AD 112: Communication in Art + Design: Digital Media

Course Information

Semester Spring 2025

Instructor Thomas Carlson, thomas.carlson@njit.edu
Section 002 Wednesday 8:30am - 12:50pm Campbell Hall 236C

Instructor Sophia Sobers, sophia.l.sobers@njit.edu
Section 004 Monday 8:30am - 12:50pm Campbell Hall 236C

Instructor Monica Nelson, monica.nelson@njit.edu
Section 012 Monday & Thursday 1:00pm - 2:55pm Campbell Hall 236D

Instructor Six Lauture, six.lauture@njit.edu
Section 006 Tuesday & Thursday 8:30am - 10:25am Campbell Hall 236C

Instructor Kaiheng Zhang , kz25@njit.edu
Sections 014 Monday & Thursday 1:00pm - 2:55pm Campbell Hall 236G

Credits 3

Prerequisites None

Course Description

Restrictions: For Digital Design, Industrial Design, and Interior Design majors only; other majors require department approval to register.

This course will help students develop a critical attitude and analytical language to explore 3D and 2D issues involved in the study of design ideas but work will be focused primarily on digital techniques and modes of expression. It will cover drawing basics and digital modeling and extracted drawing techniques and critical analysis of these techniques and other methods of graphic (and architectural) representation.

Course Objectives

- Provide an exposure to various 3d modeling and rendering toolsets.
- Develop an understanding of multiple 3d modeling typologies.
- Develop a design methodology which operates at multiple scales.
- Provide an exposure to interior, industrial and digital design representation conventions.
- Develop a quality of craft with multiple digital tools.
- Develop the ability to present a design proposal graphically.

Assignments, Grading, Attendance Policy

Assignments

This course consists of three major projects and a shared competition with AD-111. Each project will be divided into parts with specific submission specifications specified in project handouts.

The general outline for the assignments in this class is as follows:

Technical Exercises and Tutorials
A portion of each project will be dedicated towards student's ability to complete software tutorials and to submit proof of completion of these tutorials. Specific software will be assigned for each design discipline and is project specific.

Projects: Part 1: Ideation, Research and Development
Part 1 of each project will be focused on research based on the project prompt, ideation of an idea for the project, and initial 3D modeling development as a proof of concept for each project.

Projects: Part 2: Finalization, Project Submission and Presentation
Part 2 of each project is focused on the realization and finalization of the design, which includes: modeling, rendering, post-production, and a formal project presentation.

Competition
The competition is held concurrently with AD-111. The competition is thematic and open-ended in nature. Although this assignment will also be assigned in AD-111, it is not a requirement that students must also take AD-111 in order to complete this assignment.

Portfolio
A PDF packet of the projects created over the course of the semester, in addition to the competition, is to be submitted at the end of the semester before the start of exam week. This packet should be an edited version of the work created over the course of the semester.

Professionalism
While no specific assignment will be given towards professionalism, this is an expected and required part of the course, and is part of the final course grade. See **Grading / Professionalism** for more information.

Assignment Submissions
Assignments are due at the beginning of class. Students working on an assignment during class on the day due, ie. during the presentation of a project, will be marked down one letter grade. Assignments that are not clearly labeled will not be accepted or graded.

Late homework will be graded down one letter grade for every class late. Students do NOT receive extensions for submission of work due to any unexcused absences.

Data Backups, Lost Work
Students are expected to keep multiple backups of all course data and to have current project files available at all times during class time. Lost, unavailable or inaccessible data will not be a valid reason for project extensions or Incomplete grade issuance. Students are encouraged to invest in an external hard drive and / or utilize Google Drive.

Software Access
There is no excuse for not being able to access and use the software required in this course. The computer labs in which this course meets are provided for students to use to complete course assignments. See **Course Policies / Computer Labs + Software Access** for more details.

Grading

The following will be taken into consideration in grading coursework:

Intellectual Engagement
Students are to thoughtfully engage the material presented in readings, presentations and discussions. Responses to questions should be directly and thoughtful related to topics investigated in the assignment.

Independent Thinking
Independent thinking will be evaluated and will be based on the ideas and thoughts developed on an independent basis by the student. Depth of creative thought is primary to the independent thinking evaluation. Independent thinking must be clearly demonstrated in all aspects of the course including verbal participation in the classroom.

Technical Proficiency
Demonstration of proper 3D modeling techniques in the development of coursework.

Color and Composition
Application of design principles and elements (AD150) as guiding features to support project concepts.

Communication
The ability to communicate ideas and concepts to others. This includes written, verbal, and visual communication skills. Outside critics may be brought in at the end of each project to review your work in an open forum environment. These presentations should be considered “client presentations” and should be presented with a level of professionalism.

Effort
Exhibited effort towards assignment, seen in the submission and presentation of coursework. Effort in which students only meet the project requirements will result in an Acceptable (C) grade. Effort in which the student goes above and beyond project

requirements, develops conceptually rigorous and successful designs will result in higher grades.

Professionalism

Students are to express and articulate clearly their view toward the topics in this course in a method which reflects the quality of a professional in the field of design. It is the ethical responsibility of the student to support the learning community in this course in a positive and constructive manner. Maintaining a positive learning community is parallel to expectations one will experience in supporting a positive work environment after graduation.

Professional attitude includes, but is not limited to, the ability to maintain and contribute to a positive learning environment, professional attitude towards classmates, guests, and the instructor. To receive a positive evaluation, professional attitude must be clearly demonstrated on a consistent and daily basis. Do not take this portion of the course for granted--you are expected to demonstrate professional maturation processes within the course. The ability to receive and give critical feedback, respond to challenging situations with a positive attitude, and support an excellent working studio environment are all essential to receiving high marks in professional attitude evaluations.

Grading Scheme

The preliminary grading plan for this course is as follows and is subject to change:

Project 1 Technical Exercises.	4%
Project 1 Part 1.	8%
Project 1 Part 2.	15%
Project 2 Technical Exercises.	4%
Project 2 Part 1.	8%
Project 2 Part 2.	15%
Project 3 Technical Exercises	3%
Project 3 Part 1.	8%
Project 3 Part 2.	15%
Competition	10%
Portfolio	5%
Participation	5%

	100% Total

NJIT Grading System

NJIT uses the following for undergraduate courses:

A Superior
B+ Excellent
B Very Good
C+ Good

C Acceptable
D Minimum
F Inadequate

Kepler Requirement
Project grading is not officially applied to student standing until project deliverables have been uploaded in the proper format to the Kepler system. **Failure to upload work to Kepler will result in an F for the course.**

Attendance

Attendance is taken at the beginning of each class.

Absences

After three unexcused 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. Students do NOT receive extensions for submission of work due to any unexcused absences.

Tardies

When a student arrives 15+ minutes after the start of class, leaves 15+ minutes before the end of class, or takes an extensive break of 30+ minutes during class, this is considered tardy. 3 tardies = 1 absence.

Excused Absences

Students who miss class due to bereavement, medical concerns, military activity, legal obligations, or university-sponsored events **must** provide the Office of the Dean of Students with official and verifiable documentation related to the absences within 14 days and complete an online Student Absence Excuse Request. Once the absence has been verified, the Dean of Students will communicate on behalf of the student with the instructor.

Excessive Unexcused Absences

In the case of multiple unexcused absences (3+), the instructor may issue an academic warning. Although unexcused absences are accepted throughout the semester at the discretion of the instructor and through verification by the Office of the Dean of Students, missing a significant amount of class time will ultimately have an impact on the student's learning experience and ability to successfully complete the course.

Religious Observances

NJIT is committed to create an equitable and inclusive community by making sure we affirm the vast diversity of religious and cultural holidays many students celebrate. You must notify your instructor at the beginning of the semester if you will miss a session (or more) due to religious observance.

Student Athletes
Student-athletes are required to attend all classes. A student-athlete may only miss class when representing NJIT in intercollegiate competition. No student-athlete may miss any regularly scheduled classes for any practice activities.

Course Policies

The following is a list of policies for AD112:

Work Ethic
Students are expected to utilize all class time towards course work. Students are expected to bring new computer models, renderings, and hand drawings (sketches) relevant to the project in progress each class. Students are expected to work each and every day on the projects assigned.

Computer Labs + Software Access
The computer labs in which AD112 is held are reserved specifically for this course. While it is encouraged that students download software to their own personal computers, it is not expected. What is expected is that students are to use the computer labs provided to complete course assignments. This means that students may need to commute to NJIT to complete their assignments outside of course hours. There is no excuse to not be able to complete the course assignments because of a personal computer issue or inability to access software. There is no remote desktop option this semester.

Since each lab is shared by multiple classes, please respect the times in which other classes are scheduled to meet in the labs: Mondays 8:30am - 12:50pm, 1:00pm - 2:55pm, Tuesdays 8:30am - 10:25am, Wednesdays 8:30am - 12:50pm, Thursdays 8:30am - 10:20am and 1:00pm - 2:55pm.

Software Tutorials
While this course introduces and uses several software packages, students should not rely solely only on this course to teach them. Make use of all available resources to learn the software, books, online help, and fellow students.

Lab Policy
No food or drink is allowed in the computer lab. Lab door codes are to be kept private within the roster of enrolled students. Lab projectors and speakers are only for instructor use. You are expected to use good judgment in setting lengthy rendering tasks using lab facilities. *Failure to adhere to these policies can result in your being locked out of the labs.*

Class Policy
Cell phones, email, music players, social networking and music streaming software should not be used during class. Usage of these devices or applications will result in

your being asked to leave the class and being marked absent for that class session.

Course Communication
Students are expected to check their NJIT email for course announcements and updates. Students and Instructors are expected to use their NJIT email for course communication.

Instructors may make use of Canvas Announcements to send out important messages for the class, which students can set up to automatically receive an email forward. Students are expected to check these platforms for course updates.

Academic Warning
Students who do not complete and submit assignments on time and to a satisfactory standard will fail the class. It is the student's responsibility to obtain missed assignments from other classmates and make up work in time for the next class.

Extra Credit
There is no extra credit for this course.

Course Schedule*

**Subject to Change*

Regular Text Indicates All Section Schedule

Highlighted Yellow Text Reflects Section 04 Schedule

Highlighted Grey Text Reflects Section 02, 06, 12, 14 Schedule

Week 1	Week of Jan 20	Schedule
		Introduction to AD112 Syllabus Review 3D Modeling Software and Interface Tutorials
		Syllabus Review 3D Modeling Software and Interface Tutorials 3D Modeling Introductory Video Tutorials Complete Tutorials for Next Class
		2nd Class 3D Modeling Introductory Video Tutorials Complete Tutorials for Next Class

Week 2	Week of Jan 27	
		Section 04 - 1st Class Introduction to AD112 Syllabus Review 3D Modeling Software and Interface Tutorials 3D Modeling Introductory Video Tutorials Complete Tutorials for Next Class Project 1 - Part 1 Introduction Design Research and Ideation Process
		What are Assets and Understanding File Types Developing Presentation Templates Project 1 - Part 1 due Next Class

Week 3	Week of Feb 3	
		Section 04 - 2nd Class Project 1 - Part 1 Presentations + Submission Project 1 - Part 2 Introduction and Overview Video Tutorials for Lighting, Materials and Rendering
		Post Processing in Photoshop Complete Video Tutorials for Lighting, Materials and Rendering by Next Class

Week 4	Week of Feb 10	Schedule
		Section 04 - 3rd Class Desk Critiques, In Class Work Time Project 1 - Part 2 Due Next Class Project 2 - Part 1 Introduction Bring in Object for Project 2 - Part 1 for Next Class
		Project 1 - Part 2 Presentations + Submission Project 2 - Part 1 - Introduction Complete 3D Modeling Tutorials for Project 2 by Next Class Complete Initial Homework for Project 2 by Next Class

Week 5	Week of Feb 17	
		Section 04 - 4th Class Project 1 - Part 2 Presentations + Submissions Measurements, Dimensions, Units for 3D Modeling and Specification Sheets Exploded Axonometric as Communication By Next Class, Complete: - 3D Modeling Tutorials for Project 2 - Part 1 - 3D Modeling of Object Parts for Project 2 - Part 1 - Dimensions and Drawing Export Tutorials - *Draft* of Project 2 - Part 1 Presentation Layouts Complete Initial Homework for Project 2 by Next Class Review + Confirm Objects for Project 2 - Part 1
		Device Desk Critiques, In Class Work Time Project 2 - Part 1 Presentation Layouts Due Next Class Complete Tutorials for Exploded Axonometrics

Week 6	Week of Feb 24	Schedule
		Section 04 - 5th Class Review Project 2 - Part 1 Layouts Project 2 - Part 1 Due at End of Class Desk Critiques, In Class Work Time
		Project 2 - Part 1 Presentations Project 2 - Part 2 Introduction Project 2 - Part 2 Research due Next Class INT - Introductory Tutorial for Revit Due Next Class

Week 7	Week of Mar 3	Schedule

		Section 04 - 6th Class Project 2 - Part 2 Research Presentations + Initial Design Photoshop Compositing Demonstration INT - Importing Into Revit Demonstration DD, ID - HDR Scenes + Turntable Rendering Tutorials
		Desk Critiques, In Class Work Time INT - Basic Walls, Floors, Materials and Enscape

Week 8	**Week of Mar 10**	**Schedule**
		Section 04 - 7th Class Desk Critiques, In Class Work Time Project 2 - Part 2 Presentations

Week 9	**Week of Mar 17**	**Spring Recess / No Class**

Week 10	**Week of Mar 24**	**Schedule**
		Project 3 - Part 1 Introduction Project 3 - Part 1 Research + Development Tutorials Assigned - Due Next Week
		Desk Critiques, In Class Work Time

Week 11	**Week of Mar 31**	**Schedule**
		Project 3 - Part 1 Presentations Project 3 - Part 2 Introduction Tutorials Assigned, Due Next Week
		Desk Critiques, In Class Work Time

Week 12	Week of Apr 7	Schedule
		Review Project 3 - Part 2 Progress
		Desk Critiques, In Class Work Time

Week 13	Week of Apr 14	Schedule
		Desk Critiques, In Class Work Time
		Assignment 3 - Part 2 Presentations

Week 14	Week of Apr 21	Schedule
		Competition Introduced Research + Development towards Competition After Effects Demonstration
		Pecha Kucha Presentations Additional Animation Techniques Overview Desk Critiques, In Class Work Time

Week 15	Week of Apr 28	Schedule
		Desk Critiques, In Class Work Time
		6th Annual Student Competition Review Last Day of Class

Week 16	Week of May 5	Schedule
		Last Days of Class 6th Annual Student Competition Review All Sections: Portfolio Books Due

NJIT Policies

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.

Accommodations

Students with Disabilities

Instructors will be notified via email with regard to students with approved accommodations enrolled in their classes. Student Accommodations will have to be signed and dated by each instructor and returned to the Dean of Students. NJIT and instructors will endeavor to make any accommodations required and necessary for the success of students with disabilities. No accommodations can be granted “after the fact” unless due to a situation (injury/illness/etc.) that occurs or is documented during the semester. In those instances accommodations will commence upon notification or observation of the disability.

Additional Resources

Campus Health and Wellness Resources
https://www.njit.edu/healthservices/

Mental Health Resources
https://researchguides.njit.edu/mentalhealth