# Digital II: Modeling and Fabrication Syllabus

Course Information

Course Number: FNDN 121.08

Department: Foundation

Room: 327B Cleveland Institute of Art

Time: Thursdays 12:00 pm - 5:00 pm

Faculty: Jimmy Kuehnle - jkuehnle@cia.edu

Office Hours: By appointment

Semester: Spring 2024

[Canvas Course Page](#)

[Course Website](#)

## Course Description

Digital II builds technical proficiency and critical thinking about the role of digital technology. The course offers a common core that reviews file management and digital workflows, covers video editing, time-based images, narrative structures, 3D output of assets from digital models, and forms digital literacy in relation to vocabulary, resources, and digital research. Students will gain experience with basic coding, interactivity, and go more in depth into a particular topic in their chosen track. Course structure consists of introductory concept lectures, technical instruction, lab time with guidance and group critique of finished assignments.

### Digital II: Modeling and Fabrication

Digital II: Modeling and Fabrication is a course that introduces foundational digital 3D applications and methods. Focus will be on 3D output including digital options and physical options. Various methods covered will include using CNC, laser cutters, casting/mold making, 3D printing, VR/AR, and Computer Graphics. Course structure consists of introductory concept lectures, technical instruction, lab time with guidance and group critique of finished assignments.

## Course Goals and Learning Objectives

Upon completion of the course, students will have to opportunity to:

- Think critically about the role of digital technology
- Achieve technical proficiency at a foundational level in various relevant software
- Apply Digital Literacy at a foundational level in relation to semantics, digital resources, and digital research

- Apply foundation principles with Digital Tools in 2D, 3D and 4D Manage and organize files and digital workflows
- Edit Video for animation and narrative structures
- Manage 3D output of assets from digital models, either 2D vector or 3D mode
- Understand variables and functions in computer code
- Code for animation or algorithmic painting
- Utilize 3D software and understand the basics of 3D modeling
- Use digital software to create physical objects Experiment with other digital output for 3D including VR/AR
- Create innovative 3D sculptures and models
- Demonstrate the advantages/disadvantages of using digital technology in 3D form
- Understand and apply design principles using digital technologies

# Course Organization / Method of Instruction

- Digital II has 4.5 hours of regularly scheduled instructional time. In addition to the regularly scheduled instructional time, you'll need to plan on 4 to 6 hours of homework time for each of your classes.
- There will be field trips to the think[box] for instructional content.
- In addition, students will need to go to the CIA Digital Output Center and the think[box] to complete assignments such as laser cutting and 3D printing.
- Digital II is a combination of studio work as well as lecture, group dialogue, critiques etc.
- Projects will sometimes have in-progress reviews in addition to critiques when the projects are finished. The Instructor as well as students participate in the critiques. This takes time and is part of the studio learning experience and a big part of the course.
- Students must avoid behavior that disrupts the learning process, or that otherwise may be offensive to classmates, or that is disrespectful to the instructor.

## Critiques

You're required to contribute to all critiques, even if your own project is not complete. Successful crits depend on each student's generosity in sharing their honest thoughts, opinions and suggestions!

## Late Work

Projects must be turned in on time. On time is before the beginning of class on the day that they are due or other time as specified by the instructor. Late projects will automatically drop 1% per day late.

## Documentation

- Students should maintain regular, on-going and timely documentation of work in progress.
- Images should be high resolution, well exposed, in focus, and well composed.

## File Management

- We will use Canvas to turn in assignments. If issues arise with Canvas' file submission process then we will use Google Drive to turn in assignments.
- The class will have a Google Drive folder specific to this course.
- Use this format for naming all your Digital II class digital files:
  - YYYYMMDD Smith Lane Project 1
  - 20240118 Smith Lane First Day Project 1

## Course Schedule & Requirements

| Week | Date | Topic |
|------|------|-------|
| 1 | January 18 | Introduction |
| 2 | January 25 | Lecture / Workshop / Studio Work |
| 3 | February 1 | Lecture / Workshop / Studio Work |
| 4 | February 8 | Project 1 Crit |
| 5 | February 15 | Lecture / Workshop / Studio Work |
| 6 | February 22 | Lecture / Workshop / Studio Work |
| 7 | February 29 | Project 2 Crit |
| 8 | March 7 | Lecture / Workshop / Studio Work |
| 9 | March 14 | No Class Spring Break |
| 10 | March 21 | Lecture / Workshop / Studio Work |
| 11 | March 28 | Lecture / Workshop / Studio Work |
| 12 | April 4 | Project 3 Crit |
| 13 | April 11 | Lecture / Workshop / Studio Work |
| 14 | April 18 | Lecture / Workshop / Studio Work |
| 15 | April 25 | Spring Show + Film Festival |
| 16 | May 2 | Final Crits |

Key Dates:

- Jan 15 – MLK Day. No Classes
- Jan 16 – First day of classes
- March 8 – Mid Term Grades DUE
- March 11 – 15 – Spring Break. No classes.
- March 29 – Last day for students to withdraw from a course without a grade penalty
- April 26 – Final Day of Classes

- May 13 – Final Grades DUE for all students
- May 19 (Sunday) – Commencement

# Credit Hour Definition

The Cleveland Institute of Art operates on a semester system comprised of Fall and Spring terms. Each term is at least 16 weeks in length, which includes final examinations and studio critiques. A credit hour is formally defined as *1 one hour of classroom or direct faculty instruction and a minimum of two hours of out of class student work each week for approximately fifteen weeks for a semester.* At CIA, this is further defined as:

- A three-credit Studio course translates to 5 hours of scheduled class time per week plus 4-6 hours of preparation and homework.

# Required Textbooks and Readings

- No required textbook
- Course resources are available on Canvas or online

# Required Supplies

- Drawing Board
- Loose Paper to Draw on (Can use printer paper or other loose paper, not paper in a sketchbook)
- Pencil and sharpener
- Eraser
- Safety Goggles (not needed on first day)
- Hearing Protection (not needed on first day)
- ~$50 -$75 for fabrication materials to complete projects

# Recommended Materials

The following materials are not required for the course but may be useful to you in the course and further study.

- T-Square
- Straight edge for drawing lines 45 deg triangle 30 / 60 deg triangle
- Compass for drawing circles
- 3 Button Mouse – Attached to Lab computers but recommended for working on your laptop
- Low tack tape to hold drawing paper to board
- Digital Calipers - May purchase your own or use the digital calipers in the Fab Studios
- Isometric Graph Paper (Has triangles instead of squares)
- Square Graph Paper

# Cleveland Institute of Art Required Policy Language

Diversity & Inclusion Statement

The Cleveland Institute of Art recognizes and embraces diversity and believes that an outstanding education in art and design should be accessible to all individuals regardless of ethnicity, race, religion, age, gender identity, sexual orientation, national origin, socio-economic status or disability. It is essential for the College to advance diversity by encouraging our community to share a responsibility in creating, maintaining and developing an environment in which difference is valued, equity is sought, and inclusiveness is practiced.

## CIA Course Attendance Policy from the College Catalog

### Course Attendance

Students are expected to attend all sessions of the classes in which they are registered and to attend all associated lecture programs and meetings. Progress as an artist depends not only on completion of assignments but also on full participation in dialogue with studio and academic classes. All absences will count towards a student's absence total for the semester. Students are responsible for all missed class material, including assignments and tests, when absent from class. Each faculty member is required to take, and to maintain records of, class attendance. CIA's absence limits are as follows:

| Course Type | Absence Limit |
|---|---|
| Course meeting once a week | No more than 3 absences per semester* |
| Course meeting twice a week | No more than 6 absences per semester |
| Independent Study | Participation and attendance expectations are at the discretion of the faculty member. |

*note: for studio courses that meet in 2 sessions over 1 day, missing one of the two sessions will be counted as 0.5 absence*

A student who has missed the maximum absences per semester, as outlined above, must meet with their Academic Advisor to discuss their options. **To uphold the integrity of the educational content and curricula, absences exceeding the limit as outlined above will result in failure of the course.** Students must notify their faculty member if they will miss a class, and should contact their instructor(s) as soon as possible after an unavoidable absence. To protect a student's privacy, written documentation of an illness, injury or obituary is not required nor requested. **An absence from a final critique or exam will result in automatic failure of the project or exam.**

Faculty may factor tardiness into determining if a student is absent or not. Tardiness policies should be stated on the course syllabus.

### Absence Due to Religious Observance

Students who expect to miss classes or activities due to religious observances should notify their faculty members well before the expected absence. Students are responsible for the missed work.

**Absences Due to Extenuating Circumstances**

The absence limits as described above, are adequate for emergencies, minor illnesses, doctor's appointments, transportation issues, etc. In the case of exceptional circumstances that would cause a student to exceed the absence limit, the student should contact Academic Services. A student who is hospitalized or has an extended illness is asked to give HIPPA permission to their academic advisor in Academic Services so they can communicate with their medical provider regarding the student's illness and assist as needed. When protracted absence has been caused by illness or other extenuating circumstance, students may be given the privilege of making up lost work by arrangement with, and at the discretion of the instructor. Students approved to exceed the absence limit due to exceptional circumstances are still responsible for completion of any course requirements missed during their absence.

**Extracurricular Life and Class Attendance**

At CIA, we value students' total educational experience, including its curricular, co-curricular, and extracurricular components. All departments, academic and other, are encouraged to minimize the scheduling during established class meeting hours of events at which student participation is required or desired, including but not limited to extra class meetings, professional development opportunities, field trips, and other organized activities. When conflicts exist, all parties (students, faculty, and staff) should work together so that the student can meet their academic obligations and participate in extracurricular events. If agreement about an appropriate accommodation cannot be reached, the student's obligations to classes meeting on their posted schedules will take priority.

## Class Trips Policy from the College Catalog

All students attending instruction-related trips or tours that require them to travel away from CIA must sign an approved release form in advance of the trip that declares they will not make a claim against the college or its personnel/representatives for injury or damage sustained while on the trip. Release forms should be returned to the faculty member leading the trip before the event. All CIA policies are in effect during sponsored excursions away from campus.

## CIA Grading Policies and Grade Descriptions from the College Catalog

Letter grades are a means by which faculty members communicate their professional assessment of students' work. The primary purpose of assigning grades is to provide a realistic standard of reference by which students can measure their progress while enrolled at CIA.

Grades are reported twice each semester: mid-term grades after the first eight weeks, and final grades at the close of the term. The mid-term grade is a preliminary indication of progress to date.

Semester and cumulative grade point averages are reviewed by Academic Services each term to determine each student's academic status. Each transcript includes the semester Grade Point Average (GPA) and the cumulative GPA. Letter grades have the following meaning:

**A, A-:** Work of consistently outstanding quality, which displays originality, and often goes beyond course requirements;

**B+, B, B-:** Work of consistently good quality, demonstrating a high level of proficiency, knowledge, and skills in all aspects of the course;

**C+, C, C-:** Satisfactory work that meets the requirements of the course and conforms to the standards for graduation.

**D+, D, D-:** Work deficient in concept or execution but acceptable for course credit in all courses.

**F:** Work unacceptable for course credit and does not meet the standards for graduation.

## CIA Policy on Plagiarism and Academic Dishonesty excerpted from the Student Handbook:

All acts of academic dishonesty diminish the integrity of the Institute and are taken very seriously by the school. Students being accused of Academic Dishonestly will participate in our judicial process and if found responsible, will be subject to appropriate sanctions. Sanctions may include, but are not limited to any one or a combination of the following:

- Formal warning/censure/academic alert.
- Reduced grade including a failing grade for the assignment.
- Reduced grade including a failing grade for the entire course.
- Forfeiture of student leadership positions, and/or restrictions on participation in Institute activities.
- Academic probation
- Suspension
- Expulsion from the Institute.

**CIA Course Evaluation Policy**

All students are expected to fill out a brief course evaluation for each class at the end of the semester. Your participation in the course evaluation process is critical to CIA's evaluation of faculty teaching, assessment of student learning outcomes, and identification of opportunities for continuous improvement to course content and instruction. Please take a moment to respond to the evaluation when directed to do so at the end of the semester. Your thoughts matter.