BCN 4930 / BCN 5906 Special Topics
Digital Technology and Management
Fall 2023
Classroom: MARC 3FLR STARTUP FIU
Tuesday 1:00 PM – 3:45 PM
Professors: Robert Hacker, Dr. Nipesh Pradananga, Jose Faria

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MEETING PATTERN

Class Nbr	Course	Units	Time	Dates	Instructor	Room
89818	BCN 4930 U02 Special Topics	3	01:00 PM - 03:40 PM	T	HACKER	MARC335
89812	BCN 5906 U02 Special Topics	1-3	01:00 PM - 03:40 PM	T	HACKER	MARC335

COURSE DESCRIPTION

This undergraduate and graduate course is offered in collaboration with Trimble, a multinational corporation engaged in the development, sales and support of advanced software for use in architecture, engineering, construction, agriculture and geo-spatial applications. This course is a multidisciplinary exploration of digital solutions for problem solving in engineering focused on data, customer experience and integrated processes. This course uses an active learning approach combining the Lean Startup methodology and Trimble's Zero Sixty Accelerator. FIU faculty from StartUP FIU and CEC and Trimble teach the course. Some of the FIU class time and additional time will be devoted to customer interviewing.

Each team of four students creates a new business concept as the course project. Each team picks a problem in one of the designated industries above and then identifies a Trimble software product that provides a solution and new opportunity for significant scaling using a B2B business model. Students will interview existing customers to validate their problem statements and understand the requirements for solutions. Each team will be supported by an industry mentor with relevant commercial experience. Teams will meet with their mentors once a week outside of class time.

This course will develop concepts and skills in design, innovation, engineering and entrepreneurship. The course should be of particular interest to graduate students studying architecture, electrical engineering, civil engineering, computer science, construction engineering, materials and mechanical engineering and related subjects.

Course Topics:
The weekly schedule of topics is shown below.

Week	Week of	Topic
1	22-Aug	Intro
2	29-Aug	Business Model Canvas
3	5-Sep	Best Practices for Customer discovery
4	12-Sep	Value Proposition
5	19-Sep	Customer Segments
6	26-Sep	Ecosystem
7	3-Oct	Progress Presentation
8	10-Oct	Distribution Channels
9	17-Oct	Customer relationships
10	24-Oct	Revenue Streams
11	31-Oct	Progress Presentation
12	7-Nov	Key Partners
13	14-Nov	Effective Communications
14	21-Nov	Capital Raising
15	28-Nov	Final Presentation

COURSE OBJECTIVES

-For students to learn the concepts of innovation and entrepreneurship
-For students to learn the fundamentals to create a new business concept
-To introduce the students to the Trimble software products
-To introduce students to Lean Startup and the Business Model Canvas

LEARNING OUTCOMES

- The ability to interview and understand customer problems
- The ability to solve new business problems using the framework of the Business Model Canvas and Lean Startup
- The ability to use the business model canvas to describe a new business concept
- The ability to construct a multi-perspective analysis of commercial issues in engineering and design

Student Learning Outcomes will be measured based on the weekly meetings with mentors, interim and final presentations and classroom participation.

COURSE PRE-REQUISITES / CO-REQUISITES

None.

TEXTBOOKS & OTHER REQUIRED MATERIAL

Required Texts:
1. The Startup Owner's Manual Steve Blank and Bob Dorf
2. Business Model Generation Alexander Osterwalder and Yves PigneurSangeet

The books are available from most on-line websites for books. Any edition is suitable.

There is a reading list of recent articles that supplements the required texts in this course.

COURSE PROCEDURES/METHODOLOGY

Grade will be determined based on in class presentations of course project, quality of classroom participation, class attendance and the course project. Percentages are shown below.

Course Project	50%
Class Participation	30%
Teamwork	10%
Attendance	10%

CLASS or PROFESSOR POLICIES

Very active role in class discussion is encouraged.

GRADING STANDARDS/PERFORMANCE MEASURES

Very active role in class discussion is expected and required.
The second absence from class will result in a reduction of course grade and subsequent absences will precipitously reduce grade.

Grading will be on a curve, based on grades for attendance, class participation, and the project.

FIU POLICIES

The FIU Academic Pledge
As a student of this university:
   I will be honest in my academic endeavors.

I will not represent someone else's work as my own.
I will not cheat, nor will I aid in another's cheating.

Intellectual Honesty Statement

Students at Florida International University are expected to adhere to the highest standards of integrity in every aspect of their lives. Honesty in academic matters is part of this obligation. Academic, Integrity is the adherence to those special values regarding life and work in an academic community. Any act or omission by a student which violates this concept of academic integrity and undermines the academic mission of the University, shall be defined as academic misconduct and shall be subject to the procedures and penalties mandated by the University and the School of Hospitality and Tourism Management.

Misconduct Statement

Florida International University is a community dedicated to generating and imparting knowledge through excellent teaching and research, the rigorous and respectful exchange of ideas and community service. All students should respect the right of others to have an equitable opportunity to learn and honestly to demonstrate the quality of their learning. Therefore, all students are expected to adhere to a standard of academic conduct, which demonstrates respect for themselves, their fellow students, and the educational mission of the University. All students are deemed by the University to understand that if they are found responsible for academic misconduct, they will be subject to the Academic Misconduct procedures and sanctions, as outlined in the Student Handbook.

Misconduct includes: Cheating – The unauthorized use of books, notes, aids, electronic sources; or assistance from another person with respect to examinations, course assignments, field service reports, class recitations; or the unauthorized possession of examination papers or course materials, whether originally authorized or not. Plagiarism – The use and appropriation of another's work without any indication of the source and the representation of such work as the student's own. Any student who fails to give credit for ideas, expressions or materials taken from another source, including internet sources, is responsible for plagiarism.
Academic Misconduct Procedures and Penalties

Please refer to the following documents for additional information:

- FIU Code of Academic Integrity – http://integrity.fiu.edu/
- FIU Student Handbook – https://studentaffairs.fiu.edu/about/student-handbook/index.php

Cell Phones
Cell phones and beepers are prohibited during class.