Public Digital Arts

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Undergraduate certificate: public digital arts

Faculty: https://pda.uiowa.edu/people

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Courses

Public Digital Arts Courses

DIGA:2800 Digital Arts: An Introduction 3 s.h.
Introduction to potential of integrating art with technology to provide a foundation of skills and concepts through hands-on experimentation; lectures and demonstrations introduce key concepts and ideas as well as the history of digital arts; students develop skills that form a foundation for future investigation through labs; work may include using an Arduino, programming, and developing an interface to control a software project; final project is shared with the public in some way; critical discourse in the form of writing assignments allows for reflection and evaluation. GE: Engineering Be Creative. Same as ARTS:2800, CINE:2800, CS:2800, DANCA:2800, MUS:2800, THTR:2800.

DIGA:2880 Installations and Interactive Performance 3 s.h.
Introduction to aesthetics, techniques, and practical possibilities of fusing together theatre, dance, music/sound, art, design, cinema, gaming, human computer interaction, and engineering; foundations of creating interactive experiences that use digital photos, video, text, real-world objects, sensor data, live bodies moving in space, Kinect sensors, cameras, and multiple video outputs (e.g., projectors, LED displays); use of Isadora, an interactive, node-based programming software, to create immersive mediated performances, interactive installations, embodied user-based experiences, and user-manipulated virtual environments. GE: Engineering Be Creative. Same as DANCA:2880, THTR:2880.

DIGA:3840 Electronic Objects and Spaces 3 s.h.
Introduction to basic concepts, theories, and practical applications of digital video production for multiple distribution streams, with focus on aesthetic and technical principles; development of proficiency in contemporary approaches to digital media production by understanding the production pipeline from ideation to preproduction, production, postproduction, and through to distribution. GE: Engineering Be Creative. Same as DANCA:2890, THTR:2890.

DIGA:3876 Video for Performance 3 s.h.
Introduction to aesthetics and practical applications of digital media and video design for live performance including content creation, system design, and content optimization for media servers; students create digital video and animations and integrate them into live performance and entertainment events via projections, media servers, and digital displays using QLab Media Server and Adobe After Effects; for those with an interest in designing, creating, and displaying digital media for theatre, dance, concerts, corporate events, gallery installations, VJ sets, and architectural projections. GE: Engineering Be Creative. Same as CINE:3876, DANCA:3876, INTM:3876, THTR:3876.

DIGA:3885 New Musical Instruments: From Design to Performance 3 s.h.
Acoustic principles of selected traditional instruments (e.g., winds, strings, percussion) as well as principles of electroacoustic sound production (e.g., analog synthesizers, microphones, transducers); students work in teams to build, test, and improve their own musical instrument and experiment with its playing modes; projects may include inharmonic variations upon classical instruments, musical bots, guitar or voice-processing pedals, transducer-driven DIY Gamelans, and more; for composers, performers, engineers, and sound enthusiasts who want to design, build, and/or perform with new musical instruments. GE: Engineering Be Creative. Same as MUS:3285.

DIGA:3895 Performance, Art, and New Technologies in Society 3 s.h.
Students pitch projects and work in interdisciplinary groups to create original live performances and installations based on major technological innovations that have deeply impacted society and live performance in late 20th and early 21st centuries; daily hands-on making; examination of theoretical texts and performances that address impact of technology on human condition to contextualize students’ own art/technology projects; exploration and adaptation of technologies/aesthetics for live performance and art including telepresence and liveness, artificial intelligence and big data, augmented and virtual reality. Prerequisites: MUS:2800 or THTR:2880 or CS:1110 or CS:1210 or SCLP:4835. Same as DANCA:3895, THTR:3895.

DIGA:4835 New Musical Instruments: From Design to Performance 4 s.h.
Acoustic principles of selected traditional instruments (e.g., winds, strings, percussion) as well as principles of electroacoustic sound production (e.g., analog synthesizers, microphones, transducers); students work in teams to build, test, and improve their own musical instrument and experiment with its playing modes; projects may include inharmonic variations upon classical instruments, musical bots, guitar or voice-processing pedals, transducer-driven DIY Gamelans, and more; for composers, performers, engineers, and sound enthusiasts who want to design, build, and/or perform with new musical instruments. GE: Engineering Be Creative. Same as SCLP:4835.
DIGA:4840 Air, Actuators, and Motors 4 s.h.
Introduction to wide range of motors, actuators, and air devices available for integration in art projects; various forms of motor control and necessary means to power these devices; DC and AC motors, stepper motors, solenoids, electro magnets, relays, pneumatics, inflatables, and other air-driven devices; development of a project utilizing one or more systems; examples and media demonstrations to show how artists and scientists employ these systems. Prerequisites: ARTS:1510 and ARTS:1520 and (SCLP:2810 or CERM:2010 or INTM:2710 or MTLS:2910 or TDSN:2210). GE: Engineering Be Creative. Same as SCLP:4840.