San José State University  
Department of Design / Industrial Design Program  
DSID 128, Advanced Projects in ID, Sect. 01, Spring 2016

<table>
<thead>
<tr>
<th>Instructor:</th>
<th>Leslie Speer</th>
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<tbody>
<tr>
<td>Office Location:</td>
<td>Art 231</td>
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<td>Telephone:</td>
<td>(408) 924-4376</td>
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<td><a href="mailto:Leslie.Speer@SJSU.edu">Leslie.Speer@SJSU.edu</a></td>
</tr>
<tr>
<td>Office Hours:</td>
<td>W 11:15am-12:15pm (drop in), M 11:15am-12:15pm (by appt only)</td>
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<tr>
<td>Class Days/Time:</td>
<td>MW 12:30-3:20pm</td>
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<tr>
<td>Classroom:</td>
<td>Art 205</td>
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<tr>
<td>Prerequisites:</td>
<td>DSID 125A; DSID 121 (Co- or Prerequisite); DSGN 127</td>
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<tr>
<td>Course Fees:</td>
<td>$45</td>
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**Canvas Course Management Website**

Copies of the course materials such as the syllabus, assignment handouts, reading, grading, etc. may be found on the 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 and Calendar system in Canvas for course updates, assignments, etc. All online communication for this course will take place through Canvas. Key topics to check on Canvas are the Calendar, Announcements, Assignments, and Grades. Any last minute updates will be posted to Announcements, the entire semester schedule is detailed in the Calendar, and your progress in the course can be tracked through Grades. Please view Canvas as a tool for Active Learning.

**Course Description**

The Advanced Projects in ID Studio is intended to build upon and reinforce your previous coursework experience by emphasizing the manner in which you build, defend and communicate the rationale behind your design decisions. We will therefore focus on the further development of your design skills and process as it applies to design in today’s professional product development process.
Course Goals and Student Learning Objectives

This course will focus on design theories, methods and techniques used by product designers working with complex product design, appropriate brand/visual cohesiveness, a variety of technologies, and an understanding of lifestyles. It will stress application of all the knowledge you have gained while a student in this program including, but not limited to: design theory, persuasive presentation, quality and craftsmanship, ergonomics, materials and manufacturing processes used in mass-manufacturing processes, mechanical complexity, invention, production techniques, human factors (physical and behavioral), ethnography, surveys, detailed design development techniques, sustainable design strategies, sketching, model making, and use of a variety of software and hardware tools.

Class assignments will include readings from a variety of sources, videos and guest lectures, and design of a product solution for the defined problem. A field trip or two may be included. Reading from the assigned readings and other sources from Canvas will be required each week and will be reviewed and applied in class through discussions and exercises.

You will be engaging in designing a children’s prosthesis for the Simple Limb Initiative.

Your applied design project MUST meet the following criteria:
1) Robust enough to withstand the wear and tear of everyday use in many environments (inside/outside, work/home, dry/wet, etc.).
2) Be able to be integrated/assembled with current parts developed by Mahavir-Kmina.
3) Produced for under $20 USD/~62,000 COLS (Colombian Peso) or less.
4) Aesthetically pleasing and appropriate for the product and the culture.
5) Simple, functional, and ergonomically superior.
6) Be able to be produced affordably using the existing manufacturing available to Mahavir-Kmina in Medellin, Columbia.

Course Content Learning Outcomes

On successful completion of the course students shall be able to:
(LO1) Identify and demonstrate the role of the designer in a professional setting.
(LO2) Create a design project from idea through to final design in a highly refined manner during all phases of the project.
(LO3) Demonstrate systematic thinking through of complex problems and systems and apply industry standards of ergonomics, sustainability, user research, and manufacturing processes to a project.
(LO4) Practice problem identification and discovery and apply empathic design methods.
(LO5) Demonstrate advanced problem solving skills and tools, engage in active learning in and outside the classroom, and apply lessons learned to the project. Participation is key to active learning and students will demonstrate the methods associated with active learning in a creative environment.
(LO6) Know the role of the designer in scenario development in the design industry.
(LO7) Apply physical and behavioral ergonomics and human factors and successfully use scientific methods to find the most appropriate solutions.
(LO8) Perform advanced critical and technical writing skills as applied to design briefs and documentation of project work.
(LO10) Produce clear and compelling communication of ideas in 2D, 3D, and 4D formats.
(LO11) Apply the principles of time management through the use of scheduling tools.
(LO12) Evaluate appropriate aesthetics and brand and apply to the entire design project.

Course Project Deliverables

1) User, cultural, and technical research as related to environment and product. Includes competitive product research, empathic research, materials research, etc. Review, research and analysis that results in a Design Problem Statement and Design Guidelines for each team.
2) A minimum of 20 pages (11x17) filled with sketches per week, weeks 2-12
3) Sketch models throughout the semester as part of phase deliverables and required sketches each week.
4) By Mid-Term: Multiple full-scale iterative design mock-ups and a full-scale functional prototype for thorough ergonomic and usability testing.
5) Technology, Materials, and Cost Specifications in a Bill of Materials (BOM) and LCA (if applicable).
6) Final 3D Functional and 3D Appearance model of final solution (might be two models, one functional and one appearance)
7) Final CAD rendering of product alone and an in-context rendering with product being used.
9) A minimum 2-3 minute video that shows the development journey of the project WITH the use of the prototype in action. The goal here is not to create an ad for your product, but to share your design experience, show the functional results, and demonstrate how the product ACTUALLY works. Focus is on the product, not the research. This is a technical video about how the product works, not a marketing or PR video.
10) Adding of your project to the Simple Limb Initiative website for disseminating the final design in an Open Source format.
11) A final visual presentation (BOTH digital and hard copy on the wall) will take place during the last two weeks of class.
12) A hard or metal spiral bound process book, well organized, well crafted, and with a Table of Contents, Section Dividers, and submitted at the Final Exam date.
13) A pdf file(s) uploaded to Canvas of all work created during the semester, including work presented on the final presentation, the process book and any other relevant work related to the project. This is due with your Process Book on the Final Exam date.
Shop Test
The Department of Design requires that Industrial Design students attend and pass the shop safety orientation at least once each year. You are responsible for viewing the Shop Safety Video on your own as it is posted online. The shop test date will be announced the first day of class and is listed on the syllabus. 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.

Required Texts/Readings

Textbook
The required textbook for this class is:

   a. All required readings will be provided on Canvas as we will only be using a portion of the Chapters in the book, however, it is a great book and you are welcome to purchase it. You can get an international edition here (http://www.abebooks.com/9780073404776/Product-Design-Development-5th-Edition-0073404772/plp) as it is no different than the US edition and it costs significantly less ($25 vs $141). Please make sure you get the 5th edition as it is significantly different from earlier editions.

*Note: This book will be used extensively as a basis for the design process in this course. It heavily favors a quick concept/design/build/test process and provides information and methods to do this successfully. The textbook will be supplemented by other design process examples that are posted on Canvas.*

Other required reading is located on Canvas. Some of the readings come from the following books or documents:


Other Recommended Readings

See the Canvas site for other Recommended Readings and Case Studies. Some other reading that might inspire and inform you as you work on your project. If you are interested in any of these, I do have copies and would be happy to recommend specific chapters that would help you to understand the bigger world of product development.


Required Materials List

Part of your Course Fee is dedicated to supporting the Main Shop and Equipment and the other part goes to support the upkeep and management of the Seid Lab. Each student has access to a total of 3 cubic inches of 3D printing consumables for their project models.

Materials that will be required for this course will vary depending upon your specific project that are not covered by Course Fees:

1) One ream (500 sheets) of 11x17 copy paper: $15
2) Various mock-up materials: foam core sheet, cardboard, modeling clay light-weight foam, PVC pipe, metal strapping, zip ties, glue gun, etc. $100
3) Some harder density foam, modulan/renshape, or casting materials for the final model (some can be bought at the Spartan Bookstore): $160
4) 3D Printer consumables will be provided up to 3 cubic inches of volume. Any material after that will be charged to the student. See Student Assistant for more information about how to submit files, calculate and pay fees. $50
5) Plastic (acrylic, styrene, polycarbonate, PVC, etc.): $50
6) Pens, pencils, masking tape, measuring tools for working in shop $50
7) Standard set of drill bits for working in shop $30
8) Paint for model: $75
9) Ink cartridges for printing: $120
10) A variety of functional prototyping materials that may include:  
Mechanical prototyping materials like LEGO or similar, batteries, wiring, 
soldering equipment, metal, high density plastic, etc.  

The total cost of these materials is estimated to be between:  
$500-750 USD  

Library Liaison  
Teresa Slobuski, Reference and Instruction Librarian for Design Department  
Email: Teresa.Slobuski@sjsu.edu  
Phone: 408.808-2318  

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 life long 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 as we will 
make all efforts to begin the critique at that point. 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 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. 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, Pads, and even laptops can be disruptive and inconsiderate to your classmates 
and the instructor. Unless it is being used for a class activity, please turn off all electronic 
devices that can potentially disrupt class. **Phones are NOT permitted in this class** and you 
will be asked to turn off and store your phone at the start of each class. If you disrupt or 
withdraw from class activities due to your inability to silence and ignore any of these devices, 
it will count against the participation portion of your final grade and you may be asked to 
leave the classroom. Additionally, talking in class during a lecture is considered disruptive to 
the class and will adversely affect the participation grade and you may be asked to leave the 
classroom. If emergency personal issues (documented family, medical, etc) require you to 
leave your phone on, please make arrangements with the instructor prior to and in advance of 
the start of class.

Dropping and Adding  
Students are responsible for understanding the policies and procedures about add/drop, 
grade forgiveness, etc. Refer to the current semester’s [Catalog Policies](#). Add/drop
deadlines can be found on the current academic calendar web page. The Late Drop Policy is also something to be familiar with. Students should be aware of the current deadlines and penalties for dropping classes.

Information about the latest changes and news is available at the Advising Hub at http://www.sjsu.edu/advising/.

Assignments and Grading Policy

Students will be engaged in lectures, research and design activities, and lab time during class meeting times and they will be assessed on engagement in those activities in their Participation grade (LO 5). Students will have homework assignments to do outside of class (up to 12 hours per week) that include reading, sketching in their sketchbook, and drawing and concept development assignments (LO 1-6). Students will be required to turn in a mid-term body of work done to date, along with keeping up to date on uploading all assignments to Canvas for grade assessment (LO 7-12). You will be required to turn in your final project on the final presentation date (LO 7-12). The assigned final will be the turning in of your project process book AND your project laid out in your portfolio format in both printed hard copy format in professors’ office and digital format on Canvas (LO 1-12). Grading will follow the standard SJSU A-F system.

All grades are assessed on the following three criteria: Quality, Effort, and Completeness. Each assignment, presentation and deliverable will be graded on these three criteria, with each criteria holding equal value (33.33%).

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 during the semester as follows:
Iteration and Design Process (LO 2,3,5,7,10) 30%
Class Participation (LO 5): 10%
Project Assignments and Phase Reviews (LO 8-12): 20%
Final Critique, Presentation, and Project Deliverables (LO 11-12): 20%
SLI Website materials and Process Book (LO 3, 8, 10-12): 20%

Please see university grading guidelines for more information.

All assignments are due on time. No late work is accepted without documented justification. If you miss the Canvas deadline for uploading a project deliverable, you will receive a failing grade for that deliverable, however you will still receive feedback on the submission, but only at the next available time that the professor has. Project work for in-class critiques must be 100% complete and pinned up on time in order to receive in-class feedback and anything more than a failing grade. Extra credit is not possible in
this course as the workload is significant enough. The Participation grade in this course will be assessed through your engagement in Activities/Exercise sessions, discussions in class, online engagement through Canvas, and critiques. Actively engaging and exhibiting life-long learning skills during class are the mode by which participation is assessed.

**University Policies**

**Academic integrity**

Your commitment as a student to learning is evidenced by your enrollment at San Jose State University. The [University’s Academic Integrity policy](#), requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The [Student Conduct Code](#) is available on the [Student Conduct and Ethical Development website](#).

Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person’s ideas without giving proper credit) will result in a failing grade and sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include your assignment or any material you have submitted, or plan to submit for another class, please note that SJSU’s Academic Policy S07-2 requires approval of instructors.

**Campus Policy in Compliance with the American Disabilities Act**

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with the [Accessible Education Center](#) (AEC) to establish a record of their disability.

**Student Technology Resources**

It is a requirement for ID students to have their own computer with the required software (Adobe CS, Solidworks, MS Office), and it is highly recommended that by Junior Studio (DSID 125) all ID students have a large format printer (11”x17” or 13”x19”). Computer labs for student use are available in the [Academic Success Center](#) located on the 1st floor of Clark Hall. Computers are also available in the Martin Luther King Library. A wide variety of audio-visual equipment is available for student checkout from [Media Services](#) located in IRC 112. These items include digital and VHS camcorders, VHS and Beta video players, 16 mm, slide, overhead, DVD, CD, and audiocassette players, sound systems, wireless microphones, projection screens and monitors. The ID Program will provide access to the large format printer for critiques and presentations. Students will be given a 10 linear foot allotment of paper for this course (enough for 1 draft and 1 final print). Any additional needs for printing can be accommodated by payment through the IDSA.
Student Chapter or going to Plotter Pros (http://www.plotterpros.net/index.shtml) in San Jose.

Adobe Creative Suite licenses is available through the SJSU Adobe software program for faculty, staff, and students. Students can access Adobe Creative Suite 6 Design and Web Premium, and should be able to download it from http://its.sjsu.edu/services/software/adobe/index.html.

For access to a Solidworks License, send an email to the professor of this course, from the email address you wish to have the license listed under, and the professor will email you the instructions within 48 hours.

**Peer Connections: Tutoring**

Peer Connections is located in multiple locations across campus. It is designed to assist students in the development of their full academic potential and to inspire them to become independent learners. The Center's tutors are trained and nationally certified by the College Reading and Learning Association (CRLA). They provide content-based tutoring in many lower division courses (some upper division) as well as writing and study skills assistance. Small group, individual, and drop-in tutoring are available. Please visit Peer Connections for more information.

**SJSU Writing Center**

The SJSU Writing Center is located in Room 126 in Clark Hall. Staffed by professional instructors, upper-division, and graduate-level writing specialists from each of the seven SJSU colleges. Our writing specialists have met a rigorous GPA requirement, and they are well trained to assist all students at all levels within all disciplines to become better writers. Find more information at the Writing Center website.

**Peer Connections: Mentoring**

The Peer Mentoring is available at multiple locations throughout campus. It is staffed with Peer Mentors who excel in helping students manage university life, tackling problems that range from academic challenges to interpersonal struggles. On the road to graduation, Peer Mentors are navigators, offering “roadside assistance” to peers who feel a bit lost or simply need help mapping out the locations of campus resources. Peer Mentor services are free and available on a drop –in basis, no reservation required. The Peer Mentoring website is helpful for getting quick information.
Course Schedule

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

Work Product Guidelines:
Students are expected to produce a considerable amount of sketching artifacts in 2D, 3D and 4D form throughout the semester (on paper, in the form of mock-ups, progressive test prototypes, refined models, renderings, and final models/prototypes). To be effective for this type of project it is expected that each student produce no less than 200-300 sketches during the term (that works out to an average of 15-20 sketches per week throughout the semester). Design projects require a significant amount of experimentation and exploration during the first Phases of the project, in order to gain insights that guide final project direction. To help with each individuals “design process methods” a weekly sketch requirement will be assigned, as a way to assist in time management for the project. However, sketch and design process evaluations will only take part at key deliverable dates at Phase Reviews. Turning in a sketchbook of sketching done to date is required and will be assessed at each Phase Review. To help with planning, it is expected that the following percentage of sketch work be completed by each of the respective Phase Reviews:

Phase 1 & 2 Review on February 24: 20%
Phase 3 Review on March 16: 60% (Mid-Term)
Phase 4-6 Review on April 25: 80%
Phase 7-8 Review on May 16: 100%

Table 1 Course Schedule

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<th>Week</th>
<th>Date</th>
<th>Topics, Readings, Demos, Assignments, Deadlines</th>
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<tbody>
<tr>
<td>1</td>
<td>M 2/1</td>
<td><strong>Phase 01: Analyze &amp; Reflect</strong>&lt;br&gt; <em>Due:</em> Revised Gantt &amp; Proposal for IP SP16&lt;br&gt; <em>Course Intro and Discussion:</em> Review syllabus, course expectations, Canvas &amp; how to use it for this course, project deliverables, reading, and materials requirements.&lt;br&gt; <em>Activity:</em> Project Brief and assignment; Team Formation&lt;br&gt; <em>Textbook and Project Reading:</em> see Canvas for Week 1-2</td>
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<td></td>
<td>W 2/3</td>
<td><strong>Phase 01: Analyze &amp; Reflect</strong>&lt;br&gt;<em>Lecture:</em> Teamwork; Design for Need (“Hidden Colombia”)&lt;br&gt;<em>Activity:</em> Teamwork (Roles and Responsibilities); Art Heinz video&lt;br&gt;<em>Textbook and Project Reading:</em> see Canvas for Week 1-2</td>
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<tr>
<td>2</td>
<td>M 2/8</td>
<td><strong>Phase 01: Analyze &amp; Reflect / Phase 02: Reflect &amp; Explore</strong>&lt;br&gt;<em>Film Screening &amp; Discussion:</em> Emily Cohen (UCSC), <a href="#">Bodies at War</a>&lt;br&gt;<em>Activity:</em> Group “brief” and concepts&lt;br&gt;<em>Textbook and Project Reading:</em> see Canvas for Week 1-2&lt;br&gt;<em>Research Assignment:</em> Columbia, existing prosthetics products, eNable, Bespoke Innovations, D-Rev, and more.&lt;br&gt;<em>Assignment:</em> Phase 1 Report &amp; Watch <a href="#">Shop Video</a> (50 mins); Prepare for Shop Test</td>
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| W 2/10 | Phase 02: Reflect & Explore  
Lecture & Discussion: BMVSS & Mahavir-Kmina  
Activity: Prosthetic Design and User Research  
Textbook and Project Reading: see Canvas for Week 1-2  
Assignment: Phase 1 Report; Evaluation of existing prototypes  
SHOP TEST 2:00pm-3:00pm |  

3  
M 2/15 | Phase 02: Reflect & Explore / Phase 3: Explore  
Lecture: Research Breadth vs. Depth  
Activity: Work in class in Teams  
Textbook and Project Reading: see Canvas for Week 3  
Phase 3: Explore  
Due: Individual Project Presentation #1  
Activity: Work in class in teams; Testing Device discussion  
Assignment: Phase 1 Report and Phase 2 Review  
Due: IP Proposal Fall 2016 Topics |
| W 2/17 |  

|  

4  
M 2/22 | Phase 3: Explore  
Activity: Lecture by Susan Stenman, Prosthetic Solutions  
Textbook and Project Reading: see Canvas for Week 4  
Assignment: Phase 1 Report and Phase 2 Review  
Phase 3: Explore  
Due: Phase 1 Report and Phase 2 Review (Research Findings, Analysis, Team Design Approach; Concepts; Sketches; Testing Device for assigned prosthesis part)  
Textbook and Project Reading: see Canvas for Week 4  
Assignment: Phase 3 Review  
Required off campus activity: Prosthetic Solutions Sports Clinic (9:30am-1:30pm @ The Foundry. See Canvas for instructions.) |
| W 2/24 | Sun2/28 |
|  

5  
M 2/29 | Phase 3: Explore  
Activity: Phase 1 & 2 Discussion and Analysis; Team Brief/Work  
Textbook and Project Reading: see Canvas for Week 5  
Assignment: Existing Prosthesis Ergonomic Analysis; Phase 3 Review  
Phase 3: Explore  
Activity: Existing Prosthesis Ergo Analysis Discussion; Team work  
Textbook and Project Reading: see Canvas for Week 5  
Assignment: Phase 3 Review |
| W 3/2 |  

6  
M 3/7 | Phase 3: Explore  
Activity: Team work in class  
Textbook and Project Reading: none  
Assignment: Phase 3 Review  
Phase 3: Explore & Define  
Activity: Pre-Phase 3 Review Discussion  
Textbook and Project Reading: none  
Assignment: Phase 3 Review |
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<th>Week</th>
<th>Date</th>
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| 7    | M 3/14 | **Phase 3: Explore & Define**  
                      Activity: Team work in class  
                      Textbook and Project Reading: none  
                      Assignment: Phase 3 Review  
                      **Phase 3: Explore & Define**  
                      Midterm for SLI Project and Individual Projects:  
                      Due: Phase 3 Review (Final Design Approach; Final Design Direction; 3 full scale prototypes-preliminary but well crafted and of high quality; Sketches; Video of prototypes being tested);  
                      Activity: Kickoff of Phase 4  
                      Due: Individual Project Presentation #2 (Midterm)  
                      Assignment: Phase 4-6 Review; Mahavir-Kmina Review Requirements  
                      Activity off campus: Prosthetic Solutions Clinic (4:30pm-6:30pm) |
|      | W 3/16 | **Phase 4: Create**  
                      Activity: Team work class; Send concepts to Mahavir-Kmina  
                      Assignment: Phase 4-6 Review  
                      Due: IP Proposal Fall 2016 Outline  
                      **Phase 4: Create**  
                      Activity: Phase 3 Analysis  
                      Assignment: Phase 4-6 Review |
|      | M 3/21 | Spring Break – No Class – Campus Closed                                                                      |
| 8    | W 3/23 | **Phase 4: Create**  
                      Activity: Work in your teams on your project  
                      **Phase 5: Test**  
                      Activity: Team work; Review feedback from Mahavir-Kmina  
                      Assignment: Phase 4-6 Review |
|      | M 4/4  | **Phase 5: Test & Elaborate**  
                      Activity: Team work  
                      Assignment: Phase 4-6 Review  
                      **Phase 6: Test & Elaborate**  
                      Due: Individual Project Presentation #3  
                      Activity: Team work  
                      Assignment: Phase 4-6 Review  
                      Due: IP Proposal Fall 2016 Draft Proposal & Gantt |
| 10   | W 4/13 | **Phase 6: Test & Elaborate**  
                      Activity: Team work  
                      Assignment: Phase 4-6 Review  
                      **Phase 6: Test & Elaborate**  
                      Activity: Team work  
                      Assignment: Phase 7-8 Review |
|      | M 4/18 | **Phase 6: Test & Elaborate**  
                      Activity: Team work  
                      Assignment: Phase 4-6 Review  
                      **Phase 6: Test & Elaborate**  
                      Activity: Team work  
                      Assignment: Phase 7-8 Review  
                      Activity off campus: Prosthetic Solutions Clinic (4:30pm-6:30pm) |
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| 12   | M 4/25     | **Phase 7: Establish & Document**  
*Due*: SLI Phase 4-6 Review (Revised Design after testing feedback; Final Prototype Design; Initial Concepts for web documents)  
*Assignment*: Phase 7-8 Analysis;                                                                                           |
|      | W 4/27     | **Phase 7: Establish & Document**  
*Activity*: Phase 4-6 Analysis discussion; Phase 7-8 requirements  
*Project Reading*: see Canvas  
*Assignment*: Phase 7-8 Review                                                                                               |
|      | M 5/2      | **Phase 7: Establish & Publish**  
*Activity*: Website Materials  
*Assignment*: Phase 7-8 Review                                                                                               |
|      | W 5/4      | **Phase 7: Establish**  
*Activity*: Team work; Website materials development  
*Project Reading*: see Canvas  
*Assignment*: Phase 7-8 Review                                                                                               |
| 13   | M 5/9      | **Phase 7: Establish & Publish**  
*Activity*: Team work  
*Assignment*: Phase 7-8 Review                                                                                               |
|      | W 5/11     | **Phase 8: Care & Post-Mortem**  
*Due*: Individual Project Presentation #4 (Final Presentation)  
*Activity*: IP Presentations (all); work in teams on Phase 7-8  
*Assignment*: Phase 7-8 Review  
*Due*: IP Proposal Fall 2016 *Final Proposal & Gantt*                                                                            |
| 15   | M 5/16     | **Phase 8: Care & Post-Mortem**  
*Due*: SLI Phase 7-8 Review (Final Product Appearance Model/Prototype; Build and Assembly Documents; Sketches; 3D Rendering of Product alone and in use; Video of team projects).  
*Assignment*: Final Exam                                                                                                      |
| Final Exam | M 5/23 | **Final Exam**: 12:15pm-2:30pm:  
*Due*: Final Process Book for both SLI Project and Individual Projects (hard copy and Canvas). Final product design and assembly documentation (technical drawings, build manual) and renderings uploaded for SLI Project (SLI Folder on Canvas). |