

PEOPLE TO PRODUCTS

EL3331 - Systems Engineering

Fall 2015

Course Overview

This course is the first in the two course sequence on Design and Entrepreneurship required in the BS in Engineering Leadership. However, it's much more than that. It is intended to give you an opportunity to **experience** the human-centered design process from start to finish in a single semester. You will go from interacting with people to developing a product that could provide them with a better future. This course is not for the faint at heart. It will take stepping outside your comfort zone, learning to interact with people, resolving conflicts on your team, and developing a functional prototype. Your professors will be there as your advisors and mentors, but you and your users will be your guide. It will be hugely rewarding and very fun, but will take a lot of work. So let's get started!

*"Design thinking is a human-centered approach to innovation that draws from the designer's toolkit to integrate the **needs of people**, the possibilities of **technology**, and the requirements for **business success**."*

- Tim Brown, President and
CEO of IDEO

Predominant Course Activities

Throughout the semester, you and your teammates will be engaged in the design of a project of your choosing (given you've met certain criteria). As such, you will be unleashing your creative genius on the following major activities during each of three phases of design: Inspiration, Ideation, and Implementation:

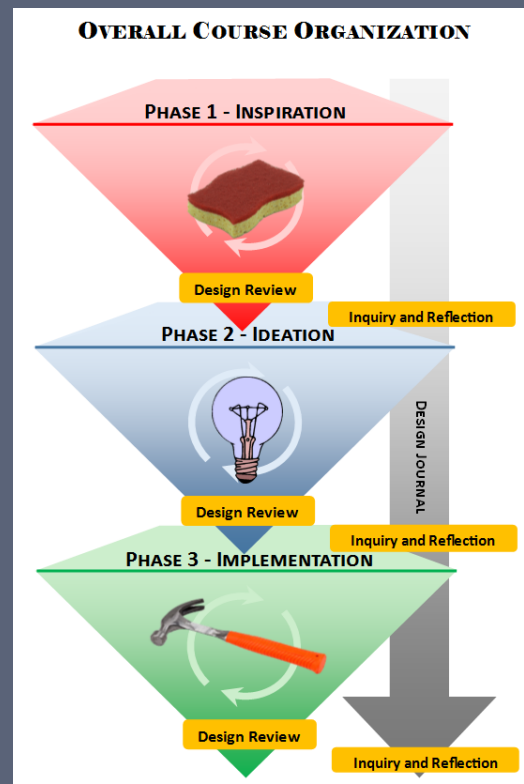
- Learn a variety of key tools and techniques for each phase.
- Identify relevant tools for your given project.
- Iteratively implement these techniques while engaging with users.
- Deliver your final result.

Each phase will include, at the minimum, the following graded assignments:

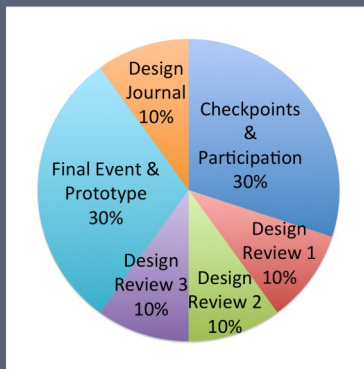
- Design Journal entries and phase reflections
- Plan Checkpoints
- Progress Checkpoints
- Design Review Presentation
- Peer Evaluations
- Prototypes
- Other Phase Specific Deliverables

Key Course Goals and Outcomes

Design & Creativity	Self Directed Learning
Real World Context	Systems Thinking
Business Acumen Toolkit	Hands On Prototyping



Grading Overview



Meeting Times & Locations

Tues & Thurs 9:00-10:20am

Friday Lab 8:30-11:30am

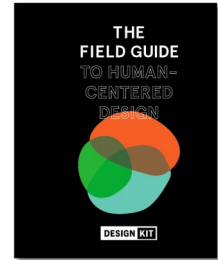
All in Studio C001

Required Materials

The Field Guide to Human-Centered Design.

IDEO.org, 2015. ISBN: 987-0-9914063-1-9

Get a **FREE** .pdf version of the text at <http://www.designkit.org/resources/1>! Hardcopies also available through IDEO and the University Bookstore.



Design Journal Notebook

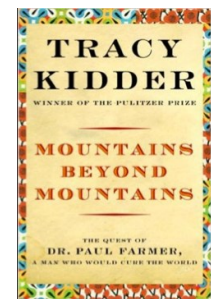
This notebook is designed specifically to help you document your work and keep track of upcoming project deliverables. It is available through Office Depot for ~\$9: <http://www.officedepot.com/a/products/703425/Cambridge-Limited-30percent-Recycled-Business-Notebook/>

Mountains Beyond Mountains

Tracy Kinder, 2003. ISBN 978-081298055

Prototyping Funds - \$50

Each team member is required to contribute \$50 towards your final project prototype. This is in lieu of a lab fee. One team member will be elected treasurer maximum budget is \$200.



Legalese

Academic Dishonesty

Students are encouraged to collaborate throughout the semester but all graded materials must represent the student's individual work. (When in doubt, ask!) Academic dishonesty is the attempt to present the work of somebody else as his or her own work or attempting to pass any assignment by improper means. It is a serious offense and will not be accepted. Any misconduct will be handled according to the current university policy and reported in accordance with university regulations. For more info visit the Dean of Students or <http://studentaffairs.utep.edu>

Special Accommodations

If you would like to request special accommodation due to a disability, we can certainly work that out. Please contact The Center for Accommodations and Support Services via their website <http://sa.utep.edu/cass/>.

See also separate Course Policies Document for policies on attendance, use of electronics, late submissions, teamwork, etc.



Faculty Info

Dr. Meagan Kendall

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EEL Department, E230.A

Office Hours: T & F 2-3pm

Prof. Gilbert Moreno

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EEL Department, E230.C

Office Hours: By Appt.

Course Website

Blackboard for now

Work in Progress Disclaimer

As this is a new course at UTEP, this syllabus is a work in progress! The faculty reserve the right to modify it as necessary throughout the semester. However, we will do our best to adhere to this syllabus and will notify you if anything must change.