Instructor: Prof. John McClusky

Office Location: Art 227

Telephone: (408) 924-4538

Email: John.McClusky@sjsu.edu

Office Hours: Thursdays 12:00am – 2:00pm

Class Days/Time: TR 15:00am-17:50am

Classroom: Art 103

Prerequisites: Declared BSID or BA Design Studies (ID Area) major or with instructor consent.

Co-requisites: DSID 21

Course Fees: A percentage of your fees are used in the maintenance of the prototyping facility equipment. The Department of Design requires that Industrial Design students attend and pass the shop safety orientation at least once each year. A shop test date will be reserved within the first two-three weeks of the term. You must provide proof of enrollment and a receipt from the bursar’s office that you have paid the required $20 shop fee to fund #62089 prior to taking the test.

Canvas Course Management Website & Course Format

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 DSID31 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 the 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 on Canvas, in which case 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 at http://www.sjsu.edu/senate/docs/F13-2.pdf for more details.

Introduction:

Luck is what happens when preparation meets opportunity.

– Seneca

Course Description:

Industrial Design Foundation I (DSID31) is the first 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. There are three primary goals for the course. The first is to teach students safe and effective shop 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 ability to understand, create and communicate three-dimensional forms clearly, effectively and beautifully.

Course Goals:

Student Learning Objectives

DSID 31 Foundation I is divided into five projects assigned to develop the following skills:

- Your understanding of the elements of design. They include: line, plane or surface, positive and negative volume, value, texture and color.
- The ability to organize the basic design elements to create a unified design and visually communicate your intent.
- Your ability to resolve multiple forms harmoniously in unified three-dimensional compositions.
- The ability to understand and articulate design knowledge and intent, both in your own work and when discussing the work of others.
- Various methods of generating three-dimensional form (which translates to computer tools).
- The ability to work confidently in a prototyping environment and to safely and effectively build and communicate your design intent in 3D form.
- Develop and advance your design process of 2D and 3D sketching and experimentation that enables you to explore, understand and solve design problems and opportunities.
Course Learning Outcomes (CLO)

Upon successful completion of this course, students will be able to:

LO1   Employ best practices and protocol with regard to the use and safety of common shop equipment both powered and hand tools.

LO2   Visualize and build in 3-Dimensions, a variety of objects in various materials used in the design profession.

LO3   Construct and finish (paint), using a variety of materials, 3-D objects that accurately illustrate basic geometric forms and surfaces.

LO4   Use orthographic and cross-section views to construct geometrically accurate 3-D designs.

LO5   Use 2-D drawings to translate and build complex and curvilinear designs accurately.

LO6   Practice and assemble an iterative body of work for any 3-D design project.

LO7   Exhibit an uncompromising and high professional standard for 3-D skills, techniques, tools, materials, and craftsmanship.

LO8   Collect, archive, edit, and produce a portfolio of 3-D work.

LO9   Actively present, discuss, critique, and engage in professional review of design work.

Required Texts/Readings

Required Reading


Other Recommended Readings

Hallgrimsson, Bjarki; *Prototyping and Modelmaking for Product Design*; Lawrence King Publisher, London; 2012. ISBN 978 185669 8764.

Course Fees

Course fees collected for DSID31 ($43) will be used to supplement some costs of modeling supplies for this class and for running the ID Labs and maintaining equipment.

Required Materials:

During the semester assignments require students have the following materials available (see list below). It is required that you have all these materials by the 2nd class meeting. They will be available for purchase on the 1st day of class in your DSID 21 class in IS118.
There may be additional course costs not covered by your fees or the kit above such as additional clay, foam, modulam, plastic, paint, etc. Other examples of tools needed have included ventilators, files, saws, foam carving tools and other hand tools that students utilize in modelmaking. Many of these materials will be sold at school the first two days of classes by Dick Blick. Those that are not included in the kit are the responsibility of the student to purchase.

Additional prototyping materials that will be required include: Urethane foam, spray paints, varnishes, body fillers, sand papers, respirator mask and cleaning materials. (Approximate cost $150-200).

We recommend Duplicolor brand paints (available at O’Reilly’s Auto Parts) or canned paint from FinishMasters or East Bay Color. Many students have experimented with different paints but this has usually ended badly. Please closely follow techniques and advice given in demonstrations. We will update information if anything changes.

Materials Kit in Blick Art Supply: *sold on first day of your DSID 21 Section 1 class in IS118*.

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<tr>
<td>13816-1129</td>
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<td>Global Arts Kona Classic Field Journal</td>
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Shop Test
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 bursars 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
Elisabeth Thomas, Liaison Librarian for Design Department
Email: Elisabeth.thomas@sjsu.edu
Phone: 408.808-2193

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 taped/pinned up to the walls 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.

Assignments and Grading Policy
Students will be engaged in demos and practice sessions during class meeting times and they will be assessed on engagement in those activities in their Participation grade (LO 9). Students will have homework assignments to do outside of class (up to 12 hours per week) that include, sketching in their sketchbook documenting their 3-D design development (LO 1-6). Students will be required to turn in a mid-term Portfolio of work done to date, along with their sketchbook (LO 7). They will be required to turn in their final Portfolio of work, along with their final sketchbook on the last day of class (LO 8). Grading will follow the standard SJSU A-F system.
A+, A, A- / 100+ - 91% / Excellent  
B+, B, B- / 90 – 81% / Above Average  
C+, C, C- / 80-71% / Average  
D / 70-61% / Below Average  
F / Below 61% / Failure

Grading is weighted as follows:
Assignment One: Speedform Inspiration Board and Formal Analysis (LO 1): 10%
Assignment Two: Rectilinear Construction (LO 1-9): 20%
Assignment Three: Curvilinear Construction (LO 1-9): 20%
Assignment Four: Speed Form (LO 1-9): 30%
Final Exam: Portfolio Images 10%
Class Participation (LO 9): 10%

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**

SJSU’s Office of Graduate and Undergraduate Programs maintains university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. You may find all syllabus related University Policies and resources information listed on GUP’s Syllabus Information Web Page at http://www.sjsu.edu/gup/syllabusinfo/.
## Course Schedule

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

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics, Readings, Demos, Assignments, Deadlines, Presentations</th>
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</table>
| 1    | R 8/24 | Review of syllabus, course content, assignment structure, course expectations, materials requirements and first assignment.  
Shop Test prep. View video in class. Do a shop walk through.  
Test scheduled for Tuesday August 29th RM 104  
Assign: Speedform inspiration board and formal analysis. (LO 1-9) |
| 2    | T 8/29 | Shop Test @ 9:00am (Have $20 bursar’s office receipt ready in class)  
Demo: Panel Saw and Tablesaw  
Build sanding boards for use later  
R 8/31 | Critique: Speedform inspiration boards and formal analysis  
Assign: Rectilinear Construction Project  
Demo: Building clay mockups  
R 8/7 |  
T 9/5 | Demo: Bandsaw and sanding  
Work in class  
R 9/7 | Critique: Rectilinear clay mockups (minimum 10)  
Assign: ½ Scale Foam Rectilinear Mockups (minimum 6)  
T 9/12 | Build: Foam ½ scale mockups  
R 9/14 | Critique: Foam Rectilinear Mockups (minimum 6)  
Assign: Full Scale final model  
T 9/19 | Demo: Mill  
Build: Final, Full Scale Rectilinear Model  
R 9/21 | Demo: Putty and Painting  
Build: Final, Full Scale Rectilinear Model  
Budget time to paint on Friday or Monday  
T 9/26 | **Critique: Final, Full Scale Rectilinear Model**  
No painting 12 hours before critique. Bring what you have.  
Assign: Curvilinear Form Project (LO 1-9)  
R 9/28 | Demo: Hot wire cutting  
T 10/3 | **Critique: ½ Scale Mockups (10 minimum)**  
Assign: Full scale mockups (2 minimum)  
R 10/5 | Demo: Bandsaw and Sanders  
Build: full scale Curvilinear Forms  
T 10/10 | **Critique: Curvilinear Project Full scale mock-ups** (2 minimum)  
R 10/12 | Build: Final Curvilinear Project |
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<th>Date</th>
<th>Activity</th>
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<tbody>
<tr>
<td>9</td>
<td>T 10/17</td>
<td>Build: Final Curvilinear Project</td>
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</tbody>
</table>
| R 10/19 | **Critique:** Final Curvilinear Models in unfinished wood (LO 1-9)  
Assign: Speed Form (LO 1-9) |
| 10 | T 10/24 | Demo: Chavant Clay  
Build: Clay Models |
| R10/26 | Build: Clay Models |
| 11 | T 10/31 | **Critique:** Initial Speed Form Clay models |
| R 11/2 | Build: refined, clay Speed Forms |
| 12 | T 11/7 | Demo: Pouring the first half of your mold. |
| R 11/9 | **Critique:** Final Clay Speed Form Due (LO 1-9)  
Pinup Orthographic Drawings from DSID21 as well. |
| 13 | T 11/14 | Build: Cast final mold. Have mold boxes ready with your speed form clayed up for the mold pour at the beginning of class. |
| R 11/16 | Build: Cast second half of your mold |
| 14 | T 11/21 | Build: Cast final forms using Instacast in your molds |
| R 11/23 | **Thanksgiving Holiday – Campus Closed** |
| 15 | T 11/28 | Build: Final sanding and finishing of your Speedform casting. |
| R 11/30 | Build: Primer painting of sanded Speedform casting (in class).  
Have your speedform fully sanded and ready to paint at the start of class.  
We will set up the paint guns and paint them with automotive primer at that time. |
| 16 | T 12/5 | Documentation day. Document your work for your portfolio |
| R 12/7 | **Final Critique:** Speed Form Project (LO 1-9)  
Bring inspiration board, process images and final clay pattern, mold and final, sanded and primed casting. |
| F 12/16 | **Final Examination:** No in-class final examination. Upload 2-3 portfolio-worthy photographs of each of your 3 primary class projects. The 3 projects that you are to upload 2-3 images of are: Rectilinear Composition, Curvilinear Composition and Speed Form projects. Upload your images to Canvas no later than 9:30am on Friday, Dec. 16. |