EMERGENT DIGITAL PRACTICES (EDPX)

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 Interactivity 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 2300 Systems in Emergent Digital Practices (4 Credits)
This course studies the fundamental concepts of systems, both analog and digital, analyzing how structure and operation combine to produce complex results and effect change in the world. Students will learn how the components of digital systems from simple electronics to complex software and distributed networks function systematically to solve problems and share information. Through study of the development of the computer, the internet and digital interfaces students will gain a critical understanding of how these systems have been historically shaped. Reading, writing, and making will synthesize practice and critical ideas. No prerequisites. Lab fee.

EDPX 2400 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 2710 Critical Game Cultures (4 Credits)
This course is a critical investigation of contemporary ludic cultures. Ludic cultures are environments and practices of play. This course is taught with a teaching model where games are treated as texts, and outcomes are in the form of discussion and synthetic media responses. We co-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 counts towards the satisfaction of the Cultures requirement for Emergent Digital Practices majors and minors. Lab fee. This course counts toward the Analytical Inquiry: Society and Culture requirement.

EDPX 2730 Understanding Digital Art (4 Credits)
An exploration of digital art focused on artwork created since 2000. Topics include video art, MMO performances, interactive installations, VR, animation, and much more. Students will actively search for, share, and analyze artworks as a key component of the class. This course counts toward the Analytical Inquiry: Society and Culture requirement.

EDPX 2740 Animated Satire (4 Credits)
This course will study the use of animated satire and irreverence as a tool to critique issues of our time, including socio-politics, culture, and environmental changes. The history and contemporary practices of this genre will be examined through text and media. Students will explore this field through media, theory, creating media and writings. Throughout history, artists, writers, performers, and activists have used satire as a powerful instrument to question those who abuse authority. Understanding the world through critical humor can position us to react to politics and culture with relevance, and even spark movements. The writing and creative making process open the opportunity for paths of self- discovery and vulnerability, which can contribute to empathy. This course counts toward the Analytical Inquiry: Society and Culture requirement.

EDPX 2770 Exploring Digital Cultures (4 Credits)
This course introduces fundamental concepts of digital technologies and networks from a cultural perspective. Students will critically examine the broader impact of the internet, search engines, social media platforms, algorithms, surveillance capitalism, technological bias, and online cultural exchange. How can we envision preferable futures for online cultures? What methods can be used to evaluate possible futures? Students will explore the different cultural aspects of critical speculation through theory, literature, speculative/science fiction, art, and making. This course counts toward the Analytical Inquiry: Society and Culture requirement.

EDPX 2780 Computing Culture (4 Credits)
This course focuses on the history and theory of computing technologies, and their impact on the arts and society. Computing, in this context, ranges from ancient mechanical computers, telecommunication, and colonial infrastructure and contemporary highspeed networks, social networks, and Artificial Intelligence. How do these technologies impact modern societies? What artworks (visual art, literature, music and more) utilize computing in creative and critical ways? How can art and computing create social change? What are the negative legacies of colonialism embedded in both art and computation? What are meaningful decolonial practices stemming from the Global South and North that enable the collective stewardship of new technologies? Students will analyze technologies, art, and human creations through qualitative analysis and creative interpretations. This course fulfills the Cultures requirement for Emergent Digital Practices majors and minors. This course also counts toward the Analytical Inquiry: Society and Culture Common Curriculum requirement.

EDPX 3100 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 3110 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 3112 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 maintain 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 very 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 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 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 2100. 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 3330 Advanced Coding (4 Credits)
This course is focused on text-based creative coding for multiple purposes. Specific applications change each quarter and can include mobile apps, computer vision, machine learning, generative art, programming reactive spaces, web animation, and other emerging ideas, all driven by creative coding. Prerequisite: EDPX 2100 or COMP 1671.

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 2100 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/pedagogy/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 3370 Biomedia in Emergent Digital Practices (4 Credits)
This EDP art-science course in Biomedia will survey and investigate the interplay between new media, biological systems/ technologies and bioethics as they relate to creative inquiry at the juncture of life sciences, digital media and contemporary technoculture. The course will build upon the basic paradigms and platforms of biosemiotics and biomimetics to expand into a coverage of our framing of corporeality, biological/environmental sensibilities and our perceptions and interconnections with biomaterials and lifeforms that we exist thru and within. Course topics will adapt to significant developments in biological sciences, emergent media and bioethics. The course can be repeated for credit with offering of new course topics. Cross Listed with EDPX 4370. Prerequisite: EDPX 2300. Course is open to Biology, Environmental Science majors and Sustainability minors with instructor approval.

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 2400 or permission of the instructor.

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. Prerequisite: EDPX 2100.

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 3600 3D Modeling (4 Credits)
This course serves as an introduction to 3D modeling, texturing, 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 compositing 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 Making.

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, VJing, 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 the sonic turn of emergence in contemporary digital culture. New sound technologies and practices, along with the development of interdisciplinary sound studies, have made avant-garde composition, sound art, film soundtracks, electronic music, turntablism, jazz, and alternative as well as popular musical forms equally essential zones in which we attune to changing technocultural conditions. To situate the course's emphasis on contemporary sonic experience and auditory ways of being in the world, an historical portion of the class establishes the ways in which new sound cultures have appeared since WWII to transform how musicians, artists, scholars, and listeners experience and understand sound. The class facilitates experiences ranging from the pole of auditory realism to that of sonic speculation and futurism. Students will develop a sonic literacy that includes: listening as a creative act; understanding how to work with diverse sonic materials; and appreciating the critical voice as a creative and cultural imperative. Prerequisites: EDPX 2400.

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. This course counts toward the Analytical Inquiry: Society and Culture requirement. Cross listed with EDPX 4770.

EDPX 3772 Cybercultures: Art, Technology, and the Extended Body (4 Credits)
This course explores the extensions of the body made possible by technology, with a particular focus on how artists have used both analog and digital technologies to extend the body and to influence their creative practices. Beginning with the camera obscura and ending with examples of contemporary computer-mediated and artworks, the course will present for critical analysis a wide range of the various technologies used by artists to shape and alter their creative practice. We will explore the nature of the technological interface with attention to its varied effects on human perception and on creative practice itself. A combination of critical texts, examples of artist works, written assignments and creative projects will foster an in-depth assessment of how technological tools and processes influence, enhance and alter the creative processes and practices used by artists. This course counts toward the Analytical Inquiry: Society and Culture requirement.

EDPX 3780 Science Fiction: Digital Culture (4 Credits)
This course explores the intersections of emergent digital practices and cultures with the extrapolative thought experiments, technical speculations, and social criticisms of science fiction. Students will engage with a range of both canonical and contemporary science fiction and speculative fiction media, including short stories and theory, film and television, and other expanded media such as visual art, audio, graphic novels, and games. Students will critically and creatively explore conceptual approaches such as world-building, speculative technologies, digital aesthetics, and much more. [This class fulfills the EDP Cultures requirement.].

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 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.