

School of Art and Design

<http://art.njit.edu> (<http://art.njit.edu/>)

The School of Art + Design offers a trio of studio-centric four-year bachelor's degree design programs—interior design, digital design and industrial design—and a BFA in fine arts, which provides unique opportunities for aspiring artists to explore the nexus between art and technology, and become part of a the cultural experience that underscores the use of digital media and information technology. With a vibrant assemblage of design disciplines and opportunities for expression, research and independent study, the School of Art + Design provides an exciting environment in which to invent and create.

Interior Design

Interior design students have the opportunity to learn from an innovative, creative faculty that participates in all phases of the design and construction process: architects, engineers and interior, product and industrial designers. The robust, studio-centric curriculum fully accredited by the Council for Interior Design Accreditation (CIDA)—is chockfull of design courses such as building and interior systems, history of furniture and building information modeling and prepares students to enter the profession of interior design, first as interns, and ultimately take the National CIDA Qualification examination. More than 90 percent of all graduates are either working in a field related to their study or are in a graduate program within six months of graduation. Students broaden their exposure to a variety of traditional or digital media-based courses or specialize in one or more areas related to a topic of interest.

Digital Design

Drawing on NJIT's well-established legacy as a pioneer and innovator in the application of digital and information technology, the Digital Design Program, after a foundation year of exposure to a variety of media, offers students two tracks of study: entertainment and interactive media/production. In addition to a two-year studio sequence, the curriculum provides opportunities for students to take a variety of related classes such as environment design in motion pictures, SFX/VFX in movies, digital audio, history of games, video and animation, 2D and 3D character design and modeling, game level design and more. There is additional flexibility built into the curriculum, allowing students to use free academic and design electives to either broaden their overall education or elect to focus on one or more areas to prepare them for a specialized field or graduate study.

Industrial Design

As part of a comprehensive university with a variety of design disciplines, students enrolled in the Industrial Design Program find themselves in a unique and creative environment, where a multi-faceted mission includes the creation of new knowledge while educating future designers in design and preparing them to contribute to 21st century society. In this context, students take advantage of the technological environment of the university to gain a broad understanding of design, materials, methods of production, user needs, and market trends. After completing six semesters of design studio, students take a variety of management, fabrication and design courses, including modeling and prototyping, principles of management, human factors/ergonomics, ethnographic and mechanics and electronics. The program exposes undergraduate students to the various potential fields within the profession and provides them with opportunities to study robotics and advanced materials.

- Digital Design - M.F.A (<https://catalog.njit.edu/graduate/architecture-design/art-design/fine-arts-in-digital-design-masters/>).
- Digital Design - M.S (<https://catalog.njit.edu/graduate/architecture-design/art-design/master-of-science-in-digital-design/>).
- Animation Essentials (<https://catalog.njit.edu/graduate/architecture-design/art-design/animation-essentials-cert/>)
- Digital Arts Essentials (<https://catalog.njit.edu/graduate/architecture-design/art-design/digital-arts-essentials-cert/>)
- Game Design and Interactivity Essentials (<https://catalog.njit.edu/graduate/architecture-design/art-design/game-design-and-interactivity-essentials-cert/>)
- UI/UX Digital Design Essentials (<https://catalog.njit.edu/graduate/architecture-design/art-design/ui-ux-digital-design-essentials-cert/>)

A

Alcala, Jose M., University Lecturer

Rolim Ana, Assistant Professor

B

Berkin-Harper Hannah , Associate Professor
Brothers, David A., Senior University Lecturer

D

Decker, Martina, Associate Professor

G

Garcia Figueroa, Julio C., University Lecturer

Goldman, Glenn, Professor, School of Design

N

Nam Hye Yeon, Associate Professor

R

Rodrigues Miguel, University Lecturer

S

Schwartz, Mathew L., Associate Professor

T

Thompson Richard, Associate Professor

V

Von Koenig Gretchen , University Lecturer

DD 601. Graphic Design and Color Theory. 3 credits, 4 contact hours.

Introduction to principles of graphic design and 2D composition with additional emphasis on color use and color theory. Introduction to computer graphics as applied to design. Students are introduced to traditional media (watercolor and collage) and digital raster graphics (painting, image processing, and compositing). Applications from the physical and digital worlds (e.g. architecture, interior design, animation/motion pictures, game design, product/industrial design, advertising, web design, and painting) are discussed. Concepts include ordering systems and hierarchy, color models and mixing, color interaction, physical and psychological response to color, typography, printing, etc. Emphasis on synthesizing knowledge and skills through creative projects.

DD 602. 3D Modelling and Composition. 3 credits, 6 contact hours.

The course introduces students to the language and conventions of describing space, shape, form, and order using digital media to represent three-dimensional physical and virtual worlds and objects. Through a series of discrete creative exercises, students will be exposed to a variety of software applications, processes, and concepts utilized in design and design communication. This course will help students develop a critical attitude and analytical language to explore 3D basic design principles in a digital milieu.

DD 603. Video and Animation. 3 credits, 3 contact hours.

Prerequisites: None. The course will introduce students to design and narrative in motion based media. While highly technical in nature, coursework will focus on narrative development and design decision making in four dimensions.

DD 610. History of Art And Design I. 3 credits, 3 contact hours.

This course surveys the major monuments and trends in the history of painting, sculpture, design and architecture from the Italian Renaissance to the beginning of the twentieth century. The focus is on global developments with an emphasis on key artworks and artists examined in relation to the social, economic, and political climates which produced them. Important artistic innovations, techniques and methods are considered. Though arranged according to historical chronology, lecture content is driven by thematic and contextual issues such as humanism, absolutism, colonialism, the Enlightenment, and industrialization.

DD 611. History of Art and Design - Survey II. 3 credits, 3 contact hours.

This foundation history course surveys the principle aesthetic/functional themes and theories of the twentieth century. Students will explore how various individuals have used art and design to develop products that enriched society culturally and/or that resolved particular societal needs. The course will begin with how optics revolutionized painting, sculpture, architecture, film, etc, and explore how the modern movement broke with or reinterpreted the past through a series of flashbacks.

DD 621. Character and Facial Modeling for Animators. 3 credits, 3 contact hours.

Prerequisites: Basic background in the use and application of digital media in design. The course will introduce students to the language and conventions of manipulating tools and techniques to develop and create 3 dimensional character design.

DD 622. Visual Storytelling and Storyboarding. 3 credits, 3 contact hours.

Prerequisites: DD 601, DD 602. Storyboarding is the preparation of a conceptual and thematic graphic plan to tell a story using animations, video games, interactive media and experiences, advertisements, music videos, or graphic novels. This course will cover the fundamentals of visual storytelling and the various applications possible in a visual narrative. Techniques for art direction are covered including the use of storyboards, concept art, and animatics to communicate. Students will translate a written narrative into a visual experience in this project-based class with the use of camera framing, camera angles, gesture, and expression. Issues of lighting, color, and mood will be included resulting in a student developed full-story pitch.

DD 623. Acting for Animators. 3 credits, 3 contact hours.

Prerequisites: Basic background in the use and application of digital media in design. Introduction to the historical contexts of acting. Survey of acting techniques and principles and their relationship to successful visual storytelling. Topics covered include movement, empathy and dialogue. Application of acting to two-and three-dimensional animation. Students will study examples from animation as well as film and theater. Required projects include both in-class acting exercises as well as storyboard creation and directed computer graphics character animation.

DD 624. Digital Audio. 3 credits, 3 contact hours.

A studio class that provides a baseline understanding of sound design within an animated video and video game environment. Course includes an introduction to sampling, field recording, sound effects, production techniques, mixing, and general sound design for the purpose of integrating and managing the integration of audio in motion pictures, television, video games, and any other sound-supported media. Analytical and creative projects are required.

DD 625. Environment Design. 3 credits, 3 contact hours.

Prerequisites: Basic background in the use and application of digital media in design. Corequisites: . The course will introduce students to the language and conventions of manipulating tools and techniques to develop and create simulated environments.

DD 631. History of Game Play and Interactivity. 3 credits, 3 contact hours.

A guided exploration through the world of games. Students will experiment, play, and analyze various aspects of games - from early traditional games to current generation electronically-mediated games; from individual games to collaborative online games. Game types will be analyzed with particular attention paid to the virtual environments in which these games take place. The expressive and persuasive aspects of games will also be explored. Students will learn underlying principles behind various game development technologies from traditional to digital format. Assignments will ask students to analyze the structure of various games and prepare them for creative final projects. The latter half of the semester will be focused mainly on individual student research toward a creative final project.

DD 634. Physical Computing for Designers – Interaction Design. 3 credits, 3 contact hours.

Prerequisites: Basic background in the use and application of digital media in design. Design course focusing on two-and three-dimensional visual communication of data, including interactive and scripted/animated communication as well as still-image utilization. Applications may include website creation, information kiosks, exhibit design, educational videos, scientific visualization, and other graphics-intensive projects.

DD 640. User Interface/User Experience in Digital Design. 3 credits, 3 contact hours.

Application of theories, research methods, ethics, and design processes of UI/UX (user interface/user experience) design. Students will research, develop, and test basic UI/UX designs. Design strategies will be discussed as they apply to physical, virtual, and hybrid prototype solutions.

DD 650. Extended Reality Design Studio. 6 credits, 12 contact hours.

Prerequisites: DD 601, DD 602, DD 603. Introduction to XR platforms and techniques as they support UI/UX (user interface/user experience) design, gaming and interactivity, and animation. Students will explore design possibilities and opportunities in XR from a range of Digital Design specializations including, Animation, Gaming and Interactivity, and UI/UX. They will use VR, AR, MR platforms to collaborate and consider complementary digital design specializations.

DD 651. Animation Design Studio I. 6 credits, 12 contact hours.

Prerequisites: DD 650. Core Studio. Extends the knowledge of design, basic concepts and ideas around time, perception and user experience introduced in DD 650. Emphasis is on developing skills and creative content using specialized 2D animation tools and techniques.

DD 652. Animation Design Studio II. 6 credits, 12 contact hours.

Prerequisite: DD 651. Core Studio. Further develops the design ideas introduced in DD 651. Conceptual focus is on representation and simulation of objects, organisms, and physical phenomena in time and space. Emphasis is on developing skills and creative content using specialized 3D animation tools and techniques including the use of motion capture.

DD 653. Game Design and Interactivity Design Studio I. 6 credits, 12 contact hours.

Prerequisite: DD 650. Core Studio. Extends the knowledge of design, basic concepts and ideas around time, perception and user experience introduced in DD 650. Emphasis is on developing skills and creative content using specialized game and interactivity design tools and techniques. The expressive power of games are explored and tested through a series of narrative and analytical exercises. Essential media elements are recombined to produce hybrid participatory forms.

DD 654. Game Design and Interactivity Studio II. 6 credits, 12 contact hours.

Prerequisite: DD 653. Core Studio. Further develops the design ideas introduced in DD 653. Focus is on building, testing and publishing game and interactive content for a broad spectrum of users and applications. Teamwork, planning, and workflow management are essential to bring creative ideas into reality. This studio combines many of the skills and concepts developed in earlier courses and studios.

DD 655. User Interface/User Experience Digital Design Studio I. 6 credits, 12 contact hours.

Prerequisite: DD 650. Core Studio. Extends the knowledge of design, basic concepts and ideas around time, perception and user experience introduced in DD 650. Emphasis is on developing skills and creative content using specialized UI/UX design tools and techniques for use in mediating between digital and physical media.

DD 656. User Interface/User Experience Digital Design Studio II. 6 credits, 12 contact hours.

Prerequisite: DD 655. Core Studio. Focus is on building and evaluating various physical and digital user interface prototypes to meet a broad spectrum of market sensitive users and applications. This studio combines many of the skills and concepts developed in earlier courses and studios with a greater emphasis on individual projects and approaches to improve E-Commerce User Experience.

DD 657. Digital Design Independent Project Studio. 6 credits, 12 contact hours.

Prerequisite: DD 650. Advanced Studio. The Digital Design Independent Project Studio requires students to propose a topic for a final studio project concentrating on topic chosen in conjunction with the studio instructor and any other subject specialist in their digital design concentration.