Digital Design (DES)

Courses

**DES 1100. Intro to Digital Design. 3 Hours.**
Introduces software and principles related to digital design and visual communications, and the creation and reproduction of art. Teaches how to create and modify digital images, illustration, and page layout using current design software and printing techniques. Course fee required. FA, SP.

**DES 1300. Design I. 3 Hours.**
Explores the elements of design from which advertising, computer graphics, and graphic arts are structured by building awareness and skill in creating designs, using the concepts of composition, proportion, alignment, contrasts, white space, typography, eye movement, and element control, emphasizing the value of these concepts to communicate ideas. Course fee required. FA, SP.

**DES 1610. Screen Printing. 3 Hours.**
For students interested in the screen printing industry on the commercial level. Includes hands-on experiences for printing on various substrates using photographically/mechanically generated stencils, reproducing images with computers for positive reproduction, and multi-color screen printing on fabric. Instruction includes the use of vector image editing software. Offered based upon sufficient student need.

**DES 2100. Design Thinking. 3 Hours.**
An introduction to design thinking, an empathy-based, human-centered, and rapid prototype-driven methodology for innovation. Students will explore challenges such as the creation of new products, technological innovation, services, business models, experiences, processes and/or systems through the design thinking process. FA, SP.

**DES 2300. Design II. 3 Hours.**
An intermediate level course that expands the skills and knowledge acquired in Design I. The course emphasizes practical assignments that examine applied problem solving and professional solutions for graphic designers. Specific themes/topics for the course include visual grouping and hierarchy, visual identity development and application of Gestalt theory. Course fee required. Prerequisites: DES 1100 (Grade C or higher) OR WEB 1400 (Grade C or higher); AND DES 1300 (Grade C or higher) OR ART 1120 (Grade C or higher). FA, SP.

**DES 2710. Typography I. 3 Hours.**
Study of basic layout, lettering, type design, identification of styles, and typographic history. Students learn how to use type as a basic element of graphic communication, how the use of different typefaces visually communicate a desired effect, and fundamental terminology of type specification. Consists of lectures, quizzes, and ongoing typographically-related projects intended to be of portfolio-quality. Course fee required. Prerequisite: ART 1120 OR DES 1300 (Grade C or higher). FA, SP.

**DES 3000. Design III. 3 Hours.**
Advanced application of design theory and processes, conceptual thinking and expansive form-making. Students will continue to develop their unique design voice and process, through further exploration of typography, imagery, and visual continuity to create complex portfolio-ready work. Prerequisites: ART 1110 (Grade C or higher); AND DES 2300 (Grade C or higher); AND DES 2710 (Grade C or higher); AND ART 2060 (Grade C or higher). SP.

**DES 3300. Intro to Digital Video Editing. 3 Hours.**
For students pursuing a degree in Computer and Information Technology. Introduces essentials of editing video and audio with computers, including TV/video production applications, multimedia authoring, and/or Internet video streaming. Also includes digitizing video and audio from analogue or digital sources, selecting footage from source clips, constructing transitions, titling, creating and using alpha channel or other matte techniques, plus other special effects. Course fee required. Prerequisites: DES 2300 (Grade C- or higher); AND DES 2600 (Grade C- or higher). SP.

**DES 3400. Information Design. 3 Hours.**
Introduction to the field of information design, data visualization, infographics and instructional materials. Students will explore information design problems in both stand-alone and system applications; digital (interaction) media, print, and environmental communication. Prerequisites: DES 2710 (Grade C or higher). SP.

**DES 3500. Interface Design. 3 Hours.**
Students will learn a user-centered approach and process to design interfaces for web, mobile and software applications successfully. Exploration of grid structures, layouts, signs and symbols, branding, and typography as they relate to interface design. Prerequisites: WEB 1400 (Grade C or higher); AND DES 2300 (Grade C or higher); AND DES 2710 (Grade C or higher). SP.

**DES 3600. 3-D Visualization. 3 Hours.**
Introduces three-dimensional modeling and rendering techniques on the computer, including various modeling processes, defining and applying textures, assembling scenes, and rendering images, which are applicable to realistic package and product designs, motion picture effects, video game assets, as well as graphics for desktop or Internet publishing projects. Course fee required. Prerequisites: DES 2300 (Grade C or higher); AND ART 1130 (Grade C or higher). FA.
DES 3650. 3-D Animation. 3 Hours.
For students pursuing a degree in Computer and Information Technology. Companion course to DES 3600, covers aspects of 3D animation design, storyboarding, character development, and animation rendering of 3D models suitable for broadcast or composite video use. Maya 3D software will be used to create multiple short animation projects individually and in teams. Includes rigid/soft body animation solvers, dynamic particles, deformation and effects fields, IK/FK rigging, and multi-frame rendering output, use of key frames, ease in/ease out controls, the timeline, realistic modeling techniques, set lighting, shadows, multi-layer surfacing, photorealistic rendering, and video formats for final output. Dual listed with ART 3650 (students may only take one course for credit). Prerequisites: DES 3600 or ART 3610 (Grade C- or higher). SP.

DES 3710. Typography II. 3 Hours.
Covers typography as a functional and experimental medium and typeface design. Students develop typographic solutions that explore verbal/visual messages in designs for publication through design problem-solving for a diverse range of specifications, including audience, client needs, and budget constraints, using traditional and digital tools. Course fee required. Prerequisite: DES 2300 (Grade C or higher); AND DES 2710 (Grade C or higher). FA.

DES 3780. Prepress & Print Production. 3 Hours.
Overview of desktop publishing and digital imaging on the prepress industry. Topics include input and output, correct creation of digital files, data storage, proofing methods, and relevant terminology/communication with prepress and printing professionals. Also acquaints students with the variety of jobs offered in the field, file evaluation, and much more. Field trips to printers and other prepress service providers reinforce lectures/projects. Course fee required. Dual listed with ART 3780 (students may take only one course for credit). Prerequisite: DES 2300 (Grade C- or higher) and DES 2600 (Grade C- or higher). SP.

DES 3800. Branding. 3 Hours.
Explores the history, psychology and purpose of corporate identity programs and the role of communication design in the current corporate environment by analyzing, investigating, and reporting on current company corporate objectives and target markets and then designing a sound multifaceted identity program. Course fee required. Prerequisite: DES 2300 (Grade C or higher); AND DES 2710 (Grade C or higher). FA.

DES 3850. Graphic Design Problems. 3 Hours.
For students pursuing a Graphic Design degree or an emphasis in Digital Design; also open to other interested students. Students will develop critical thinking, research, and practical skills related the graphic design industry. Students solve design problems by designing for commercial media, self-promotion. Includes practical exercises in project management and other real-world applications. Course content changes by semester to reflect current trends and issues in the design industry. Course fee required. Prerequisites: DES 2100 (Grade C or higher); AND DES 2300 (Grade C or higher); AND DES 2710 (Grade C or higher). FA.

DES 4100. Interaction Design. 3 Hours.
Exploration of advanced User Interface and User Experience design. Students will learn how to use words, visual representations, objects or space, time and behavior to create successful interaction between a user and a product which enables the user to achieve their objective(s) in the best way possible. Prerequisites: DES 2100 (Grade C or higher); AND DES 3500 (Grade C or higher). SP.

DES 4200. Tangible Interaction. 3 Hours.
This course explores the use of tangible interaction in relationship to emerging technologies. Students will explore the how humans interact with technology while creating tangible objects that affect how we work, play, communicate and learn. Prerequisites: CS 1400 (Grade C or higher); AND DES 2100 (Grade C or higher). FA.

DES 4600. Senior Project. 3 Hours.
For students pursuing a degree in Computer and Information Technology. Emphasizes application of skills to commercial projects through design of or contribution to various private sector or university internet projects, print, and multimedia projects. Includes portfolio development. Course fee required. Prerequisite: Senior standing. SP.

DES 4650. 3-D Animation. 3 Hours.
For students pursuing a degree in Computer and Information Technology. Companion course to DES 3600, covers aspects of 3D animation design, storyboarding, character development, and animation rendering of 3D models suitable for broadcast or composite video use. Maya 3D software will be used to create multiple short animation projects individually and in teams. Includes rigid/soft body animation solvers, dynamic particles, deformation and effects fields, IK/FK rigging, and multi-frame rendering output, use of key frames, ease in/ease out controls, the timeline, realistic modeling techniques, set lighting, shadows, multi-layer surfacing, photorealistic rendering, and video formats for final output. Dual listed with ART 3650 (students may only take one course for credit). Prerequisites: DES 3600 or ART 3610 (Grade C- or higher). SP.

DES 4750. Package Design. 3 Hours.
The course explores the various facets and theories of package design while applying design principles to create effective packaging solutions for a variety of products. Students will take design projects from concept phase to three-dimensional working prototypes. Course fee required. Prerequisites: ART 1130 (Grade C or higher); AND DES 2300 (Grade C or higher); AND DES 2710 (Grade C or higher). SP.

DES 4900R. Independent Research. 1-3 Hours.
For students pursuing a degree in Design with advanced standing who wish to pursue a specific focus of study related to their degree emphasis and/or research interest not otherwise available in the current Design curriculum. Students are closely supervised by appropriate faculty in the design and successful completion of the course. The course is dependent upon a formal contractual arrangement with the faculty member that is submitted at the beginning of the semester in which coursework is undertaken, and is contingent upon the department chair's approval. Students meet with the faculty mentor each week and provide progress reports for feedback. Students are required to meet the university requirement of 45 hours of work per credit. Variable credit 1.0 - 3.0. Repeatable up to 3 credits subject to graduation restrictions. Offered by arrangement. Course fee required.
DES 4920. Internship. 3 Hours.
Designed to integrate Design students into working environments that increase aptitude, skills, and networking. The internship setting will nurture a mentor learning relationship with the student, and assist them in preparation for after graduation. Course fee required. Prerequisite: DES 2300 (Grade C or higher); AND Instructor Permission. FA, SP, SU.

DES 4990. Seminar in Design. 3 Hours.
For students wishing instruction that is not available through other regularly scheduled courses in this discipline. Occasionally, either students need some type of non-traditional instruction, or an unanticipated opportunity for instruction presents itself. This course may include standard lectures, travel and field trips, guest speakers, laboratory exercises, or other nontraditional instruction methods. Repeatable for credit as topics vary, up to 6 credits. Course fee required. Prerequisite: Advanced standing. Offered by arrangement.