M.S. in Entrepreneurship & Design
ENTR617: Design Thinking and Innovation (3 credits)
Spring, 2017

Introduction and Course Description
Recall ENTR616: Applied Creativity - This course provides foundational knowledge in research and practice of creativity theory and creative problem-solving. Topics include creativity processes, including creative problem solving models and methods, problem-finding, user-experience methods, idea-generating techniques, and developing a creative disposition. Students also explore worlds of creative activity and how to build a culture that effectively enhances individual and organizational creativity. Course previews application of creativity to design processes in next course.

Most Important Lessons – A Review:
(If you were not in that class…stay tuned for some interesting discussion…)

Moving on into ENTR617: Design Thinking and Innovation - This course focuses on the integration and application of design processes and design thinking to enhance innovation. Students will engage in a multidisciplinary exploration of design theory and practice, specifically applying design ideas, principles and approaches to innovation and entrepreneurship. The course emphasizes the role of user-centered research, divergent thinking, and iteration among others to enhance innovation.

The main objective of this course is to help you think more like an expert designer. Expert designers bring a specific set of mental habits that enhance the different phases of their design process. But, at the heart of their work, the expert designer is shaping the user-product interaction. How the individual uses a product or service – and the uses and emotions that product affords – will determine how they think, act, and feel; and ultimately how much they value the product. As entrepreneurs understand, the heart of a successful, sustainable venture is the value proposition – how much others value the product or service you offer.
Course Objectives:

Knowledge
1. Explore and understand the breadth of design across fields of practices, eras, styles, and other design experts.
2. Understand the nature, nurture, and application of design thinking as both disposition and processes.
3. Understand design as a complex, iterative process.
4. Explore and experiment with the influential power of design principles, which directly addresses the user-product interaction.
5. Understand the role of leadership in creating conditions for and facilitating innovation at both the individual and organizational levels.

Skills
6. Develop individual mental habits (dispositions) that enhance ability to see differently, and thus be more creative.
7. Develop individual design thinking dispositions that enhance each specific phase of the design process.
8. Acquire and develop tools and techniques to more effectively identify and influence the user-product interface.

Attitudes
6. Appreciate the value and applicability of design thinking as an integral element of successful entrepreneurship and innovation.
7. Become empowered to act as a creative leader, facilitating and guiding yourself others to greater entrepreneurial success.

The future of successful organizations will depend on individual’s ability to creatively see beyond problems and create conditions that encourage innovation. –me.

Course Readings/Texts/Materials


Kennedy, P. (2016). Inventology: How we dream up things that change the world.

(can download http://designwithintent.co.uk/downloads/ )
(actual: http://designwithintent.co.uk/docs/designwithintent_cards_1.0_draft_rev_sm.pdf )

Select articles and handouts as assigned.
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Major Assignments due on this day**</th>
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| 1    | Introductions, definitions, distinctions  
1. Design thinking – process, mindset, tools  
2. Innovation – what and how (and why)  
3. Influential solutions = creating and translating value  
*Innovation – the process of generating unique ideas and translating them into value.* | Your presence |
| 2/9  | Innovation and the fields of amazing  
(Design thinking: Explorative) | Assignment #1: One Amazing Innovation+ |
| 2/16 | Technology and Innovation by field of practice  
(Design thinking: Multi-disciplinary) | Assignment #2: Exploration Lightening - 5 slides/15 minutes |
| 2/23 | Design eras and styles  
(Design thinking: Explorative and Multidisciplinary) | Exploration Lightening - 5 slides/15 minutes |
| 3/2  | Expert designers – profiles and processes  
(Design thinking: Explorative and Multidisciplinary) | Exploration Lightening - 5 slides/15 minutes |
| 3/9  | User-centered data collection techniques – going deeper by technique and life stage  
(Design thinking: User-centered) | Assignment #3: Beyond lightening – 3 slides/10 minutes |
| 3/16 | Creativity revisited -- divergent thinking and idea-generation  
Translating to value – convergent techniques  
(Design thinking: Divergent) | |
| 3/23 | SPRING BREAK – No Classes | |
| 3/30 | SPRING BREAK – No Classes | |
| 4/6  | Imagine, iterate, and influence – pinballs, shortcuts, and thinkers  
Introduction to motivation and influence  
(Design thinking: Iterative) | Assignment #4: Influential Design Principles Presentation and Facilitated Discussion |
| 4/13 | Influential Design: Architectural Lens and Error-proofing Lens  
(Design thinking: Iterative) | |
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<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Activity</th>
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<tbody>
<tr>
<td>4/20</td>
<td><strong>Influential Design: Interaction Lens and Ludic Lens</strong></td>
<td>Influential Design Principles Presentation and Facilitated Discussion</td>
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<td>(Design thinking: Iterative)</td>
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<tr>
<td>4/27</td>
<td><strong>Influential Design: Perceptual Lens and Cognitive Lens</strong></td>
<td>Influential Design Principles Presentation and Facilitated Discussion</td>
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<td>(Design thinking: Iterative)</td>
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<td>5/4</td>
<td><strong>Influential Design: Machiavellian Lens and Security Lens</strong></td>
<td>Influential Design Principles Presentation and Facilitated Discussion</td>
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<td>(Design thinking: Iterative)</td>
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<td>5/11</td>
<td><strong>Iterate, influence, and leading innovation</strong></td>
<td>Assignment #5: Practice your Influential Design: Leading Innovation Tool</td>
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<td>(Design thinking: Integrative)</td>
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*Schedule subject to change based on new information, opportunities, and/or interests of the class.
**Additional assignments generally assigned in class the week before.
Course Assignments:

Assignment #1: One Amazing Innovation+ (10% of final grade)
YOU go out and find one amazing innovation.
Prepare a brief (3 minutes) presentation (non-powerpoint) for the class that includes:
1. An explanation and demonstration of the amazing innovation (bonus for images, artifacts, and other ways to help illustrate and explain other than telling). You may use your own computer screen, but this is not a “projection” presentation.
2. A brief explanation of what PRECEDED (and consequently led to) this innovation. Not what you think, but what you research and discover.
3. And…what will follow from this innovation. In other words, use your imagination to dream up what’s next!
Bonus: Innovation does not discriminate, but history often does. Bonus if you bring an innovation that was NOT attributed to a white male (no offense white males – I want everyone to get a sense of the full range of innovation).

Assignment #2: Exploration Lightening - 5 slides/15 minutes (20%)
Over the course of three weeks we will examine different facets of design. During one of those weeks, you and a partner (or two) will be assigned a facet of design: a field of practice, an era, a style, or a designer. You will have 5 slides and 15 minutes to convey the following:
1. Definitions, descriptions, parameters – what are the key points to note?
2. Distinguishing features – how will we know this from any other?
3. At least two examples that clearly illustrate your subject.
And, you will create and distribute (to each of your peers) a simple tool to help others remember the key points and distinguishing features. This can be something like a bookmark, fridge magnet, dream catcher, brochure, embossed dead animal, etc.

Assignment #3: Beyond lightening – 3 slides/10 minutes (10%)
Faster than lightening, one class only – 3 slides and 10 minutes for you and a partner (or two) to present an assigned user-centered data collection technique…but, first you need to actually try the technique with some real people. You will need to convey the following:
1. What is the technique and how does it work?
2. In what situation or for what type of problem would the technique work best?
3. Describe the key benefits and drawbacks of using the technique BASED ON YOUR EXPERIENCE in trying the technique in the real world.
Be prepared to consider how these techniques would need to be modified to use across different life stages.

Assignment #4: Influential Design Principles Presentation and Facilitated Discussion (40% of final grade)
Over the course of four weeks we will learn to see differently to enhance our iteration. In other words, how can we make our solution (product, service, etc.) be of more value using different design principles. During one of those weeks, you and a partner (or two) will be assigned a specific lens, within which are numerous applicable design principles (this is the Design with Intent text). You will create and execute a presentation/facilitated discussion that may utilize any format, as long as it facilitates our understanding. You must convey:
1. What is the essence of the Lens, and how does it help us see differently?
2. Choose 3-5 specific design principles and illustrate their application:
   a. Explain each design principle
   b. Provide at least one real world example for each AND
   c. An activity that illustrates the principle more fully
   d. Describe how you applied each principle to either your venture/problem OR a general problem (that will be explained to the class in advance)
3. A summary reiterating the most important points and/or key questions for others to use this lens and principles This is a BIG assignment and will likely, with discussion, last an hour or so. Be sure you are well informed and able to facilitate the discussion.

Assignment #5: Practice your Influential Design: Leading Innovation Tool (10% of final grade)
Over the course of this semester you will have acquired many new perspectives, dispositions, tools, and ideas. Assuming that at some point you will need to design other’s success, what do you think they most need to know, be able to do, or be like? Develop a simple tool that incorporates these Most Valuable Lessons and effectively communicates them to
others – a tool that they will remember!
Hint #1 – The VALUE of a product lies in how individuals interact with it and feel about that interaction.
Hint #2 – USE and apply the things that you learned throughout the semester to design the tool.
Hint #3 – How do you imagine me reacting when you hand me the tool?

Course Contribution (10%)– As adults responsible for your own learning, your attendance and participation are your decisions. However, you will learn more and contribute more to the learning of others, if you are present, involved, and engaged. Thus, while there is no daily requirement/penalty for attendance, attendance and participation are expected in all facets and phases of this course, both in the meetings and in other experiences. A cost/benefit analysis of your overall contributions will determine your final contribution to our group. Group project efforts will also count toward your individual participation grade.

You shouldn’t need Extra Credit for this course – every engagement/activity/assignment should be your best! But…if you have concerns that you are falling behind, not earning the grade you feel you are capable of for some reason, please contact me to discuss possible ways to enhance your learning (and earn up to 6% in extra credit).

General Expectations:
Graduate school is a choice, and a great privilege. This program strives to develop your potential for success – to see differently, think more effectively, work collaboratively, communicate effectively, think creatively, and to make a significant positive difference in the world. You cannot begin this journey unless you can manage yourself:

• Be present and punctual.
• Be prepared, be awake, be willing to engage and sometimes lead.
• Changes in content or schedule may be made during the semester, and will be emailed as applicable.
• No late work accepted. Electronic submissions are NOT acceptable (tmiddleb@udel.edu).

• All written work should be word-processed, free from spelling and grammatical errors, and proofed by a peer for clarity prior to submitting. A simple staple will suffice – no plastic covers.
• All work is to be in the student’s own words unless quotation marks and referenced pages are provided. Failure to do so is plagiarism and unethical. Collaborative efforts still require giving credit due.

• Cherish diverse perspectives, take the risk of sharing your own, conflict in the spirit of learning.

• Any person who may require alternative instructional and/or evaluative procedures due to a disability should feel free to discuss these needs with the professor so that appropriate arrangements can be made.

YOU NEED TO FOCUS AND THINK AND TAKE NOTES IN THIS CLASS.
I assume that as a graduate level student you want to be here and maximize your investment of time and money. For our brief time together, please turn OFF and put away all electronic devices – cell phones, computers, ipads, etc. ****If I see an electronic device out and in use…you will lose a letter grade…***

Academic honesty is essential to preserve the integrity and excellence of the University of Delaware education. Cheating on projects or exams, or plagiarism or written or visual material may result in dismissal from the University.

Academic Integrity: http://www.udel.edu/studentconduct/ai.html
Please familiarize yourself with UD policies regarding academic dishonesty (http://www.udel.edu/stuguide/14C15/code.html). To falsify the results of one's research, to steal the words or ideas of another, to cheat on an assignment, to re-submit the same assignment for different classes, or to allow or assist another to commit these acts corrupts the educational process. Students are expected to do their own work and neither give or receive unauthorized assistance.