Industrial Design – ID 1803 Special Topics: Fundamentals of Design
Room: Arch East 104
Fall 2026
CRN 93027

Section 2 9:30am – 12:15pm, Tuesday & Thursday – Arch East 104

Credit Value: 3.000

Instructors:

David Lynn david.lynn@design.gatech.edu

Course Description:

Introduction to fundamental design principles, processes and methodology. Through 2D and 3D techniques designers will be empowered to generate effective visual representation of form. This course will connect drawing and modeling while developing an understanding of the principles of design.

Course Objectives:

This course deals with the various ways that designers communicate visually. Emphasis will be placed on clear communication that is effective and efficient in its intent. The course will explore both 2D (sketching) and 3D (form giving / model making) communication integral to the design process.
Specifically, the course objectives are to:

- Improve the visual communication skills of the students, as pertaining to drawing and modeling.
- Increase the creative confidence in each student and heighten the attention to craft resulting in the medium.
- Deal with the perception of the work by the audience and visual hierarchy of the perception in the work.
- Ability to critique work based on vocabulary introduced within this course.
- Prepare students to be strong visual designers by practicing basic design methods and skills required in Industrial Design.

Course Learning Outcomes:

Upon completion of the course students are expected to demonstrate knowledge, skill and abilities in the following areas:

Observation

- Ability to carefully observe the environment as it relates to shape, form, hierarchy, shadow, and space
- Observe and critique their own work and those of others in a manner that is constructive and positive

Visualization / Applied Imagination

- Ability to stretch applied imagination skills, coming up with ideas with both fluency and flexibility
- Ability to cycle rapidly and iteratively through the design process to drive ideas
- Use their visualization skills to communicate ideas in a compelling manner
- Brainstorming: prolific generation of ideas in service to the design process

Creative Skills

- Thinking creatively to solve problems
- Drawing Skills: Gesture, Contour, Blind, Perspective
- Modeling Skills: Form giving, Mockups, Works-Like, Appearance
- Rendering / Finishing: Shading, Light Modeling (raytracing), Photography
- Gestalt Theory: Elements of Art, Design Principles
- Attention to Craft: Quality of Produced Artifacts
- Attention to Material: Prototyping Intent

Design Process

- Create multiple design solutions
- Develop complete design solutions
- Communicate compelling design stories in class presentations
- Understanding and application of 3D visual form principles.

Communication

- Draw sketches of ideas
- Construct 3D models of design ideas

- Ability to explain the design process/thinking, and justify decisions/outcome

Presentation

- Present work in a professional manner (visual, verbal, and experiential)

Materials:

1. Ream of white 11x17 copy paper (500 sheets) for sketching on lose paper. (20lb paper)
2. Ream of white cardstock 80lb (minimum size 8.5 x 11) 50+ sheets.
3. A variety of glues for models. (To be used on paper, wire, foam core, cardstock, & wood)
4. Varity of Wood Dowel Rods. (Ex: https://a.co/d/ejxvEqP) 12" length
5. Foam spheres. Ex: https://a.co/d/4J3Y1zY
6. 1 spray can of each flat white & gray paintable primer
7. Varity pack of sandpaper sheets grits 80 / 120 / 220 + 400 / 600 / 800
8. Spackle (8oz) https://a.co/d/7KDfYYt
9. Safety Goggles + Particle Masks
10. Basic hand tools: screwdrivers, needle nose pliers, and a utility knife
11. A variety of tapes for models. (suggestions: blue tape, masking tape, clear tape)
12. *Hot glue gun & glue sticks.
13. Sketchbook (no line paper)

Grading:

Grading will be based on the Georgia Institute of Technology system. No plus or minuses will be applied to the final grade. Plus, or minus may be used, however, for project submissions during the semester.

Project grades are based on a combination of exercise assignments and the performance criteria that accompany the project. Similar to the overall semester grade, each project grade will be broken down in weighted segments, the details of which will be included on the project handout.

Your projects will be graded at scheduled presentations (see dates listed on the project handouts). Grades will be based on the level of understanding demonstrated, relevance to assignment criteria, clarity of representation, attention to execution, clarity of verbal presentation, demonstration of commitment and craft and quality of material submissions.

Week 1-5 Module 1: 2D to 3D	30%
Week 6-11 Module 2: Volume in Space	30%
Week 12-15 Module 3: Developing Form	30%
Participation, Launchpad, & Evaluations	10%

Attendance:

Students are required to be in class for designated times with all assigned work completed. Attendance will be recorded for each student for each class during the semester. Excessive missed classes will affect final course grades.
A total of 3 unexcused absences is allowed before impacting a final grade. A fourth unexcused absence will result in the reduction of one letter grade from the final course grade. Each additional unexcused absence will result in the reduction of an additional letter grade.

If you know that you will miss a class for a valid reason (such as for a major religious observance or participation in an *approved* Institute activity), please let the instructor(s) know at least 1 week in advance. If an unexpected situation occurs, it is your responsibility to contact the Dean of Students for approval of the missed class.

Late Arrival:

Students are expected to arrive on time for class. Any student arriving 5-20 minutes late or leaving 5-20 minutes early will be considered tardy. Being tardy 3 times=one absence.

Students arriving more than 20 minutes late or leaving 20 minutes early will be considered absent.

Additional criteria for successful completion of the course:

***Participation and Community Engagement**

Students are expected to attend and participate during each class session. Participation means being actively involved in the activity of the class. Your participation score will be evaluated based on: Your activity in class, your contribution to the studio community, coming to class prepared with new work, your on-time readiness, keeping your desk clean throughout the semester, and your participation in LaunchPad.

Academic Integrity:

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. For information on Georgia Tech's Academic Honor Code, please visit: http://www.catalog.gatech.edu/policies/honor-code/
or http://www.catalog.gatech.edu/rules/18/
Any student suspected of cheating or plagiarizing on a quiz or assignment will be reported to the Office of Student Integrity and the ID Undergraduate Curriculum Committee, who will investigate the incident and identify the appropriate penalty for violations.
*** All work must be original, designed and built by you! AI generated concepts and sketches will not be accepted.

AI:

Students are not permitted to turn in AI generate sketches, rendering, or design iteration as original work. No AI should be used in any course competencies. Violating these rules will be considered a breach of academic integrity and will result in a zero-project grade.

Dean of Students:

https://studentlife.gatech.edu/ 404-894-6367 They will help you with medical and personal emergencies. They will email your faculty with approved absences or extensions.

Accommodations:

If you are a student that require accommodation, contact the Office of Disability Services at (404) 894-2563 or http://disabilityservices.gatech.edu/, as soon as possible, to make an appointment to discuss and obtain an accommodations letter. Please also e-mail your faculty as soon as possible to set up a time to discuss how we can support you.

Student-Faculty Expectations Agreement:

At Georgia Tech we believe that it is important to continually strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. See http://www.catalog.gatech.edu/rules/22/ for an articulation of some basic expectations – that you can have of me, and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech, while in this class.