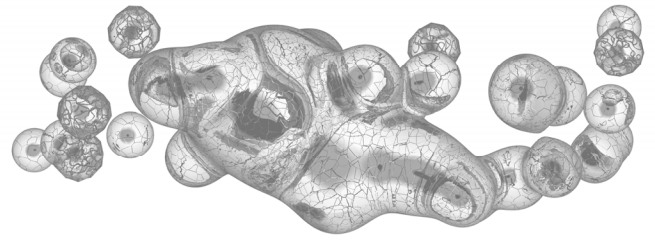


School of Art + Design
Hillier College of Architecture and Design
New Jersey Institute of Technology



Digital Design Studio III

DD-464-STUDIO | SPRING 2025

OFFICE HOURS: Miguel Rodrigues mhr@njit.edu
MEETING TIMES: By an appointment

COURSE DESCRIPTION and OBJECTIVES

In this studio, students will continue to hone their design skills, visual storytelling techniques and problem-solving ability. Computer environments will be the primary design media for creating narrative-based and/or interactive content. As part of the final studio semester of the Digital Design Program, students are expected to propose their own project (within the framework defined below) and develop it through all stages from the concept development to post-production. An ability to express an idea, present it in an engaging manner, and deliver the final product is essential for professional success. Students will be evaluated on the quality and sophistication of their visual storytelling filled deliverables.

Students are required to secure at least three consultations with outside critics, manage time and computational resources. Consultations may include NJIT faculty whose area of specialty aligns with project needs, such as IT faculty for gaming or sound design faculty for soundtracks.

As you are about to join society as college graduates, you also need to become engaged in our collective future and see how you can be a part of it. Consequently, all studio projects will work around a central theme of sustainability, environment considerations, and human condition. Students are expected to address a topic associated with resilient and/or sustainable practices such as water management, energy efficiency, pollution, recycling, or environmental or constructed response to climate change. The produced work should have a broader social, cultural, or intellectual reach and engage currently urgent issues. These should serve as examples not as a definite list of possible topics. If telling a story for film, animation or video games be sure to use visual storytelling in your details. Be the sure to also use industry level quality including strong layout, composition and design. Students could propose and formulate their own take on their theme and consult it with the instructor.

Students are encouraged to engage outside organizations that share similar core mission. Successful design work will be a comprehensive solution that addresses emotional, sensory, and experiential design issues, delivered in a professional manner.

LEARNING OBJECTIVES/OUTCOMES

- To formulate a conceptual and artistic position on topics of digital designs relevant to the student concentration area (entertainment, film, animation, interactive graphics).
- To define the scope of work, production schedules, and required software tools.
- To understand the pipeline of the digital design production and demonstrate the ability to effectively use it.
- To develop a sophisticated and complex project that integrates multiple digital media, such as modeling, rendering, video editing, interactivity, and graphic design.

PREREQUISITES:

DD 364: Digital Design Studio II

STUDIO PROJECT FOCUS

Students are expected to address, through their projects, current discussion and practices related to sustainability, environment, and human condition (see discussion above). Student work will fall into one of the five categories. These categories are not meant to limit student choice, but to establish efficient and effective ways to guide student projects as well as to define project milestones and deliverables.

Five areas of concentration are as follows:

- 3D/2D Animation, 3D Illustration/Environments, Live Action Production
- Branding/Identity/Print/Marketing/Advertising
- Interactive/Gaming
- HCI/Physical Computing
- Narrative-based Works

3D/2D Animation, 3D Illustration/Environments, Live Action Production

This category encompasses all types of time-based media, both 2D- and 3D-based, as well as 3D environments for illustrations, cinematographic production, and video games. This category is often associated with entertainment track students.

Students working on:

- (1) animation will be expected to produce 30 to 40 second HD movie with soundtrack and full post production processing and packaging. They will have to demonstrate and document the creative process and showcase all developed assets including a series of screen grabs to be submitted that show the development of the project, and illustrate the model or image in different stages (e.g. wireframe, shaded, etc.)
- (2) 3D illustration and/or environments will be expected to produce one high quality and high resolution three-dimensional digital environment with custom assets and textures. For the presentation purposed they will produce a minimum of 8 high resolution images (4000 by 6000 pix) with at least two different lighting scenarios. They will have to demonstrate and document the creative process and showcase all developed assets and a series of screen grabs to be submitted that show the development of the project, and illustrate the model or image in different stages (e.g. wireframe, shaded, etc.)
- (3) live action production will be expected to produce a 40 to 60 second HD movie with multiple compositing and camera tracking/matching layers. They will have to demonstrate and document the creative process and showcase all developed assets and a series of screen grabs to be submitted that show the development of the project, and illustrate the model or image in different stages (e.g. wireframe, shaded, etc.)

Branding/Identity/Print/Marketing/Advertising

This category includes work in areas of technical illustrations, information/scientific visualization, exhibit design, advertising, and basic Web-based communications. This category is for entertainment

and production tracks. However, the marketing aspect would be more appropriate for production track students.

Students will be expected to produce a multifaceted marketing campaign ranging from banner ads to be placed on websites, to print advertising, to a video for YouTube and other social media. Projects in this category are most effectively realized via collaboration with a non-profit organization that has a product or service to distribute. It may also involve advertising for a cause and/or organization.

Interactive/Gaming

This category incorporates interactivity into 2D graphic and 3D environments with time-based media. It addresses issues of the user interface (UI) and the user experience (UX). Students developing within this category are expected to address both the time component and the user interactions. This category is often associated with entertainment track students.

Students will be expected to produce a fully functional working prototype of the game with basic game mechanics/play, a number of original assets and textures. As part of the design process students will develop storyboards for proposed game, game tree, define the target market, and a written description with game instruction and play manual. Students working within gaming track are required to participate in Global Game Jam.

HCI/Physical Computing

This category includes various forms of human-computer interactions that utilize both digital and physical environments. They include but are not limited to physical computing, multi-reality interface (MRI) designs, mobile/ubiquitous computing, augmented reality (AR), and adaptive environments. Students will be expected to produce a coherent and fully functional interactive product such as AR environment, interactive print, VR, projection mapping or interactive installation.

Narrative-based Works

This category is a cross-section of the categories above and it can often be seen as their subset. Game design or interactive installation could be organized around the gameplay and game mechanics. However, the same category could also be expressed through narratives resulting in a very different type of games. In the same way, 3D animation or motion graphics can be driven by narratives (storytelling) or by data (sciences, history) as would be the case with infographics, informercials, and educational materials. When proposing a linear narrative, the **3D/2D Animation** track should be followed for the initial presentation. When working on non-linear storytelling (narratives) **game** category approach would be appropriate. However, if you are interested in illustration-based narratives (comics, illustrations, graphic design) see specific requirements for the initial presentation below.

Additional Considerations

When proposing a topic for your final digital design studio, consider the following questions:

- What types of skills and intellectual qualities are you trying to address through your project?
- How does the proposed work fit with your overall portfolio/reel?
- What is unique about your idea and the ways you plan to deliver it?

Consider what values your work and enhanced skills can bring to future collaborators and employers as well as how this work complements or extends your current portfolio.

In short, think how you are going to position yourself after graduation. Think about quality, innovative techniques, and imaginative artistry. You are asked to address these questions during your initial presentation as well as throughout the semester.

Please note: If you choose not to develop your own thesis/capstone project proposal or your proposal will not meet minimum requirements (be unsatisfactory), you will be assigned a motion graphics project by the studio instructor.

COURSE SCHEDULE

Each student is expected to attend all class meetings, to verbally participate in class discussions, as well as to develop additional work and ideas beyond the minimum requirement. **It is also very highly recommended that students take advantage of any additional sessions that are announced.**

Specifically, students are expected to:

- (1) work in studio space on their projects the entire studio period unless previous arrangements have been made (i.e. visiting a client/consultant) and
- (2) make every effort to work in studio space to benefit from the peer and faculty help.

The Spring 2023 semester is arranged as follows:

WEEK 1	Introduction 1/23 <u>Proposal internal discussions</u>
WEEK 2	Conceptual Design 1/27 Proposal discussions (2) 1/30 <u>Proposal (Conceptual) Review</u>
WEEK 3	Project Development 2/03 Studio Project Proposal Presentations Due 2/06 (10% grade) Critiques
WEEK 4	Project Development 2/10 One-on-one help 2/13 Desk Critiques
WEEK 5	2/17 <u>Quarter Semester Review</u> (10% grade) 2/20 Progress Critiques
WEEK 6	Project Development 2/24 One-on-one 2/27 Desk Critiques

WEEK 7	Project Development 3/03 <u>In-class Progress</u> 3/06 Desk Critiques
WEEK 8	MIDTERM 3/10 Progress Presentation Critiques 3/13 <u>MIDTERM STUDIO REVIEW</u> (25% grade)
WEEK 9	Spring Recess <i>No classes</i>
WEEK 10	Project Development 3/24 Desk Critiques 3/27 Desk Critiques
WEEK 11	Project Development 3/31 Desk Critiques 4/03 Desk Critiques
WEEK 12	Production 4/7 <u>THREE-QUARTER REVIEW</u> (10% Grade) 4/10 Near Completion Presentation Critiques
WEEK 13	Production 4/14 Desk Critiques / Production 4/17 Desk Critiques / Production
WEEK 14	Finish Line 4/21 Post-production 4/24 <u>FINAL INTERNAL REVIEW</u> (15% grade)
WEEK 15	Finish Line 4/28 Post-production + Submissions 5/01 FINAL SCREENING and PUBLIC PRESENTATIONS (alternative day)
WEEK 16	Finish Line 5/05 FINAL SCREENING and PUBLIC PRESENTATIONS (30% grade) ALL Kepler and Archival SUBMISSIONS DUE

EVALUATION

Completion of ALL assigned projects and presentations is required to complete this course. All assignments are due at the beginning of class. Your performance will be graded based on the successful completion of the class objectives, projects, presentation and documentation requirements. The NJIT- Honor Code will be upheld, and any violations will be brought to the immediate attention of the Dean of Students.

Conceptual Design (Initial Proposal) (evaluated by the panel of critics)	10%
Quarter Review	10%

Midterm Design Review (deliverables will be assessed individually based on project type)	25%
Three-Quarter Review	10%
Final (Internal) Review	15%
Final Screening and Public Presentation	30%

Extra Credit, 5% for serious public submission presentation up to total 5%
Note: Working with a real life “client” and work being used them in a public form qualifies for this credit.

Three (3) individual consultations with selected faculty by April 17th. Required
 One including soundtrack (Penalty of 3% for each missing consultation)

Kepler Posting due May 2nd Required
 Final Google Drive Submission due May 2nd Required
 Resume submission (due April 10th) Required

COURSE GRADING CRITERIA

The final grades are broken down as follows:

A	4.0	Superior	92 -- 100%
B+	3.5	Excellent	86 -- 91.99%
B	3.0	Very Good	80 – 85.99%
C+	2.5	Good	74 – 79.99%
C	2.0	Acceptable	67 – 73.99%
D	1.0	Minimum	60 – 66.99%
F	0.0	Inadequate	below 60%

The intensive schedule of the course cannot accommodate absentee, tardy, or preoccupied students. Attendance is mandatory. Lateness will be counted 15 minutes after class has started. After 3 recorded absences, your grade will be lowered by ½ grade point for each additional absence if you are not carrying a medical, school or religious related excuse. Students with particular needs and unforeseen absences should present them to their instructor within the first week of class. Everyone is expected to be punctual.

Note: When executing your work make sure to understand and follow copyright laws. When using outside images, footage, or audio files make sure you have the right to do so and credit original authors. Always reference your source files for Case Study submissions.

STUDENT RESPONSIBILITIES

The Studio Advisor, Advisory Committee and thesis group will provide you with guidance and advice, but it is your task to define the goals, expectations, and requirements of your thesis. In addition, you will have the responsibility:

- to form a reliable and participatory Advisory Committee made up of experts and mentors to help you navigate through your thesis process (minimum of 3 consultations by the 17th of April);
- to familiarize yourself with the full extent of NJIT resources that are at your disposal and take advantage of NJIT facilities and faculty as well as organizations and professionals that will help you to realize your thesis;
- to organize, prepare and present your research and experiments as well as being ready to discuss your methodology and process throughout the semester;
- to participate in discussions and provide feedback for your colleagues in these settings;
- to provide a weekly documentation of your work that will include to scans, prints, digital images and presentations etc. that will become part of your final submission.

DIGITAL DOCUMENTATION

Digital documentation of the entire work of the semester will be required of each student. The documentation for each assigned project step is to be submitted on the day of each review before the presentations. This documentation will provide the Department with a review of your study, and information contained in the digital files might be used in future electronic or printed media publications, either in whole or in part. This record will also enable interested students, faculty, and others to have access to your work in the future. Please be advised that it is highly recommended that you make a copy of the digital package for your own records. The instructor will give detailed instructions on how to submit the documentation.

The Digital Documentation has the following requirements:

- The title of the submission (Google Drive Folder) should be your name only (LAST_FIRST).
- All submissions developed during the semester should be placed in the STUDENT WORK folder on the Google Drive. Each submission folder needs to contain folders called PRESENTATION, RESEARCH, IMAGES, VIDEOS, and 'SOURCE-FILES'.
- In the first folder, IMAGES, you are to place high-resolution images of your own work that were submitted. Each image is to be a 72 ppi/dpi JPEG, at maximum quality (i.e. compression value 10 or 12). The longest dimension of each image, horizontal or vertical, must not be less than 3600 pixels. When you title each image file, simply number the file (i.e. 01.jpg, 02.jpg, 03.jpg, 04.jpg, 05.jpg ...).
- The second folder, VIDEOS should contain all animations and videos you have produced to demonstrate your work. Any animated movies that are submitted must be saved as Quicktime MOV or MP4 files. The larger the size and quality, the better, but movies shall not be smaller than 1280 x 720 pixels.
- In the third folder, PRESENTATION, you are to include a copy of any PowerPoint, Keynote or similar presentations that were made. This folder must also contain a PDF copy of your PowerPoint presentation in its entirety.
- In the fourth folder, RESEARCH, you are to place complete documentation of research findings as PDFs. A bibliography and hyperlinks to Internet content should also be included in a PDF or MSWord (.doc) file that summarizes the resources you referenced. You will use the Chicago Style for your referencing:
http://www.chicagomanualofstyle.org/tools_citationguide.html
- In the last folder, TEXT, you are to place a text 500-word minimum description of your project in MSWord (.doc) format. You will use the Chicago Style for your referencing:
http://www.chicagomanualofstyle.org/tools_citationguide.html
- In the last folder, SOURCE_FILES, you will place files such as Maya, Unreal Engine, Revit,

Photoshop, or similar, that enabled your final presentation materials.

Kepler Documentation:

You will receive more information regarding how many files to post on Kepler. All files must be resized and renamed. Do NOT upload folders. Please fill out all of the metadata information. The maximum size is 2000 x 2000 pixels. Images must retain their original proportions without being enlarged. In cases where the width to height ration exceeds 3:1 you may resize the short dimension to 2000 pixels. To distinguish PROCESS documents from FINAL documents, be sure to enter labeling information in the pull-down metadata section built into each Kepler file. The filename should be saved according to the following naming convention: <Lastname, Firstname ##.jpg>. The guidelines described here, are in place to promote economic representations of student work and to ensure the sustainability of the Kepler system. Grossly oversized images will be deleted without notice and will not be considered for grading purposes. You must submit your PowerPoint slides as jpgs. It is good practice to keep the images at 72 dpi. You will not receive your final grade until you submit to Kepler.

This digital documentation submission will be evaluated in relation to the stated objectives of the course and a demonstrative consideration of:

- The quality and legibility of the chosen images.
- The appropriateness of the images in relation to the objectives of the study.
- Selective documentation of the whole work, and significant parts of the project.
- Evidence of thorough research.
- Craft and quality of writing.
- Adherence to the requirements listed above.

ADDITIONAL INFORMATION

Academic Integrity:

Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at:
<http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>.

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. Any student found in violation of the code by cheating, plagiarizing, or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu

Attendance:

Attendance will be taken during each class and is an explicitly required component of all on-campus/location-based classes for all students in the School of Art + Design. After three absences students may be docked one-half grade for each subsequent unexcused absence. In other words, if the final grade would have been an "A", it results in a "B+". Similarly, a "B+" is reduced to a "B", and so on. There is a one-half grade penalty for each absence after the third.

In the case of illness or other special circumstance, notification should be given to the instructor as soon as possible and before the date in question.

The instructor has to be notified at the beginning of the semester if a student will miss a session (or more) due to religious observance.

Tardiness:

Students are expected to arrive to class on time. The time limit that constitutes an absence versus tardiness is 15 minutes.

Late work:

Project assignments and digital documentation of your work are due at the beginning of class on the specified dates. Students should make every effort to avoid incomplete work and late submissions. Late submissions are not acceptable, except in the case of documented illness or special circumstances.

Last day to withdraw:

Please note that Monday the 3rd of April 2023 is the last day to withdraw from this course.

Students with Disabilities:

Students seeking accommodations due to disabilities are required to notify the instructor at the beginning of the semester.

Accommodations:

Students infected or in some cases, even having come in contact with someone infected by the COVID-19 virus will have to miss class(es). These students will have officially been excused from attending and the instructors will be notified by the Office of the Dean of Students.

Cell Phone Policy

The use of cell phones during class time is only permitted for emergencies.

Class Recordings:

Class sessions may be recorded by the instructor. These recordings shall only be used as an educational resource and are not to be distributed or used outside of this class. Information on how to access recorded lectures will be made available by your instructor. Any recordings that contain identifiable information about students will not be used beyond this semester.

Class Recording Etiquette:

Students are expected to respect their fellow students' privacy and freedom to learn without disruption. Students are not allowed to capture or reproduce anyone's name, image, or voice without permission. They must be polite and respectful in the online chat. Informal chat is okay, but

typing is restricted to things that one would say out loud in front of the entire class. Students must always conduct themselves on their webcam video as they would in person in a classroom.

READINGS

Reading assignments will be issued throughout the semester and discussed in class.

OPPORTUNITIES FOR THE VISIBILITY

(Check course discord announcements often.)

Ars Electronica www.aec.at/prix/

Computer Animation Festival

Digital Graffiti Festival in Alys Beach, Florida

<http://www.digitalgraffiti.com/fifth-annual-digital-graffiti-festival-calls-for-artist-submissions>

INITIAL PRESENTATION GUIDELINES

The public presentation will take place on Thursday, January 26th, at 12:00 PM (third studio day). Location to be determined. I will spend first two studio days 1/19 and 1/23 internally reviewing your proposals. I am also available to discuss by email your work and ideas anytime during the winter break. This could help to course-correct your direction if necessary.

All students are expected to include the following items with the studio project proposal independently of the category: (1) relevant precedents/inspirations, (2) their own work relating to the proposal emphasizing the qualitative aspects of your designs that you can achieve in the capstone studio, (3) intended pipeline showing tools you will be using indicating your familiarity with these tools, and (4) semester schedule identifying major milestones (tasks and dates).

Depending on the chosen concentration area, your beginning-of-the-semester presentation should include:

Project Category: **3d/2d Animation, 3d Illustration, Live Action Production**

PowerPoint/PDF Presentation with full character design(s), set design(s), prop design(s), storyboard, written story; pre-vis animatic quicktime .mov or mpg4 at half final resolution (640 * 360); precedent study of similar characters and environments; proposed work schedule based on the studio milestones (midterm, final review).

Character design(s) and set design(s) would include your sketches of main actors and environments in your animation. These can be freehand or renders of your already modeled assets.

Propose the story board and pre-vis animatic to define time and major scenes of your animation. To produce your animatic, you would use your storyboard illustrations with text (written story), character and environment sketches. The key is to understand the time factor of your storyboard.

For the written story component; write your story and consider the ways you will introduce your characters/environments and how you will conclude it. Are you looking for a surprise, a happy ending, or a twist?

Project Category: **Branding/Identity/Print/Marketing/Advertising**

PowerPoint/PDF/Prezi Presentation with clear media campaign calendar (fictitious one-year calendar of production scheduling for the campaign), Asset/Production plan, shooting schedule(s) for any live action or photographic shoot(s); precedent study with artistic directions relevant to your approach; proposed work schedule based on the studio milestones (midterm, final review).

For branding/identity/marketing/advertising you will need to select a product or a group of products/services you will be working with. Understanding the nature of the product/service and its past marketing campaigns would be an important part of your precedent studies.

Include at least 4 different case studies that relate to your chosen product line. Based on this research, you propose three approaches to showcase your product for January review. Each approach should consist of a number of visual sketches with diverse graphics styles (realistic, stylized, 3D, 2D, etc.) and short animations 30s to show the story of the product.

For scientific visualization projects, choose a theme, a phenomenon, or a process. Develop two draft visualization examples for the chosen theme, so we can evaluate your artistic direction and technical competency. One of these examples should be time-based (animation) graphics.

If you are working with a client (such as the W.A.T.E.R. group) you will have to contact the client, establish expectations with deliverables, and timeline prior to the meeting. In these cases, contact the instructor to work out your detailed deliverables.

Project Category: **Interactive/Gaming**

PowerPoint/PDF/Prezi Presentation with full character design(s), set design(s), prop design(s), storyboard with the game tree (simulation logic flow chart), written story; precedent study; proposed work schedule based on the studio milestones (midterm, final review)

Character design(s) and set design(s) would include your sketches of the main actors and environments of your animation. These can be freehand or renders of your already existing assets.

Propose the game tree that defines possible gameplay scenarios and major scenes of your animation. To produce it, you would use your storyboard illustrations with the text (written story), character and environment sketches. You need to provide criteria (type of triggers) that you will use for players to advance in the gameplay. This can be done as a 2D graphic poster(s) that outlines all possible gameplays. To illustrate triggers (challenges, advancements) use an appropriate technique/medium.

For the written story component; answer questions regarding the theme of the game with a story, the type of challenges, and narrative components, including animations, you are planning to use.

Project Category: **HCI/Physical Computing**

PowerPoint/PDF/Prezi Presentation with the proposal for interactive installation (environment of object) with sketches and 3D graphics; precedent study of similar installation, technical research on technologies to be used in the project with 2-3 actual demonstrations of these technologies (working prototypes), proposed work schedule based on the studio milestones (midterm, final review). List of materials and technologies required for the interactive installation. A simple draft example developed by you showing your ideas within the medium you plan on using (AR, VR, Arduino/physical computing, ...)

Project Category: **Narrative-based Works**

Playscript: all narrative-based projects need to present a full, written story during the initial presentations. The narrative needs to be in the form of the play with clear distinction between the prose (third person perspective) describing the contextual settings/mood/ambience and the dialogues/interactions between actors (first person perspectives). Avoid language associated with books, magazine, and blog posting. You are writing a play (situations) not a story (description).

Sketches of characters and settings: Since your narrative will have visual storyline you will need to develop characters and environments.

Storyboard: present a storyboard for your play

Medium: discuss the media that you will use to execute your project: illustrations, video, augmented reality, virtual reality. ...

Schedule: propose the schedule for the entire semester with key deliverables and deadlines.

Sample: provide a short example of your final project in at the draft level. If you are working on a cartoon, prepare a layout (page or two) of your cartoon book. If you are working on a narrative game, show a couple of slides of game interface with dialogue.