

**San José State University**  
**Department of Design / Industrial Design Program**  
**DSID 32, Industrial Design Foundation II, Section 01,**  
**Spring 2022**

<b>Instructor:</b>	Prof. Alison Armstrong
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<b>Office Hours:</b>	W 11:00 - 11:50AM
<b>Class Days/Time:</b>	MW 12:00-2:50 pm
<b>Classroom:</b>	Art 103 & Zoom
<b>Prerequisites:</b>	DSID 21, DSID 31, or Instructor Permission
<b>Corequisites:</b>	BSID Major: DSID 22 (Corequisite), DSID 32A or Instructor Permission BA Design Studies (ID) Major: DSID 22 (Corequisite) or Instructor Permission

## Course Format

### Hybrid

This course uses a hybrid method of teaching. A hybrid course means that there are components of the course that are done in the classroom and other components that require using the online course management system. Copies of the course materials such as the syllabus, assignment handouts, grading, etc. may be found on the DSID 32 course Canvas website. You may find your link to this website on MySJSU, along with your login/password info. You are responsible for regularly checking with the messaging system in Canvas for course updates, assignments, etc. All class correspondence and grading will also be managed through the class Canvas site. If you do not check Canvas often, you should set up your email forwarding to forward all class correspondence to your preferred email address. You must have access to a computer and Internet to be able to access the Canvas site. You may also use a tablet or your phone. Some assignments will be required to be turned in both in class on paper and on Canvas. Therefore, you will need to have access to some basic software such as MS Office (MS Word) or some writing software, Adobe Acrobat (for making pdfs), and basic scanning software for scanning sketches to upload to the assignment portal. See [University Policy F13-2](http://www.sjsu.edu/senate/docs/F13-2.pdf) at <http://www.sjsu.edu/senate/docs/F13-2.pdf> for more details.

## Course Description

Industrial Design Foundation II (DSID32) is the second of two studio experiences designed to introduce students to the foundation principles of design and develop their abilities to explore and communicate their design concepts.

## Course Goals

### Student Learning Objectives

There are three primary goals for the course. The first is to teach students safe and effective model building skills so that they become effective at exploring and communicating their design concepts with a wide range of tools available to them and in a variety of three-dimensional media. The second is to introduce the basic elements of three-dimensional design and foundation principles of visual structure. The final goal is to reinforce a design process of experimentation and refinement. The intended outcome is a heightened awareness, improved observation skills and the ability to understand, create and communicate three-dimensional forms clearly, effectively and beautifully.

### Course Learning Outcomes (CLO)

Foundation II is divided into five projects assigned to develop knowledge and skills needed in future courses in the Industrial Design curriculum. Upon successful completion of this course, students will be able to:

LO1: Use the formal elements of design to create three-dimensional design concepts. The design elements we will be discussing include: line, plane or surface, positive and negative volume, value, texture and color.

LO2: Organize the previously outlined design elements to create unified designs that visually communicate clear intent.

LO3: Generate three-dimensional form in a variety of ways (which translates to how designers generate three-dimensional form with computer-aided design tools)

LO4: Demonstrate confidence in a prototyping environment to safely and effectively generate prototypes that communicate their three-dimensional design intent.

LO5: Demonstrate effective design process through their use of two-dimensional and three-dimensional sketching and experimentation that enables them to explore, formulate and solve design problems and opportunities.

LO6: Exhibit an uncompromising and high professional standard for three-dimensional design and prototyping skills, techniques, tools, materials, and craftsmanship.

LO7: Use three-view, orthographic projection drawing as a tool of exploring alternative concepts, planning and specifying prototype construction and to communicate design concept specifications to others.

LO8: Use design awareness, knowledge and intent, both in their own work and when discussing the work of others in informal classroom discussions as well as formal critiques at the end of each project. This should be demonstrated in their ability to actively discuss, critique, and engage in professional review of their work and that of their peers work.

### Required Texts/Readings/Materials

There are several books that are highly recommended for this course. These are all books that are recommended as part of any Industrial Designer's permanent library and will be either assigned or referenced in future DSID courses.

### Other Recommended Readings

Dreyfus, Henry; *The Measure of Man & Woman*; 2002; Wiley, New York. (ISBN 978-0471099550)

Bjarki, H. *Prototyping and Modelmaking for Product Design*. Lawrence King Publisher  
(To be published Sept 2012 ISBN 978 1 85669 8764)

Thompson, Rob. *Prototyping and Low-Volume Production*. Thames and Hudson NY, NY 2011. ISBN 978-0-500-28918-1.

Shimizu, Y. *Models & Prototypes*. Graphic-Sha Publishing Co Japan. 1991. ISBN 7661-0617-2

### **Required Materials List**

There will be additional tools and materials required to complete the course assignments. This has, in the past, cost students an estimated \$800-\$1000 over the course of DSID31 and DSID32 combined. Past examples of tools have included respirators (purchase a respirator that is effective for both particles and fumes), files, saws, foam carving tools and other hand tools that students utilize in model making. Prototyping materials may include (all costs are estimates):

1. Urethane modeling foam (\$160)
2. Modulan foam (available in the Spartan Bookstore \$50)
3. Sandpaper (100, 150, 220 and 400 grit approx. \$100)
4. Body filler and spot putty (Evercoat or Bondo approx. \$40)
5. Paint and primer (we recommend Duplicolor brand paints or canned paint from Lowe Paint approximately \$100)
6. Foamcore (\$30)
7. Medium Density fiberboard (\$40)
8. Respirator Mask for gases and vapors not just dust particles (\$50). An example would be: [https://www.amazon.com/dp/B00IF7RBS4/ref=psdc\\_2257619011\\_t1\\_B00G7TRLAA](https://www.amazon.com/dp/B00IF7RBS4/ref=psdc_2257619011_t1_B00G7TRLAA) with cartridges for gases and vapors.

### **Shop Test (work in shop will resume when classes are back in session on campus)**

The Department of Design requires that Industrial Design students attend and pass the shop safety orientation at least once each year. We will be showing the video in class and then you will have at least a week to review the video again on your own as it is posted online (<http://www.sjsu.edu/atn/services/webcasting/events/shopysafety.html>) now. The shop test date will be announced the first day of class. That will be the only date that you will be able to take the shop test for this course so make sure you have studied up and paid your shop test fee at the bursar's office before that date. You must provide proof of enrollment and the original receipt from the bursar's office that you have paid the required \$20 shop fee to fund #62089 prior to taking the test.

### **Library Liaison**

Elkin, Aliza  
Email: [aliza.elkin@sjsu.edu](mailto:aliza.elkin@sjsu.edu)

### **Classroom Protocol**

Active participation in class activities is a significant factor in a student's success in the Industrial Design program. Active learning facilitates mental growth, skill enhancement, creates a lifelong learner and improves the goals of becoming a good designer. Students are expected to be on time to class and when a class critique is planned, work is to be ready to be displayed at the students' work/class space by 10 minutes after the official start of the class period. Be ready to start the critique by 15 minutes after the class officially starts. Students are to be respectful of

the professor and their peers and any disruptive activities in the classroom will result in the student being asked to leave the class. Arriving late to class without prior arrangement and approval from the professor is considered disruptive. If the student cannot be in the classroom by the start of class, please do not interrupt the class in session by entering the classroom. If a student encounters any problems that inhibit their ability to participate in the class, please provide as much advance notice as possible to the instructor so that he/she may respond and inform the student in a timely manner. Students are expected to leave the classroom in a clean condition at the end of each class meeting so that the next class has an organized, clean room waiting for them.

Cell phones, organizers, laptops and, particularly, games are also disruptive and inconsiderate to your classmates and instructors. Phones are NOT permitted in this class and you will be asked to turn off and your phone at the start of each class. If you disrupt or withdraw from class activities due to your inability to silence these and similar devices it will count against the participation portion of your final grade (LO9). If personal issues (family, medical, etc) require you to leave your phone on, you may do so by making arrangements with the instructor in advance. With this in mind, your instructor may need to answer his phone during class due to university business or professional demands but will try to keep this to a minimum during the semester.

### **Assignments and Grading Policy**

Students will be engaged in demos, discussions and critiques during class meeting times and they will be assessed on engagement in those activities in their Participation grade (LO8). Students will have homework assignments to do outside of class (12-18 hours per week) that include two- and three-dimensional sketching and drawing assignments as required by the course assignments (LO 1-8). Students will be required to be present to discuss their work in classroom critiques (LO 8). Grading will follow the standard SJSU A-F system.

**Determination of Grades**

ASSIGNMENT GROUPINGS	WEIGHT
Eating Utensil	10%
Cardboard Project	20%
Push, Pull, Twist	15%
Redesign Project	40%
Participation	10%
Quizzes	5%
Total	100%

A = 100% to 95%  
 A minus = 95% to 91%  
 B plus = 91% to 87%  
 B = 87% to 85%  
 B minus = 85% to 81%  
 C plus = 81% to 77%  
 C = 77% to 75%  
 C minus = 75% to 71%  
 D plus = 71% to 67%  
 D = 67% to 65%  
 D minus = 65% to 61%  
 F = 61% to 0%

All assignments are due on time. No late work is accepted. Project work for critiques must be complete in order to receive in class feedback. Extra credit is not possible in this course as the workload is significant enough. A passing grade (for receiving university credit for the requirement) in this course is a D-, however, D- project work will usually not pass the DSID 32A Portfolio Project 1 course. The Participation grade in this course will be assessed through your engagement in Work/Practice sessions, class discussions and critiques each week. Actively engaging and exhibiting lifelong learning skills during class are the mode by which participation is assessed.

**University Policies**

Per University Policy S16-9 (<http://www.sjsu.edu/senate/docs/S16-9.pdf>), relevant information to all courses, such as academic integrity, accommodations, dropping and adding, consent for recording of class, etc. is available on Office of Graduate and Undergraduate Programs' [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>.

## DSID 32 / ID Foundation II, Spring 2022, Course Schedule

*Schedule is subject to change with fair notice (one week) in class or via notice on Canvas.*

Week	Date	Topics, Readings, Demos, Assignments, Deadlines
1	W 1/26 Zoom	Review of syllabus, course content, assignment structure, course expectations, materials requirements and first assignment.  Assign: Problem Notebook Assign: Eating Utensil Partner Project Lecture: Teamwork lecture. Work in class Homework: Review video "Combining Opposites" and Quiz Homework: Prepare Partner introduction and initial sketches
2	M 1/31 Zoom	Review: Partner Introduction, Initial sketches, Initial mock ups
	W 2/2 Zoom	Review: Refined models
3	M 2/7 Zoom	<b>Due: Eating Utensil Project – Final Model</b>  Assign: Cardboard Project Lecture: Structures and Modular systems Show: cardboard products Homework: review video "Lateral Thinking is a Survival Skill" & quiz
	W 2/9 Zoom	Cardboard Project - Idea/Problem/Issue presentation Demo: Adobe Illustrator Basics & Setup (if needed)  Work in class/shop Homework: 15 concept sketches (1/page) and 10 mock ups
4	M 2/14	<b>Due: Cardboard - Concept Review - 15 Concept Sketches &amp; 10 Mockups</b>  Selection of three directions for refinement.  Work in class - Cardboard Refined mockups video: working with cardboard
	W 2/16	Work in class - Cardboard Refined mockups Homework: Minimum 3 high fidelity mock ups
5	M 2/21	<b>Due: Cardboard Project - 3 Refined Ideas/Mockups</b> Review: Laser cutter Work in class – Cardboard Final
	W 2/23	Work in class - Cardboard Final,

6	M 2/28	Assign: Push, Pull, Twist Project. Work in class
	W 3/2	<b>Due: Cardboard Project – Final Project</b>
7	M 3/7	<b>Due: Push/Pull/Twist - presentation of image gathering</b> <b>Due: first round of sketches and mock ups (3 sets)</b> Homework: revision to single idea
	W 3/9	Review: Revisions on chosen direction Fusion demo Work day P/P/T
8	M 3/14	Final Project Introduction Assign: Analysis & Theme Boards  Work in class - Push, Pull, Twist Project Final - progress review
	W 3/16	<b>Due: Push/Pull/Twist - Final design</b>  Lecture: Helmet manufacturing Assign: Initial ideation Sketches
9	M 3/21	<b>Due: Helmet - Analysis Boards</b> <b>Due:</b> first ideas/sketches for the Helmet project. A minimum of 20 ideas is required. Selection of five (5) directions for refinement.
	W 3/23	<b>Due:</b> 5 directions for refinement & refinement sketches
10	M 3/28	<b>Spring Recess - No Class (March 28-April 1)</b>
	W 3/30	<b>Spring Recess - No Class</b>
11	M 4/4	<b>Due: Helmet - Refined Sketches &amp; Mockups</b> 5 ideas with refined, presentation quality sketches (including thinking on details) and a mockup of each on the head form. Selection of 2 ideas to revise  Assign:detail drawings
	W 4/6	Lecture: color & graphics Work in class: Revision mockups
12	M 4/11	<b>Due: Helmet - Revised Sketches &amp; Mockups</b> Refined concept sketches (2) and mock ups (details or entire helmet form)
	W 4/13	Work in class: Final Design Selection Fusion demo (if needed) Assign: Final Mockup & Orthographics
13	M 4/18	<b>Helmet - Final Design Selection - Review</b>

		Fusion demos (if needed) Assign: Detail drawings
	W 4/20	Review: detail definition
14	M 4/25	Lecture: Presentation ideas
	W 4/27	<b>Review: Final Concept, Orthographics &amp; Fusion progress/status</b>
15	M 5/2	Work in class - Helmet Final Idea in Fusion
	W 5/4	Work in class - Helmet Final Idea in Fusion Demo: Photography for presentation
16	M 5/9	Work in class - Helmet Final Idea in Fusion
	W 5/11	<b>Due: Final Presentation</b> Attendance is mandatory for final presentations.
Final	TBD	DSID32A review of all profolio work