

Digital Media & Design Computing

The Design Computing curriculum is quite dynamic. New opportunities and resources appear, as well as new challenges. Please keep in mind that *the following information will almost certainly change!*

Digital Media

Anticipated Offerings

380: Computers In Architecture (UG req.)

Autumn **Winter** **Spring** **Summer**

Prerequisites: None

Lectures, demonstrations and exercises introduce students to general computing concepts, and to applications used in environmental design and planning professions. Exercises utilizing Macintosh, Windows 95, and networked computing environments convey the 'survival skills' of each operating system, as well as experience with different applications: word processing, 2D paint and draw graphics, 3D graphics, and spreadsheets.

481: 3D Modeling and Rendering

Autumn **Winter** **Spring** **Summer**

Prerequisites: Arch 380 or permission

Lectures and weekly exercises develop an understanding of and an ability to apply the underlying principles of 3D graphics and rendering software. Topics include modeling, lighting, shading, smoothing, texturing, rendering and, animation.

478: 2D CAD + Working Drawings

Autumn Winter **Spring** Summer

Prerequisites: Arch 380 or permission

Lectures and exercises develop understanding of working drawings (WD) and the use of 2D CAD to create them. Topics WD organization, conventions, content, limitations, plus CAD primitives, attributes, layering, symbols, data exchange, plotting.

416: Freehand Drawing in the Digital Realm

Autumn **Winter** Spring Summer

Prerequisites: none

Develop and apply traditional visual sensitivities to drawing done with digital tools. Class sessions are spent hands-on, working with paint programs, graphics tablets, scanners, etc.

417: Advanced Topics in Digital Drawing

Autumn Winter **Spring** Summer

Design Computing

Anticipated Offerings

482: Web Weaving

Autumn Winter Spring Summer

Prerequisites: Arch 380 or permission

Learn to create interactive design-oriented web sites: present a design project, a personal portfolio site, or the work of an online studio. In addition to looking at the technologies involved, discuss the social and user issues of such sites.

486: Comp. Graphics Prog. for Design

Autumn Winter Spring Summer

Prerequisites: permission

Introduction to fundamental concepts of computer programming for design applications with an emphasis on interactive graphics. Basic control and data structures for interactive graphics programming; weekly exercises with term project. Significant lab time required.

485: Digital Craft Workshop

Autumn **Winter** Spring Summer

Prerequisites: Arch 411/481, 478, or permission

Opportunity to apply programming, computer graphics or CAD knowledge to a projects of your own choosing, and share skills and techniques with your peers. You will be expected to work on your own project, but share your goals and process with the rest of the class, as well as give suggestions and comments to other class members.

Seminars

Anticipated Offerings

484: Design Computing Seminar

Autumn Winter Spring Summer

Prerequisites: permission

Weekly colloquium and discussion forum. Discusses design computing research and report on ongoing project progress, with demonstrations and guest speakers. Explores design computing, design thinking and design process, and inventing new computer aided tools for design.

587: Theory of Design Computing

Autumn Winter Spring Summer

Prerequisites: permission

Examines the relationship between theory of design and computational tools for practice. Explores how the emergence of computers as a mainstream tool in design has already changed architectural practice. Discusses how, as with other technologies that revolutionized the practice of architecture, information technologies carry hidden implications about design process and products.

483: Design of Virtual Environments

Autumn Winter Spring Summer

Prerequisites: permission

Explores through a blend of technical exercises constructing computational artifacts, readings, and discussions of relevant literature, the possibilities of online virtual environments. Incorporates a term project or paper based on exercises and readings.