Syllabus – Fall 2026
ID 3041 – Product Dev Studio 1 **v1**

Course Number:	ID 3041-A CRN: 86699
Course Title:	Product Development Studio 1
Instructor:	Kevin Shankwiler
Credit Value:	4 credit hours
Course times:	8:00am – 11:50am; MW

Catalogue Description:

The application of systematic design methods to projects focused on the use of parametric design and CNC capabilities in the design development of products, services & systems.

Objectives:

This studio will introduce a range of processes as they relate to solving product design problems including various dimensions of human factors applied to design. As such, it will focus on the full design cycle and the important steps for designing products: from problem definition through design iteration, the cyclical nature of the design process, and prototyping. Emphasis will be placed on substantiating design decisions. Important product design principles will be employed to learn about product areas specific to this studio: consumer and industrial. Additional skills will be developed in digital design processes, prototyping and product development.

As the semester progresses, students will be expected to show greater volition in the development of design projects. Students will become more self-directed in their investigations. More specifically, this studio introduces students to the following concepts:

- Design process and problem solving as a tool to promote excellence in design.
- Mechanical design
- Branding and brand language
- Product systems

Additionally, students are expected to contribute skills, methods and theory gained from external courses to the studio. The studio is designed as an integrative platform for considering product design decisions from multiple perspectives.

Learning Outcomes:

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

- Understanding of branding characteristics.
- Use of digital tools for design and fabrication.
- Ability to work with external sponsors
- Ability to apply a range of design processes to solve a variety of design problems
- Advanced ability to generate concepts, develop designs, test and refine designs.
- Ability to engage in open-ended problems and produce tangible outcomes.

Course Format:
Instructional methods for teaching the course include:

- Lectures and in-class discussions
- Group and Individual Projects
- In-class exercises
- Presentation and project reviews
- Readings
- Field Trips

*Open studio sessions, may include a combination of project production, one-on-one/group tutorials, and desk critiques

Weekly Learning Activities:

- Lecture (2 hours)
- Studio/Workshop Sessions (6 hours)
- Outside project work (10 hours)
- Total Hours (18 hours)

Scope of Work:

Project 1 (individual) :: Strategic Product Branding and VBL Implementation :: 5+ weeks
Research, propose and reimagine a branded experience:

1. To investigate and discover what makes a brand authentic, consistent and successful.
2. To learn how to design and develop products in the language of a brand.
3. To be able to analyze and extract design elements which communicate characteristics of a brand as well as re-construct and develop with those elements (design language).
4. To learn how to design and develop experiences to connect customers to an established brand.
5. Use digital tools to advance design development: generate multiple design solutions and refine them.
6. To understand design tradeoffs between function/form/material/fabrication.

Project 2 :: Open-Ended Product Development and Innovation :: 12 weeks
Research and develop new product ideas for a recyclable good.
Objectives:

1. To learn to find new opportunities for product development.
2. Design a product to exploit the identified opportunity.
3. Practice methods of iterative prototyping to advance a design concept.
4. Apply human-centered methods of research to drive design development.
5. Advanced skills in digital product development, including parametric design.
6. To adopt an open ended approach for identifying problems and designing a new product.
7. To learn to address complex task situations through making (modeling, testing, refining).
8. To develop skills in fabricating functional appearance models (formally, volumetrically, proportionally correct with accurate representation of color, texture and materials of manufacture, demonstrating final appearance and packaging of product and including simulated functions).

End of Semester Show (studio) :: Launchpad 1-2 weeks
Cleaning and organizing the studio space, making displays, and showing your work for promotion, publicity, and job seeking, and to enrich the Ga Tech ID program by sharing your work with family, friends, and the greater GT and professional communities.
Deliverables: Clean, arrange, promote, display.

General Responsibilities and Expectations:
Attendance:
Students are expected to attend each class session. Classes will start on time and in the assigned classroom, unless field activities or other are notified by the instructor. Attendance will be taken at the start of class. A “late arrival” will be recorded after attendance is taken within the first 15 minutes of the class, after that time the student is considered absent. Please note: three “late arrivals” will account for one absence. You will have three (3) unexcused absences. If more than three (3) unexcused and undocumented absences, you will fail the class. It is the student responsibility to obtain any information in the class due to absences. Attendance for all scheduled exams or any in class presentation is required. If you know that you will miss a class, please advise your instructor at least 24 hours in advance. If an unexpected situation occurs, it is your responsibility to contact the instructor within 24 hours of the scheduled class time.

Participation:
Students are expected to actively engage in any in-class discussions and activities.

Deadlines:
Deadlines for all assignments and projects will be specified when they are given. Students are expected to complete any assigned readings or projects and come prepared to each class. Students are expected to complete all project assignments and submit them digitally to the class website on TSquare.

Assignments will be due before class starts on the scheduled due date. Submitting work after class on the scheduled due date will be considered late and will lower the student letter grade for each late day. Note incomplete assignments cannot be submitted after the next assignment. Late or incomplete projects will result in grade reduction. Incompletes will be given an F letter grade. In-class activities may only be made up if you are absent for a valid reason. The instructor reserves the right to change the dates and modify assignments as necessary, with advanced notification.

Other:

- Design is learned through practice and rigor. Students are expected to nurture their talent beyond class assignments.
- Motivation is expected in class and meetings as well as demonstration of independence, initiative, and time management.
- This course depends on the student active participation and collaboration. The instructor's role is more as a moderator, coach, and critic than as a supervisor who has to define and monitor every detail.
- Questions not asked are questions not answered. Students are expected to ask questions.
- Working in the studio not only gives the student feedback from the instructor and peers; it will also build a professional community of practice.
- Clean studio protocol will be followed. Students are expect to keep a clean working environment and maintain a professional standard of presentation in their studios at their desks, such that any visitor could stop by at any time and easily understand or engage in the work-in--progress.
- Feedback and criticisms will be direct and honest, aimed at the student process and product not personally. Students should hear them carefully and do not hesitate to discuss with their instructor about anything that is unclear or confusing.
- The course material is intended to build up a design library. Students are encouraged to file information and contribute to the course at all times.

Communications:
Your instructor can be reached via email and in some cases via cell phone. Appointments can be made to discuss work, problems and student issues.
Contact: Kevin Shankwiler kshankwiler@gatech.edu

During the semester, you will be asked to submit work in the Acrobat Reader Format (PDF). Canvas will be the main portal for dissemination of course information (https://tsquare.gatech.edu). Your instructor will be posting a variety of course information or sending as group emails. It is assumed that you check your email on a daily basis – this is especially true for materials that you are required to bring to class. In general, any required information will be sent out by 5:00 in the evening prior to the next day's studio.
You may be invited to subscribe to an online forum for inter and intra-studio communication. Details will follow at your instructor's discretion.

Evaluation Criteria:
Students will be evaluated on the quality of their contributions in class discussions and the quality and creativity of their work submissions. Projects will be evaluated on demonstrated understanding and relevance to assignment criteria, clarity and quality of representation, clarity and quality of verbal presentation, and demonstration of commitment. Observations of contributions to solo and group activities, craft and quality of material submissions, and clarity of verbal and graphic presentations will contribute to grade assessment.

Grading:
Grading will be based on the Georgia Institute of Technology system. No plus or minuses will be applied to the final grade. However, plus and minuses will be used for all the submissions during the semester. Students will have one week after each project grade submissions to discuss any grading matters to the instructor.

90-100% = A
80-89% = B
70-79% = C
60-69% = D
0-59% = F

Grades will be based on projects and exams according to the following grading distribution:

Project 1: Brand Development	(25%)
P 1.1: Analysis	5%
P 1.2: Application	10%
P 1.3: Development & Implementation	10%
Project 2: Open-Ended Product Dev Innovation	(55%)
P 2.1: Research and Insights	15%
P 2.2: Concept Development and Refinement	20%
P 2.3: Implementation and Presentation	20%
Launchpad	10%
Attendance, Participation & Contribution to Class Discussion	10%
Total	**100%**

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. Review Georgia Tech's Honor Code and the student Code of Conduct.

Any student suspected of cheating or plagiarism on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Accommodations for Individuals with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services (404-894-2563) as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Student-Faculty Expectations

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. The Student-Faculty Expectations articulate 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.

This syllabus is subject to change during the course of the semester. If so, the syllabus will be updated online and you will be informed of the changes.