Creative Design Methods

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<th>Course Designator</th>
<th>PDES</th>
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<tr>
<td>Course Number</td>
<td>2701</td>
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<td>Section Number</td>
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<td>Semester and Year</td>
<td>Fall 2019</td>
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- Class Meeting Days & Time: Tuesday/Thursday 3:35-5:30
- Classroom: Rapson Hall Room 56
- Number of Credits: 3
- Final Exam Date & Time: None

Instructor's Information

Name: Barry Kudrowitz and Jes Rosenberg

Office Location: Rapson Hall, Room 15

Office Phone: (612) 624-1708

Email: barryk@umn.edu and rosenbej@umn.edu

Office Hours: Tuesdays 1:30-2:30, Rapson 15

TAs: TAs email list: productdesign@umn.edu

- Hoa Vo, voxxx248@umn.edu
- Sunmin (May) Hwang, hwang211@umn.edu
- Ben Pedrick, pedr012@umn.edu

Course Information and Instructor's Expectations

Course Description:
This class is an introduction to a variety of tools and methods used in developing new product concepts. The focus of the class is on the early stages of product development which includes user research, market research, idea generation methods, concept evaluation, concept selection, intellectual property, and idea presentation. Students work individually applying the content taught in lecture to a semester-long design project. Students meet in teams bi-weekly to present and critique their work. Students will be grouped into teams of 7 for discussion days and peer reviews. On discussion days, a volunteer instructor joins each team to run a critique session. These instructors are either PDES students and/or industry representatives. These volunteer instructors are not grading. The TAs perform the official grading of assignments.

Website: http://product.design.umn.edu/courses/pdes2701/index.html
Blog: medium.com

Student Learning Outcomes following course completion: (must identify at least one outcome and how it relates to this course how it will be addressed and how it will be assessed, http://www.slo.umn.edu/)

This course focuses heavily on two of the approved student learning outcomes:
Identifying, defining, and solving problems

This is essentially the purpose of this class. Students find opportunities for innovation, refine ideas based on user feedback, and develop product-based solutions for real problems.

Understanding the role of creativity, innovation, discovery, and expression across disciplines

Students will practice a variety of creative methods that are used developing new products.

Recommended Readings


Required Materials

Design notebook and access to a digital camera or smart phone capable of video recording
Attendance:
This is a hands-on class and **attendance is mandatory**. Tardiness will also count against the attendance grade. Being on time is critical for the activity-based nature of this class. Only in certain circumstances as described in the UMN Policies page (https://policy.umn.edu/education/makeupwork) will an absence or tardy not affect the grade. Here are some things that do not constitute an excused absence: going to hear a talk, attending an event for another class, job interviews, going to a career fair, having a headache. *Late work is not acceptable or of use to the team.* This class is on a tight timeline and all assignments build on each other.

Absence Protocol and Policies:
Notify us, notify your team, provide documentation
- **Let us know about any absence prior to class starting and your reason for missing class** (productdesign@umn.edu). If there are extenuating circumstances, let us know as soon as you are able.
- In order for an absence to be excused, formal documentation of legitimate excuse is required (doctor’s note, athletic note, etc.) This must be **emailed** to the TAs at productdesign@umn.edu **within three business days** of the absence. If you receive a physical note, scan it or take a picture and email us - physical notes will not be accepted. Email documentation will ensure all parties have a record of it.
- UMN policy allows for one excused **medical related** class absence without verification of a doctor’s note. You still need to email the TAs to determine what you missed.
- If you are absent from class and did not notify us ahead of time it will be marked as an unexcused absence. **An unexcused absence for a day will result in a half grade deduction (5% of overall class grade).**
- Any three unexcused absences will result in an F in the course.
- If you have a note from the DRC (Disability Resource Center) see “DRC section” of syllabus.

Workload:
This is a 3-credit studio and so students are expected to spend a minimum of 9 hours each week outside of class time working on assignments. Each of the 7 assignments will span two weeks and so students are expected to put 18 hours of work into the assignments for each module. This time is to be spent physically doing the assignment, documenting your processes and results in your blog, and later doing peer reviewers for several other classmate's work.

Accepting and Returning Assignments:
Assignments are given at the end of lecture on Tuesday and the assignment will be due as a blog post at 10 pm on Wednesday of the following week. The next day during team discussion, your team instructor will run a critique session where you will present your work to your team using visuals from your blog. At least one person on your team should bring a laptop to discussion days. To ensure that you dedicate appropriate time and follow the assignment guidelines, a one-point outline post is due the day after the assignment is given. This outline post includes the headings for each deliverable and a detailed timeline for when and how you are planning to work on the assignment components. For each two-week module, students will review a set of two other blog assignments on your team. The reviews are submitted as blog comments due at 10 pm on the Friday following the blog submission. The table below explains this assignment structure:

<table>
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<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
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<tbody>
<tr>
<td>Week n</td>
<td>Lecture/</td>
<td>Blog Outline</td>
<td>Lecture</td>
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<td></td>
<td>New Assignment</td>
<td>Due @ 10pm</td>
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<td>Week n+1</td>
<td>Industry Perspectives</td>
<td>Blog Assignment Due</td>
<td>Team Discussion</td>
<td>Peer Reviews Due</td>
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<td>@ 10pm</td>
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Grades will be returned the Tuesday after assignments are submitted. The graduate TAs will do the official grading on these blog posts based on a grading rubric that we will share with you when the assignments are introduced. Assignments may also have a peer-evaluated component as part of the grade. Instructors and peers will provide the feedback on the content during the team discussion. Late assignments will receive a letter grade deduction for every day late. Late peer reviews will not be graded. Every blog post must be formatted correctly to allow your peers and instructors to find it. To minimize grading confusion we will ask you to clearly note in the blog post where you are addressing each component of the rubric for that week.

Make Up Work for Legitimate Absences:
Students will have an extra week to complete assignments missed from legitimate absences.  
http://www.policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html

Grading Structure:
Students keep an idea notebook to develop concepts for the weekly assignments. The assignments are also presented digitally on a blog. The notebook should be used to document ideas, collect data, sketch, organize materials and the blog should be used to present the highlights of the assignments. The blog submissions will be peer reviewed weekly in the form of blog comments.

There are 7 assignments that are equally weighted. The assignments will build on each other and (aside from Assignment 1) are all based on an overarching project theme. Assignments and reviews are evaluated on a combination of quality, completeness, and presentation.

70% - Blog Assignments (the final exam/presentation is part of the last assignment)  
15% - Peer Reviews (Modules 1-6)  
15% - Class Participation  
http://policy.umn.edu/Policies/Education/Education/GRADINGTRANSCRIPTS.html

Schedule and Assignments:
Module 1

**Tues, September 3**
Lecture: Course Intro & Theories of Creativity and Innovation

**Thurs, September 5**
Lecture: Creativity Assessment Methods

**Tues, September 10**
Course Project Introduction, Project Selection (& General Mills)

**Thurs, September 12**
Discussion Session (and Team Intro)

**Assignment 1 – Creative Experimentation and Design Process**
Experience and document a product design process from concept to selling product all within two weeks.

Module 2

**Tues, September 17**
Lecture: Benchmarking the State of the Art

**Thurs, September 19**
Lecture: Trend Research

**Tues, September 24**
Product Industry Panel (Target, 3M)

**Thurs, September 26**
Discussion Session

**Assignment 2 – Market Research**
Conduct and organize trend research and market research on your product topic both online and in stores. Find product opportunities and keep track of ideas as you have them.
Module 3
Tues, October 1
Lecture: User Research Methods
Thurs, October 3
Lecture: Observation and Opportunity Finding
Tues, October 8
Design Consultancy Panel (Worrell, Kablooe)
Thurs, October 10
Discussion Session

Assignment 3 – User Research
Conduct user research on your product topic including online survey, in-person interviewing, and observation. Present the results and extract insights. Discuss user needs and potential product opportunities.

Module 4
Tues, October 15
Lecture: Humor and Association Based Tools
Thurs, October 17
Lecture: Structured Idea Generation Tools
Tues, October 22
Improv Workshop (Theatre of Public Policy)
Thurs, October 24
Discussion Session

Assignment 4 – Idea Generation (part 1)
Develop a mind map to explore the space related to your product genre. Use the structured tools to come up with (more) ideas. In preparation for the following assignment, identify and schedule 4 people to help you with your brainstorming session sometime between Wed Oct 30- Sun Nov 3.

Module 5
Tues, October 29
Lecture: Reframing Prompts and Traditional Brainstorming
Thurs, October 31
Lecture: Techniques for Presenting Ideas Visually
Tues, November 5
Product Entrepreneur Panel
Thurs, November 7
Discussion Session (and Team Change)

Assignment 5 – Idea Generation (part 2)
Organize and facilitate a group idea generation session in person using methods practiced in lecture to generate blue-sky ideas related to your chosen prompts. Use the Novel, Value, Feasible frame work to evaluate all of your ideas from this and prior assignments. Design slides to present the top ideas.

Module 6
Tues, November 12
Lecture: Testing Ideas and User Feedback
Thurs, November 14
Lecture: Idea Selection and Evaluation Methods
Tues, November 19
Product Protection Panel
Thurs, November 21
Discussion Session
Assignment 6 – Concept Assessment, Refinement, and Selection
Survey users to get feedback on top ideas, organize and present the data. Conduct a preliminary patent search related to top ideas. Describe feasibility concerns. Compare ideas to existing products. Develop a Pugh chart to select top idea. Build a sketch model of top idea and get in-person feedback from users. Create/update pitch slides for top idea.

November 26 and 28 – No class - Thanksgiving Break

Module 7
Tues, December 3
Elevator Pitch Fundamentals
Thurs, December 5
Practice Elevator Pitch Session
Tues, December 10
Walleye Tank Finale

Assignment 7 – Elevator Pitch
Redesign Pitch Slides and Create Elevator Pitch Video

University Policies

Personal Electronic Devices in Classroom:
Using Electronic Devices in Class

Use of Class Notes and Materials:
Using Class Notes

Scholastic Dishonesty and Student Conduct Code:
Student Responsibility and Scholastic Dishonesty

Sexual Harassment:
Sexual Harassment Policy

Statement on Climate of Inclusivity:
You are expected to be attentive during class, ask questions if you do not understand something, and to offer your opinion. You are also expected to listen respectfully to other students and to me when speaking. The University of Minnesota is committed to providing a safe climate for all students, faculty, and staff. All persons shall have equal access to its programs and facilities without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation. Racism, sexism, homophobia, classism, ageism and other forms of bigotry are inappropriate to express in this class. Reports of harassment are taken seriously, and there are individuals and offices available for help.

or download the policy at Equity and Diversity

Academic Freedom and Responsibility:
download the policy at Academic Freedom
Availability of Disability and Mental Health Services:

The University of Minnesota is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

If you have, or think you may have, a disability (e.g., mental health, attentional, learning, chronic health, sensory, or physical), please contact the DRC at 612-626-1333 to arrange a confidential discussion regarding equitable access and reasonable accommodations.

For additional information please visit: https://diversity.umn.edu/disability/

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce your ability to participate in daily activities. University of Minnesota services are available to assist you with addressing these and other concerns you may be experiencing. You can learn more about the broad range of confidential mental health services available on campus via www.mentalhealth.umn.edu or contact Counseling/Consulting Services at 612-624-3323.

Academic Services:

If you would like additional help, please contact one of the offices listed below:

Student Writing Support  http://writing.umn.edu/sws/index.html
Student Academic Success Service  http://www.uccs.umn.edu/

Plagiarism:

As defined by The Office of Community Standards, plagiarism shall mean representing the words, creative work, or ideas of another person as one’s own without providing proper documentation of source.

Plagiarism is a serious offense in academia and is not tolerated by the College of Design. It is the responsibility of students to understand the standards and methods of proper attribution and to clarify with each instructor the standards, expectations, and reference techniques appropriate to the subject area and class requirements, including group work and internet use.

The College of Design holds students accountable to the standards set forth in the Student Conduct Code regarding plagiarism. Students are encouraged to seek out information about reference methods from instructors and other resources and to apply this to all submissions of academic work.

The above information was adapted from the University of Minnesota Office of Community Standards.