and expands into an individual exploration of video art focusing on off-screen time-based media through conceptual and technological experimentation. Projects explore creating digital video for projection into space, onto buildings, and in the form of installations, to name a few formats. Projects are used as a platform for creative expression focusing on the critical skills necessary for the conception and completion of ideas. Lab fee. Prerequisite: EDPX 3400 or permission of the instructor.

EDPX 3430 2.5D Motion (4 Credits)
This course provides students an opportunity to create multi-dimensionally active poetic orchestrations of text, video and audio using the post-production processing and animation tool After Effects. Lab fee. Prerequisite: EDPX 2400 or permission of the instructor. Cross listed with EDPX 4430.

EDPX 3440 Site-Specific Installation (4 Credits)
This class produces projects investigating physical space, virtual space and site-specific public installation. Lab fee. Cross listed with EDPX 4440. Prerequisite: EDPX 2400 or permission of the instructor.

EDPX 3450 Visual Programming (4 Credits)
This course introduces intuitive visual programming that allows rapid building of personalized tools for data, video, image, and sound manipulation. These tools can be used in real-time editing or performance, complex effects processing, or to bridge between multiple pieces of software. Lab fee. Cross listed with EDPX 4450. No prerequisites.

EDPX 3460 Visual Programming II (4 Credits)
This class uses advanced visual programming concepts (as provided by Max/MSP and Jitter) to explore visualization and sonification techniques in an artistic context. Areas of exploration include OpenGL modeling and animation, virtual physics emulation, audio synthesis techniques, and external data manipulation. Students use these concepts to create art installation and performance projects. Lab fee. Cross listed with EDPX 4460. Prerequisite: EDPX 3450 or permission of the instructor.

EDPX 3490 Expanded Cinema (4 Credits)
This course introduces several forms of expanded cinema, such as video remixes and mashups; live cinema and audiovisual performance; VJing; sonic visualization; visual music; and ambient video. The class extends the student’s multitrack video and audio mixing skills to an emphasis on both performative and generative approaches to audiovisual media. It introduces software and hardware sets including VJ tools and visual programming for generating as well as manipulating video files and real-time source streams. Lab fee. Cross listed with EDPX 4490. Prerequisite: EDPX 2400 or permission of the instructor.

EDPX 3500 Sonic Arts (4 Credits)
This class introduces the tools and techniques of the sonic arts, including field recording; sampling and synthesis; sound editing and effects processing; and mixing. Students survey a variety of sonic arts, historical and contemporary, to understand techniques and strategies for developing and distributing sonic artifacts. Lab fee. Cross listed with EDPX 4500. Prerequisite: EDPX 2400 or permission of the instructor.

EDPX 3510 Sonic Arts II (4 Credits)
This class extends and applies the techniques and theories of the sonic arts to include loop-based composition, generative creation and modular processing. Students learn to add richness and complexity to audio work based on a combination of modern and classic techniques for audio production and the sonic arts. Class assignments include creation of audio for video and games, live performance and installation. Lab fee. Prerequisite: EDPX 3500 or permission of the instructor.

EDPX 3520 Voice & Sonic Environments (4 Credits)
This course covers environmental sound design with an emphasis on the human voice and acoustic ecologies. Studying and exploring a range of documentary, narrative and experimental approaches to sound design and the spoken word, students write and produce several short audio pieces. The final output consists of a podcast, voice-oriented performance and/or sonic installation. Lab fee. Prerequisite: EDPX 3500 or permission of the instructor. Cross listed with EDPX 4520.

EDPX 3560 3D Modeling (4 Credits)
This course serves as an introduction to 3D modeling, texture, and lighting on the computer. Students complete a series of projects in which the processes of preparing and producing a 3D piece are explored. Various strategies and techniques for creating detailed models to be used in animation and games are examined. Additional attention is spent on virtual camera techniques as well as the use of composting in creating final pieces. Current trends in the field are addressed through the analysis and discussion of current and historical examples. Lab fee. Cross listed with EDPX 4600, MFJS 3600. Prerequisite: EDPX 2000 or permission of the instructor.

EDPX 3610 3D Animation (4 Credits)
This course examines animation within virtual 3D environments. Starting with basic concepts, the course develops timing and spacing principles in animation to support good mechanics. They also serve as the basis for the more advanced principles in character animation as the class processes. Lab fee. Cross listed with EDPX 4610. Prerequisite: EDPX 3600 or permission of the instructor.

EDPX 3620 3D Spaces (4 Credits)
An exploration of 3D digital space and the possibilities found in games, narratives and visualizations in these spaces. A real-time engine is used by students to examine the opportunities of virtual 3D worlds. Lab fee. Prerequisite: EDPX 3600 or permission of the instructor.
EDPX 3700 Topics in Emergent Digital Culture (4 Credits)
This course provides an in-depth exploration of the emergent digital practice of a particular culture and a unique area of advanced study (for example, art and science studies; activism; youth culture; critical game studies; the philosophy of technology; or social networking). Students learn the social/historical context of the particular culture and observe and document the interplay between cultural practices and particular technologies. This course may be repeated. Prerequisite: varies with topic.

EDPX 3701 Topics in Emergent Digital Making (1-4 Credits)
Topics in Emergent Digital Practices.

EDPX 3710 Critical Game Studies (4 Credits)
This course is a critical investigation of contemporary ludic cultures. Ludic cultures are environments and practice of play. This course is taught with a hybrid teaching model where games are treated as texts, and outcomes are in the form of discussion and synthetic media responses. We construct and play a hyper-local canon of games, both in and outside of class. We read from the growing body of literature in game studies. We reflect and respond to these texts through shareable media. This course satisfies a cultures requirement for emergent digital practices majors and minors. Lab fee. Prerequisite: EDPX 2200 or permission of the instructor.

EDPX 3725 Activist Media (4 Credits)
Today's alternative cultures use internet and mobile technologies to access and circulate mainstream information, but also to exchange rapidly information that exists outside mainstream media channels. Activist movements today with access to digital tools and networks are no longer dependent on newspapers and broadcast networks to represent them and to disseminate their message. We are, however, just beginning to see how the proliferation of alternative networks of communication, and the content, practices, and identities they facilitate, interact with traditional political and business organizations as well as with traditional media products and practices. This course focuses on media activism over the past half-century tied to various social movements with an emphasis on contemporary protest movements and their use of new and old media tools and strategies. This course satisfies a cultures requirement for emergent digital practices majors and minors. Cross listed with EDPX 4725, MFJS 3150. At least junior standing required or permission of the instructor.

EDPX 3730 21st Century Digital Art (4 Credits)
An exploration of Digital Art and surrounding culture from the last 15 years. Topics will include machinima, demoscenes, MMO performances, interactive installations, VR, animation, video shorts, and much more. Students will actively search for, share and critically review much of the creative work for the class.

EDPX 3740 Performance Cultures (4 Credits)
This course explores the history and current state of technology and performance. Topics covered include expanded cinema, live cinema, V.Jing, performance art, and the intersections of audiovisual media and technologies with dance, theater, and more. This course incorporates reading and discussion of critical texts and documentation of theory, process and practices, and the class includes screening and discussion of examples of both historical and emerging forms of media-enriched performance. For output, students produce written media on a variety of performance-related issues, artifacts, and practitioners, culminating in a written document or interactive publication. Lab fee. Prerequisites: EDPX 2200 and EDPX 2400, or permission of the instructor.

EDPX 3750 Sound Cultures (4 Credits)
This course explores some of the cultures of artists, producers, and listeners that have formed around sound technologies. The class combines reading of critical texts and guided listening to study several genres of music, sound art and noise, ranging from post-WWII electronic music, field recordings and sound art, to hip-hop, techno, jam bands, and more. Interdisciplinary in critical approach, this class encourages students to listen to these sonic forms as intersections of technological, social, ideological, and imaginative forces. For output, students produce written media on a variety of sound-related issues, artifacts, and practitioners, culminating in a podcast or interactive publication. Lab fee. Cross listed with EDPX 4750. Prerequisites: EDPX 2200 and EDPX 2400, or permission of the instructor.

EDPX 3770 Cybercultures: The Social Science of Virtual Spaces (4 Credits)
This course encompasses a variety of lenses through which to view, evaluate and critique ideas of 'community' and communities in cyberspace (cyberculture). The course covers such issues as identity and race in cyberspace (including 'identity and racial tourism'); communication technologies and social control; digital censorship; and utopian and dystopian representations of digital technology. The course also engages with social theories involving issues of technological determinism and the popular representation of technology. It explores the views of a diverse set of critics to ask whether digital things are 'good' for you and your communities. Cross listed with EDPX 4770.

EDPX 3780 Speculative Cultures: Science Fiction in Emergent Digital Practices (4 Credits)
This course explores the intersections of emergent digital practices and cultures with extrapolative thought experiments, technical speculations, and social criticisms of science fiction. Students read, discuss, write, and otherwise respond to primary texts by the likes of William Gibson, Bruce Sterling, Cory Doctorow, Philip K. Dick, and Hiroshi Yamamoto. Science fiction studies may also include sub-genres (steampunk, hard science fiction, ecological) and regional categories (Japanese sci-fi), as well as consider science fiction in other media formats (sound recordings, film, games). For output, students produce written materials in a variety of formats, culminating in a formal essay or interactive publication. Cross listed with EDPX 4780. Prerequisite: EDPX 2200 or permission of the instructor.

EDPX 3800 Topics in Digital Making (4 Credits)
This course provides an in-depth exploration of the emergent digital practices of a technology or method for making (for example, wearables; interactive projections; augmented reality; immersive multi-channel soundscapes). Students learn the social/historical context of the particular method and consider the role and function their creations serve when it becomes public. This course may be repeated. Lab fee. Prerequisite: varies with topic.
EDPX 3950 Collaboration and Production (4 Credits)
In this collaborative capstone experience, students combine skills to create complex works that encourage the social collaboration of its audience or users. Students learn how to develop group working methods that take advantage of the skills of each member. This course requires full cooperation between team members in order to demonstrate synthesis of the principles of experience, emergence, and engagement taught throughout the program. Understanding and involving the audience as full participants in the final created experiences are also essential. Lab fee. At least junior standing required. Prerequisite: varies with topic.

EDPX 3960 BFA Capstone (4 Credits)
This course is required for all BFA students prior to taking the undergraduate capstone course. Students work independently with a faculty member to research and develop their capstone project in detail addressing ideas, making, venues, distribution, and other aspects of professional practice. Lab fee. Senior standing required. Must be a BFA student.

EDPX 3980 Internship (1-8 Credits)
Instructor approval required.

EDPX 3990 Capstone (4 Credits)
This course provides time and guidance for individual students to develop complex works that are a culmination of their studies. All projects must synthesize the principles of experience, emergence, and engagement taught throughout the program. All projects require both writing and making, the balance of these two to be determined by the nature of the work. Lab fee. Senior standing required.

EDPX 3991 Independent Study (1-8 Credits)
Independent Study form required.

EDPX 3992 Directed Study (1-8 Credits)
Independent Study form required.