ENT 3607
Innovation by Design
Syllabus
Spring 2018

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Prerequisites: None, open to all majors, required for ENT majors
Course Website: www.innovation.fsu.edu/design and in Canvas
Course Meeting Times: Section 1, Tue, Thu 12:30 – 1:45, Section 2, Tue, Thu 2:00 – 3:15
Course Meeting Location: FSU Innovation Hub, 126 Shores

Course Rationale
Some believe that innovation springs from spontaneous insight that miraculously strikes the inventor. In reality, the most useful innovations are the result of a careful and methodical study of the human condition followed by painstaking exploration of ideal solutions for observed needs.

Course Description
This course teaches Design Thinking – the most popular human-centered innovation framework today. Design Thinking provides groups of diverse problem solvers with tools and methods that support a 5 stage process: 1) empathizing with people in given situations, 2) framing and reframing problems, 3) ideation, 4) prototyping and 5) testing solutions. Students will learn the process of developing products, services, systems and other solutions from the initial discovery of needs, to presenting a tested solution ready for deployment. This course features learning by doing with the vast majority of class time dedicated to collaborative exploration, supported by inspirational case studies, insightful video lessons from thought-leaders in the field, and abundant online resources.

Course Learning Objectives
Upon successful completion of this course students will be able to...
1. identify needs that are ripe for innovation,
2. utilize innovative frameworks and the methods, tools and practices that drive them,
3. implement practices for interviewing, observing and empathizing with people in specific situations and environments around a given need,
4. define and frame compelling needs and insights based on empathy findings, and scope a specific and meaningful design challenge using established methods,
5. ideate and generate design alternatives to serve as unique and meaningful solutions not currently available using established methods,
6. explore prototypes of possible solutions through physical modeling, storyboarding, and/or software simulations, iterating and experimenting until a final refined solution is developed,
7. test the solution with users, customers and/or stakeholders, returning to the drawing board as is necessary,
8. effectively communicate and “sell” the final solution to stakeholders through the effective use of storytelling and persuasion, and
9. in fulfillment of FSU’s Scholarship in Practice requirement, students will apply areas of scholarship in Design, utilizing the Design Thinking framework, to produce an original project resulting in a design solution.

Course Materials and Resources
There are no materials or textbooks to purchase for this course. All necessary materials and resources are available online and in FSU’s Innovation Hub (1st Floor Shores Bldg).

- The Innovation by Design website (www.innovation.fsu.edu/design) is where all course content is accessed: assignments, lessons, videos, and links to online resources.
- FSU Canvas (https://fsu.instructure.com) is where all class interactions occur: announcements, discussions, surveys, quizzes, assignment submissions and student grades.

Other online resources utilized in this course:
- https://dschool.stanford.edu/resources
- https://www.luma-institute.com
- http://www.designthinkersgroup.com
- http://innovation.autodesk.com/2015/10/05/the-innovation-genome/
- http://www.ted.com

Additionally, the following online tools may be incorporated into course work to increase student productivity, interaction and reflection:
- Student and/or group blogs and websites
- Online survey systems and social media for collecting data
- Online discussion board for student collaboration and critiques
- YouTube video production for presenting solution designs

Getting Help
Students needing assistance with assignment work should follow this two-step process:

1. Logon to Canvas (https://fsu.instructure.com) and navigate to the ENT3607 course page. Click on “Discussions” in the menu, and open the “Help!” Discussion area. Quickly scan the previously submitted posts to see if your issue has already been addressed, and if not, post your question – in full detail. Students may reply to classmate’s questions for extra credit. Instructors will “like” solutions that are correct, or post solutions themselves.
2. TA Office hours TBA for students in Tallahassee
3. If your question is private or of a serious nature, you may email, phone or visit the instructor:
Grading

Students earn grades primarily through project work and participation in groups, in class and online. Quizzes are used to emphasize important concepts and techniques. Peer grading may be implemented for final projects through critiques and group reports. See the Grading Rubrics Document at https://goo.gl/6QUFxO for more details. In general, class work towards the final grade is divided as follows:

- Assignments: 60 percent
- Exams and Quizzes: 20 percent
- Participation: 20 percent

Final grades are calculated based on points earned with 1,000 possible points (perhaps more if extra credit opportunities are provided):

910 - 1,000 (or more) A
900 - 909 A-
880 - 899 B+
810 - 879 B
800 - 809 B-
780 - 799 C+
710 - 779 C
700 - 709 C-
680 - 699 D+
610 - 679 D
600 - 609 D-
000 - 599 F

Attendance and Participation

Much of the value of this class lies in activities and interactions during class time and in group meetings outside of class. Attendance is taken in each class in order to credit students for being physically present. Activity reports collected at the close of each class session are used to credit students for the value of their participation in class. Group activity reports collected with each assignment are used to credit students for the value of their participation in group activities outside of class. These three components – physical presence in class, participation in class activities, participation in group activities outside class, combine to make up the participation
portion of a student’s grade. In addition to the loss of participation points, absence from class or group meetings outside of class, may cause a student to miss out on valuable assignment or quiz points. Students with an excused absence (see University Attendance Policy below), will be provided with a means to make-up any missed work.

Scholarship in Practice
The Liberal Studies for the 21st Century Program at Florida State University builds an educational foundation that will enable FSU graduates to thrive intellectually and materially and to engage critically and effectively in their communities. In this way your Liberal Studies courses provide a comprehensive intellectual foundation and transformative educational experience. This course has been approved as meeting the Liberal Studies requirements for Scholarship in Practice and thus is designed to help you become a critical thinker, a creative user of knowledge, and an independent learner.

Since the main purpose of this class is to develop problem-solving skills in students, all learning objectives and activities contribute to the goals of the Scholarship in Practice requirement. The requirement asks that students “apply relevant areas of scholarship to produce an original project.” In this class, the final group project fulfills the “original project” criteria specified by the requirement, and the final assignment is used to gauge each student’s success in achieving that requirement. Passing this course with a C- or better, fulfills the Scholarship in Practice requirement for FSU’s Liberal Studies (http://liberalstudies.fsu.edu)

Course Agenda
The semester is divided into two parts:
1. Training and piloting tools for innovation, in which students are exposed to several problem sets from a variety of disciplines requiring different types of solutions while learning to apply tools and methods for human-centered design.
2. Applying the tools for innovation to a final group project in which student teams are given or select a problem to work on for the remainder of the semester with deliverables due at the conclusion of each stage of design.

The semester will progress as follows:
1. Course Introduction and Student Introductions
2. Innovation Frameworks and Design Thinking Crash Course
3. Tools for Empathy
4. Tools for Problem-Framing and Ideation
5. Tools for Physical Prototyping and Testing
7. Group Project: Discovering and Identifying Needs
8. Group Project: Empathy
9. Group Project: Problem Framing and Ideation
10. Group Project: Prototyping and Testing
11. Group Project Presentations (Storytelling), Reports and Reflection
Final Group Project

Human-centered design methodologies, including Design Thinking, arrive at optimal solutions to problems by gathering thoughts and ideas from a diverse set of individuals using established tools and methods. During the second half of this course, after students have learned the tools and methods of Design Thinking, groups will be created each containing four to six diverse students. A Design Challenge will be assigned to each group, and one student will be designated as the facilitator for each group. Design Challenges will be wide ranging and varied. They will be different for each group over the lifetime of the class. Examples of possible design challenges include:

- integrating the homeless back into society
- developing a cycling culture in Tallahassee
- designing a new college course
- reducing road congestion on campus
- designing a better backpack
- developing a student culture for a full and rich college experience at the Panama City campus.

Students will work together in groups, during class time and outside of class, progressing through the stages of Design Thinking to develop what they feel is the best human-centered Design Solution for their assigned Design Challenge. They will then present/pitch their Design Solution through an online video working to tell the story of their challenge and selling the audience on their solution. Upon conclusion each student will independently submit a paper detailing the process of the team’s work, the resulting Design Solution, their unique contribution toward the solution development, and the lessons they learned along the way.

University Attendance Policy

Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

Academic Honor Policy

The Florida State University Academic Honor Policy outlines the University’s expectations for the integrity of students’ academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to “. . . be honest and truthful and . . . [to] strive for personal and institutional integrity at Florida State University.” (Florida State University Academic Honor Policy, found at http://fda.fsu.edu/Academics/Academic-Honor-Policy.)

Americans With Disabilities Act:

Students with disabilities needing academic accommodation should:
(1) register with and provide documentation to the Student Disability Resource Center; and
(2) bring a letter to the instructor indicating the need for accommodation and what type.
Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from the Student Disability Resource Center has been provided.

This syllabus and other class materials are available in alternative format upon request.

For more information about services available to FSU students with disabilities, contact the:
Student Disability Resource Center
874 Traditions Way
108 Student Services Building
Florida State University
Tallahassee, FL 32306-4167
(850) 644-9566 (voice)
(850) 644-8504 (TDD)
sdrc@admin.fsu.edu
http://www.disabilitycenter.fsu.edu/

Syllabus Change Policy
"Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice."