Stanford | Continuing Studies

Course Title:	**Design Your Future: Design Innovation for Global Teams**
Course Code:	**DSN 112 W**
Instructors:	**Larry Leifer, Tamara Carleton, and William Cockayne**
Quarter:	**Spring 2017**

Course Description

In these times of rapid change, successful design innovation is distributed, global, and highly collaborative. This course provides you the mindset, solutions, and tools—along with cases and stories drawn from around the world—to build a team that can work across cultures to solve problems. We will focus on the ways that leading design innovators pull together partners, customers, and their own team members across the entire development process, from vision formation through the test and validation of new business opportunities. The course also notably draws on the time-tested methods and rich case history of "ME310: Product-Based Engineering Design, Innovation, and Development," which has been offered at Stanford for more than fifty years. In ME310, students work across globally distributed teams, using a proven set of principles and tools, to help them move beyond traditional design thinking in order to deliver full-functioning, award-winning products and services.

For part of the course, you will work in small groups to solve problems that major international organizations have posed to the ME310 course in previous years. In the development of solutions, you'll learn techniques in global teamwork, creativity, and design. Through the combination of short videos, readings, demonstrations, field work, and open forums with faculty, plus personal feedback, you will gain fast practice in understanding design innovation in a globally distributed environment.

Grade Options and Requirement

This course may not be taken for a Letter Grade. Students may choose between these options instead:

Credit/No Credit (CR/NC)
- Students must complete at least 80% of class assignments and exercises.

No Grade Requested (NGR)
- This is the default option. No work will be required; no credit shall be received; no proof of attendance can be provided.

Please Note: *If you require proof that you completed a Continuing Studies course for any reason (for example, employer reimbursement), you must choose the Credit/No Credit option. Courses taken for NGR will not appear on official transcripts or grade reports.*

Course Philosophy

What do we mean by the course series title "design your future"? People who believe that they can change the world already possess a vision of change in the future. Those who make a difference in the world, and feel they matter to themselves and to others, are proactive at heart, connecting thinking and doing. In other words, if you can imagine an improved future, you are more likely to make it happen. Like an athlete, if you can picture yourself winning the race, you will increase your chances of getting there.

Our learning approach embodies multiple fundamental beliefs in Stanford's design community, including embracing ambiguity in the creative collaboration process, focusing on asking smarter questions to reframe the design challenge, supporting teamwork with multiple group tools and processes, prototyping as a way to learn, and encouraging iterative cycles of learning.

While our course is modeled after the award-winning ME310 class, we have adapted many of the common assignments and group critiques (e.g., Small Group Meetings) to better support an interactive online format. We also plan to reflect more on the dynamics of globally distributed teams, so that you gain a deeper understanding of design innovation in a globally distributed environment.

Readings will be kept light, so that you have more time for group work. Many readings will be drawn from current business press and news coverage, so that we follow the latest themes in the world dialogue.

Assignments

We provide assignments as a way to practice and apply the material because we feel that the best way to learn is by doing. Further, we are also believers in the philosophy to build to think. By getting physical and by prototyping and testing ideas, you will advance your understanding of a problem. All assignments are noted in the course schedule section, and we will explain due dates and the submission process each week. Generally, all assignments listed should be turned in by the following week.

Course Schedule

Specific readings, dates, and assignments will be adjusted as needed.

CLASS FOCUS	RESOURCES	PROJECT
Week 1 - Dancing with Ambiguity		
Video. "The Stanford Way – Surprise & Delight" **Video.** "Building with ME310 Design Briefs" **Video.** "Setting up a new team: Using the Team Aligner"	ME310 Design Briefs for the course [project] Team Aligner worksheet [team]	**BEFORE CLASS. Review the ME310 briefs and post your top three choices.** DO (after class). After the teams have formed, meet virtually to complete the Team Aligner POST (after class). A photo or digital copy of your team's completed Team Aligner

Week 2 - (re)Define the Problem		
Video. "Extreme Project-Based Learning" with Professor Larry Leifer **Video.** "Building the big picture: Context Maps tool" **Video.** "Post-mortems and reflection"	Reflection worksheet [team] Context Map worksheet [project] Reading. Publicly available articles to be chosen each week.	DO. Build a Context Map for the brief your team is working on POST. A photo or digital copy of your team's Context Map to the class space. SUBMIT. Your team's reflection on the problem (re)definition to the Teaching Team
Week 3 - Benchmarking		
Video. "Iterative Questioning" with Professor Larry Leifer **Video.** "Feedback; from Good to Great: Buddy Checks tool" **Video.** "Benchmarking & needfinding in the world today…"	Buddy Check worksheet [team] Benchmarking worksheet [project] Reading. Publicly available articles to be chosen each week.	PRACTICE. Over a video chat, try pitching ideas to your team members. Practice level 1…then 5-7. DO. Benchmark an existing technology or product AND describe a customer interaction with the benchmarked tech/product POST. A photo or digital copy of your team's Benchmarking.
Week 4 - Building T-Teams		
Video. "Learning Loops" with Professor Larry Leifer **Video.** "Measuring the innovation qualities of your team: VOICE Stars tool" **Video.** "A Desired Experience: Customer Journey Maps tool"	VOICE Stars worksheet [team] Customer Journey worksheet [project] Reading. Publicly available articles to be chosen each week.	DO. Provide great feedback to another team's Benchmark DO. Develop Customer Journey Map POST. A photo or digital copy of your team's Customer Journey work

Week 5 - (re)Build the Team		
Video. "d.Global – A Team of teams platform" with Professor Larry Leifer **Video.** "Building a network: Crowd Clovers tool" **Video.** "Capturing a wicked problem, tangibly: Paper Mockups tool"	Crowd Clovers worksheet [team] Paper Mockup worksheet [project] Reading. Publicly available articles to be chosen each week.	DO. Provide feedback to another team's Customer Journey DO. Create a Paper Mockup POST. A photo of your team's Paper Mockup
Week 6 - Exploring the Problem Space		
Video. "Evidence of a good question" with Professor Larry Leifer **Video.** "Exploring surprise & delight through a prototype"	Critical Experience Prototype (CEP) worksheet [project] Reading. Publicly available articles to be chosen each week.	DO. Provide feedback to a second team's Paper Mockup DO. Critical Experience Prototype (CEP) POST. A video of your team's Critical Experience Prototype
Week 7 - Designing a Difference		
Video. "What and why to prototype" with Professor Larry Leifer **Video.** "Exploring a core feature through a prototype"	Critical Function Prototype (CFP) worksheet [project] Reading. Publicly available articles to be chosen each week.	DO. Provide feedback to another team's Critical Experience Prototype (CEP) DO. Critical Experience Prototype (CFP) POST. A video of your team's Critical Function Prototype (CFP)

Week 8 - All Design is Re-Design		
Video. "Earning a WOW (have different ways of thinking, working, and learning)" with Professor Larry Leifer **Video.** "Challenging assumptions: Dark Horse Prototype" **Video.** "Challenging assumptions with a DARPA Hard Test"	DARPA Hard Test [team] Dark Horse Prototype worksheet [project] Reading. Publicly available articles to be chosen each week.	DO. Provide written feedback to another team's prototype DO. Complete DARPA Hard Test with your team DO. Build a Dark Horse Prototype with your team POST. Your Dark Horse in "Twitter form" (aka, under 144 characters).
Week 9 - Re-inventing the future		
Video. "Design Thinking Evolves" with Professor Larry Leifer **Video.** "What were our assumptions?"	Reflection [team] White Horse Prototype worksheet [project] Reading. Publicly available articles to be chosen each week.	DO. Provide written feedback to another team's prototype DO. Describe the White Horse Prototype with your team POST. Your White Horse
Week 10 - Re-designing the Equation for Success		
Video. "The laws" with Professor Larry Leifer **Video.** "Taking it back to your team"	Resources: • Innovation Academy • ME410 Reading List • ME310 Reading List • ME410 Twitter feed	POST. Course and team reflections

Honor Code

All of you should be familiar with the principles of the [Stanford Honor Code](). We expect your assignment and work submissions to be of your own independent effort and not be derived from the thoughts and work of others. You should do your own thinking, your own analysis, and your own writing. Of course, this does not mean that you can't ask questions or get help when you get stuck, but any help must remain within acceptable limits, and truthful citations must be made where required. If you are ever uncertain of what is appropriate or acceptable, just ask us.