

# Digital Arts (DIGA)

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## Courses

### **DIGA 101A. Digital Art Fundamentals. 1 Unit.**

An introduction to digital arts as a tool for artistic expression. Topics include digital imaging for print and screen, raster and vector graphics, video, animation and interactivity. Students will be exposed to the work and ideas of important artists working in digital arts. Emphasis is on the application of acquired skills in the completion of creative projects.

### **DIGA 161A. Digital Audio Fundamentals. 1 Unit.**

An introduction to digital audio as a tool for artistic expression. Topics include digital audio encoding, recording hardware and techniques, basic audio processing, MIDI applications, and multitrack sequencing. Students will be exposed to the work and ideas of important artists working in electronic music and sound design. Emphasis is on the application of acquired skills in the completion of creative projects.

### **DIGA 190. Special Topics in Digital Arts. 1 Unit.**

### **DIGA 221. Graphic Design. 1 Unit.**

This course explores the principles of design, and typography through digital media. Students are introduced to a wide range of practices used in the fields of graphic design and professional visual communication. Prerequisite: DIGA 101A.

### **DIGA 222. Web Design. 1 Unit.**

This course is an introduction to the design and creation of websites. Students will learn to utilize sound, graphics, interaction and programming to create and publish dynamic web sites. It additional to web site creation students will be exposed to contemporary issues surrounding web culture and technologies. Prerequisite: DIGA 101A.

### **DIGA 225. Digital Photography. 1 Unit.**

An introduction to digital photography as a means of creative expression. Students will learn basic camera techniques, digital image software, and aesthetic considerations of the medium. Prerequisite: DIGA 101A.

### **DIGA 231. Interactivity and Art. 1 Unit.**

This course explores concepts and techniques of computer interactivity by exploring human computer interactions, software programming, sensor acquisition, and the translation of human movements into expressive multimedia art forms. Students will learn how to create custom software interfaces and use an array of sensors to create advanced interactive projects. Prerequisite: DIGA 101A or DIGA 161A or CSCI 111.

### **DIGA 251. Digital Video Fundamentals. 1 Unit.**

This course is an introduction to digital video as a tool for artistic expression. Students will learn basic principles of composition, lighting and narrative, as well as non-linear editing and basic operation of video hardware. Students will be exposed to the work and ideas of important artists working in the medium and will be expected to produce artwork in a creative and personal way. Prerequisite: DIGA 101A or DIGA 161A.

### **DIGA 260V. Audio Field Recording. 1 Unit.**

Portable technology for recording sound in outdoor environments has a long history of engaging both artists and scientists. Almost from the beginning, the portability of the resulting audio recordings transformed human understanding of natural environments and other cultures. These recordings allowed us to not only hear new things, but also to hear old things in new ways. This course offers a hands-on approach to the tools and techniques used in audio field recording. Students will gain experience making their own audio field recordings and learn about the potential uses of such recordings. A variety of perspectives and professions will be covered, including musicians, sound designers, ethnographers, bio-acousticians, and environmental scientists.

### **DIGA 280. Digital Arts. 0.5 to 1 Units.**

### **DIGA 285. Independent Study. 0.5 or 1 Units.**

### **DIGA 290. Special Topics in Digital Arts. 0.5 or 1 Units.**

### **DIGA 301. 3D Modeling and Animation. 1 Unit.**

An introduction to 3D modeling, rendering and animation. Includes creation, editing and mapping of materials for the models in a 3D scene, material editors, paint and image manipulation software, lighting, tracking and keyframing, curve/path animation, inverse kinematics, morphing, raytracing, file conversion/compression and required formats. Prerequisite: DIGA 101A or CSCI 111.

### **DIGA 302. Advanced 3D Modeling and Animation. 1 Unit.**

A continuation of DIGA 301. A project based class where students complete advanced 3D animation and modeling projects. Covers a wide range of topics and techniques in 3D modeling, shading, rendering, and animation, including character-design for game animation and film. Prerequisite: DIGA 301.

### **DIGA 303. 2D Animation. 1 Unit.**

A studio course concentrating on a range of digital and experimental animation principles, techniques and fundamentals. Topics covered will include hand drawn animation, body mechanics, storytelling and storyboarding, as well as practical use of compositing software. No previous animation experience required. Prerequisite: DIGA 101A or ARTS 105A.

### **DIGA 325. Advanced Digital Photography. 1 Unit.**

A continuation of DIGA 225. A project based class where students complete advanced digital photography projects. Covers a wide range of advanced topics and techniques in digital photography with an emphasis on artistic expression. Prerequisite: DIGA 225.

### **DIGA 331. Advanced Interactivity and Art. 1 Unit.**

A continuation of DIGA 231. A project based class where students complete advanced interactive projects. Covers a wide range of topics and techniques in computer vision, physical computing, and programming for art and games. Prerequisite: DIGA 231.

### **DIGA 351. Advanced Digital Video. 1 Unit.**

A continuation of DIGA 251. This course is an advanced workshop where students are expected to develop substantial time-based projects. Students will have the flexibility to work in any genre including narrative forms, non-linear forms video installations and multi-channel projections. Students will be exposed to artists who use the medium of digital video in nontraditional ways and challenge the viewer's expectations of time-based media. Prerequisite: DIGA 251.

**DIGA 361. Audio Recording and Production I. 1 Unit.**

An introduction to composing and recording music in a computer-based studio environment. Students learn about tools and techniques for MIDI sequencing, multi-track hard disk recording and music production. Original composition projects are an integral component of this course. Prerequisite: DIGA 161A.

**DIGA 362. Audio Recording and Production II. 1 Unit.**

A continuation of DIGA 361. Students complete advanced projects in a computer-based studio environment. Readings and discussion in this course focus on the social impact of audio recording technology and contemporary aesthetics of studio production. Prerequisite: DIGA 361.

**DIGA 365. Electronic Music. 1 Unit.**

An introduction to sound synthesis, musical sampling, audio processing, and other music production techniques. Emphasis is on the students developing original creative projects and remixes that explore the distinct sonic elements of various sub-genres. This course explores both software and hardware tools. Prerequisite: DIGA 161A.

**DIGA 366. Sound Design. 1 Unit.**

An introduction to sound that supports other media such as film, TV, live theatre, and interactive entertainment. Emphasis is on the students producing or enhancing sonic elements of both existing media examples and projects developed in complimentary classes. This course explores a variety of tools specific to each media application. Prerequisite: DIGA 161A.

**DIGA 385. Independent Study. 0.5 or 1 Units.**

**DIGA 390. Special Topics in Digital Arts. 1 Unit.**

An advanced course that focuses on the intense study of a topic related to digital arts. The specific topics offered will vary each semester and depend on student interest and faculty availability. May be repeated for credit. Prerequisite: Permission of Instructor.

**DIGA 395. Teaching Apprenticeship. 0.5 Units.**

Pass/Fail only. Students assist a faculty member with the teaching and management responsibilities related to one of the program's existing courses. Prerequisite: Permission of instructor. May be repeated once.

**DIGA 398. Advanced Digital Arts Studio. 1 Unit.**

Studio course structured to cover a wide variety of digital media. Students pursue projects of their own design, producing a body of work that is composed of screen-based 2D images, multimedia, sound, animations, video, or other experimental digital artwork. The course includes ongoing discussions and critiques of student-designed projects. May be repeated for credit. Prerequisite: Any course from DIGA 325, DIGA 331, DIGA 351, DIGA 302, DIGA 362 or DIGA 366. Offered every year in the spring semester.

**DIGA 465. Scoring for Multimedia. 1 Unit.**

Explores the coordination of music with the visual and narrative elements of a multimedia production. Students compose for both electronic and traditional media in a variety of musical genres. A survey of film music is an integral component of the course. Prerequisite: DIGA 161A.

**DIGA 466. Advanced Scoring for the Media. 1 Unit.**

continuation of DIGA 465. A project based class where students create scores for video games, film, video, installation and other mediums. Covers a wide range of topics and techniques such as audio production, orchestration, juxtaposition, and the analysis of sound and image. Prerequisite: DIGA 465.

**DIGA 485. Independent Study. 0.5 or 1 Units.**

**DIGA 490. Special Topics in Digital Arts. 1 Unit.**

**DIGA 498. Senior Project I. 1 Unit.**

Conception and development of the senior project. The student produces a proposal for a capstone project that builds on previous coursework and presents it before a faculty jury at midterm. After this proposal is approved, the student is expected to make significant progress on the project before the semester ends. Prerequisite: Any course from DIGA 325, DIGA 331, DIGA 351, DIGA 302, DIGA 362, or DIGA 366. Offered every year in the fall semester.

**DIGA 499. Senior Project II. 1 Unit.**

Further development and completion of the senior project. Each student continues with the project initiated in Senior Project I and prepares it for a public presentation. Students work together under the guidance of a faculty member to plan and execute a public exhibition of completed projects. Prerequisite: DIGA 498. Offered every year in the spring semester.