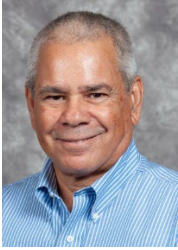


EEL 4933-U01 Engineering Entrepreneurship
Monday 2:00PM – 4:45PM, Room EC1107 @Engineering Center
Fall 2022 Dates: August 22, 2022 – December 2, 2022

GENERAL INFORMATION



PROFESSOR INFORMATION

Instructor: Prof. Reynaldo Max Padro

Office Hours: Before or After class or by appointment

E-mail: rpadro@fiu.edu

Course due dates are according to Eastern Standard Time (EST) time zone.

COURSE DESCRIPTION

This course provides real world, hands-on learning on what it is like to start a high-tech company. This class is not about how to write a business plan. It is not an exercise on how smart you are in a classroom, or how well you use the research library to size markets. The result is not a PowerPoint slide deck for a VC presentation. It is most definitely not an incubator where you come to build the “hot-idea” you. This is a practical class – essentially a lab, not a theory or “book” class. Our goal, within the constraints of a classroom and a limited amount of time, is to create an entrepreneurial experience for you with all the pressures and demands of the real world in an early stage start up.

You will be busy talking to customers, partners, competitors, as you encounter the chaos and uncertainty of how a startup works. You will work in teams learning how to turn a great idea into a great company. You will learn how to use a business model to brainstorm each part of a company and customer development to get out of the classroom to see whether anyone other than you would want/use your product. Finally, based on the customer and market feedback you gathered, you would use agile development to rapidly iterate your product to build something customers would use and buy. Each block will be new adventure outside the classroom as you test each part of your business model and then share the hard-earned knowledge with the rest of the class.

This class requires pre-class preparation and lots of out of the classroom work. Read: [Why the Lean Start-Up Changes Everything](#) to get a better idea on the class objectives.

COURSE LEVEL STUDENT LEARNING OUTCOMES

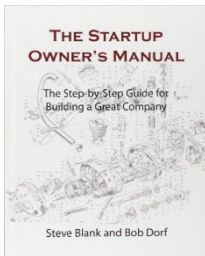
After completing this course, students will be able to:

1. Practice the process to test business model hypotheses for a real business
2. Work in a team environment to bring market needs forward
3. Present recommendations using team-based selling approaches
4. Develop a detailed Value Proposition as a basis for the Business Canvas
5. Employ the concepts of Customer Segments and Customer Discovery to the Business Canvas
6. Recommend the best Channel for your Business Canvas
7. Employ the concepts of Customer Relationships and Revenues to the Business Canvas
8. Analyze the impact of Costs to the Business
9. Describe, in a Final Presentation, the results of the research having used the Business Canvas process

ABET LEVEL STUDENT LEARNING OUTCOMES

3. an ability to communicate effectively with a range of audiences.
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

TEXTBOOKS



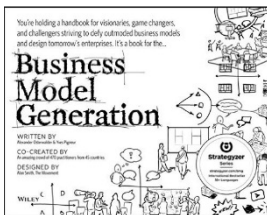
Recommended: *The Startup Owner's Manual: The Step-By-Step Guide for Building a Great Company*

Authors: Steve Blank and Bob Dorf

ISBN-10: 0984999302

ISBN-13: 978-0984999309

<https://steveblank.com/books-for-startups/>



Required: *Business Model Generation*

Authors: Alexander Osterwalder & Yves Pigneur

ISBN-10: 0470876417

ISBN-13: 978-0470876411

www.strategyzer.com/books/business-model-generation

TECHNICAL REQUIREMENTS AND SKILLS

One of the greatest barriers to taking this course is a lack of basic computer literacy. By computer literacy we mean being able to manage and organize computer files efficiently and learning to use your computer's operating system and software quickly and easily. Keep in mind that this is not a computer literacy course; but students enrolled are expected to have moderate proficient using a computer. Please go to the "[What's Required](#)" webpage to find out more information in this subject.

Privacy Policy Statements for Partners and Vendors:

- [Canvas](#)
- [Microsoft](#)
- [Zoom](#)
- [Google](#)
- [Adobe](#)

ACCESSIBILITY AND ACCOMMODATION

The Disability Resource Center collaborates with students, faculty, staff, and community members to create diverse learning environments that are usable, equitable, inclusive, and sustainable. The DRC provides FIU students with disabilities the necessary support to successfully complete their education and participate in activities available to all students. If you have a diagnosed disability and plan to utilize academic accommodations, please contact the Center at 305-348-3532 or visit them at the Graham Center GC 190.

For additional assistance please contact FIU's [Disability Resource Center](#).

Web Accessibility Statements for Partners and Vendors:

- [Canvas](#)
- [Microsoft](#)
- [Zoom](#)
- [Google](#)
- [Adobe](#)

Please visit or [ADA Compliance](#) webpage for additional information about accessibility involving the tools used in this course.

EXPECTATION OF THIS COURSE

The Flipped Classroom

Unlike a traditional classroom where the instructor presents lecture material, the pre-class lectures are in the book and online. I expect you to watch the assigned lectures for the upcoming week **before** class and we will use time in class to discuss questions about the lecture material and to provide supplemental material. You need to come prepared with questions or comments about the material for in-class discussion.

Experiential Learning

You will be spending a significant amount of time in between each of the lectures outside the class talking to customers. Each week your team will conduct **at least** 10 customer interviews focused on a specific part of the Business Model Canvas. This class is a simulation of what startups and entrepreneurship are like in the real world: chaos, uncertainly, impossible deadlines in insufficient time, conflicting input, etc.

Class Culture

Startups communicate much differently than inside a large company. It is dramatically different from the familiar large company culture. At times, it can feel brusque and impersonal, but it is focused and oriented to create immediate action in time- and cash-constrained environments. We have limited time, and we push, challenge, and question you in the hope you will quickly learn. We will be direct, open, and tough – just like the real world. We hope you can recognize that these comments are not personal, but part of the process.

I expect you to question and challenge any point of view if you disagree and engage in a real dialog. This approach may seem harsh or abrupt but try to appreciate that as entrepreneurs you need to learn and evolve faster than you ever imagined possible.

Team Organization

This class is team-based. Working and studying will be in teams and you will be assigned to a team and your project will need to be approved by the professor. Team projects can be software, a physical product, or a service of any kind. The teams will self-organize and establish individual roles on their own.

There are no formal CEO/VPs. Just the constant parsing and allocating of the tasks that your team needs to complete.

Students are expected to:

- review the getting started page located in the course modules
- introduce yourself to the class during the first week by posting a self-introduction in the appropriate discussion
- take the practice quiz to ensure that your computer is compatible with the learning management system, Canvas
- interact online with instructor and peers
- review and follow the course calendar and weekly outlines
- respond to discussions by the due date specified. No late work will be accepted
- respond to emails within 1 day
- submit assignments by the corresponding deadline.

The instructor will:

- respond to discussion postings within 2 days of the deadline
- respond to emails within 1 day
- grade assignments within 2 days of the assignment deadline.

UNDERGRADUATE COURSE PREREQUISITES

None, but you are required to have interest/passion in discovering how an idea can become a real company. Ability to work insanely hard in a team environment and take critical feedback dispassionately.

COMMUNICATING WITH THE INSTRUCTOR

Communication in this course will take place via the Canvas Inbox. Check out the [Canvas Conversations Tutorial](#) or [Canvas Guide](#) to learn how to communicate with your instructor and peers using Announcements, Discussions and the Inbox. If necessary, I am available to meet with you by appointment.

RELIGIOUS HOLIDAYS

The University's policy on religious holidays as stated in the University Catalog and Student Handbook will be followed in this class. Any student may request to be excused from class to observe a religious holy day of his or her faith.

RULES, POLICIES, AND ACADEMIC MISCONDUCT

Assignments from the text and other resources are listed later for each weekly session. Students are expected to pace their learning according to the posted course assignments.

It is expected that interactive learning and teaching will enrich the learning experience of all students, and that each student will work in partnership with the professor to create a positive learning experience for all. Student engagement is a necessary condition for an effective learning experience and includes contributions to debate and discussion (if any), positive interactive learning with others, and an enthusiastic attitude towards inquiry. Everyone is expected to be a positive contributor to the learning community, and students are expected to share the responsibility of teaching each other.

Statement of Understanding between Professor and Student

Every student must respect the right of all to have an equitable opportunity to learn and honestly demonstrate the quality of their learning. Therefore, all students must adhere to a standard of academic conduct, demonstrating respect for themselves, their fellow students, and the educational mission of the University. As an FIU student taking this class:

- I will not represent someone else's work as my own
- I will not cheat, nor will I aid in another's cheating
- I will be honest in my academic endeavors
- I understand that if I am found responsible for academic misconduct, I will be subject to the academic misconduct procedures and sanctions as outlined in the Student Handbook

Failure to adhere to the guidelines stated above may result in one of the following:

Expulsion: Permanent separation of the student from the University, preventing readmission to the institution. This sanction shall be recorded on the student's transcript.

Suspension: Temporary separation of the student from the University for a period.

By taking this course, I promise to adhere to the policies procedures of the [FIU Student Code of Academic Integrity](#) and Academic Misconduct: <http://compliance.fiu.edu/> .

PANTHERS CARE & COUNSELING SERVICES (CAPS)

If you are looking for help for yourself or a fellow classmate, Panthers Care encourages you to express any concerns you may come across as it relates to any personal behavior concerns or worries you have, for the classmate's well-being or yours; you are encouraged to share your concerns with [FIU's Panthers Care website](#).

[Counseling and Psychological Services \(CAPS\)](#) offers free and confidential help for anxiety, depression, stress, and other concerns that life brings. Professional counselors are available for same day appointments. Don't wait to call 305-348-2277 to setup a time to talk or visit the online self-help portal.

ASSESSMENTS

In order to mitigate any issues with your computer and online assessments, it is very important that you make sure that your computer meets the minimum [hardware requirements](#).

All assessments will auto-submit when (1) the timer runs out OR (2) the closing date/time is reached, whichever happens first. For example, if a quiz has a closing time of 5:00pm but the student begins the exam at 4:55pm, the student will only have 5 minutes to complete the quiz.

Assessments in this course are not compatible with mobile devices and should not be taken through a mobile device.

ASSIGNMENTS

1. Attendance (13 classes @ 10 points each). Attendance will be taken manually during every class. Arrivals after 10 minutes will receive half of the attendance points for that day.
2. Discussion Boards (6 @ 25 points each submitted in Canvas for a total of 150 points).
 - a. You need to 1) complete your answer 2) read three posts from your classmates and add insightful comments to their posts. Please check the rubric.
 - b. Due dates are listed in the schedule and Canvas. Rubrics are included for grading.
3. Quizzes (5 @ 30 points each completed in Canvas for a total of 150 points)
 - a. Due dates are listed in the schedule and Canvas. Rubrics are included for grading.
4. Out-of-the-building progress as measured by weekly presentations (20 points weekly) and completion of Project File (17 points weekly). Total of 370 points). Rubrics are included for grading.

Team must do the following **weekly before the presentation class**:

- 1) Record your weekly progress using the EEL4933 Project Team file (Found in Canvas)
 - a. Update each block of the business model canvas
 - b. Identify which team member did which portion of the work.
 - c. Provide a detailed report on what the team did each week.
- 2) Deliverables (submit before class starts in Canvas):
 - a. Weekly Presentations must be submitted on Sunday before class in Canvas every week. Use the format provided in Canvas.
 - b. Updated EEL4933 Project file (.xls) and submit in Canvas at the same time.
5. Team final Project File (100 points):
 - a. Final EEL4933 Project Team file (.xls) with all contents completed and documenting all semester activities. Rubrics are included for grading.
6. Team final presentation and evaluation (100 points):
 - a. Follow format and expectations presented in class.
 - b. All Team members must be present for this presentation.
 - c. Due dates are listed in the schedule and Canvas. Rubrics are included for grading.

Late assignments will not be accepted. Advise ahead of time if you have any issues.

GRADING CRITERIA

Experiential Learning Assignments	Possible Points
Attendance (13 classes @ 10 points each)	130
Discussion Boards (6) @ \$25 each available on Canvas and submitted before class.	150
Quizzes – 5 @ 30 points each	150
Out-of-the-building progress as measured by weekly presentations (10 Updates @ 20 points each)	200
Out-of-the-building progress as measured by completion of Project File (10 Updates @ 17 points each)	170
Team final Project File	100
Team final Presentation	100
Total Available Points	1,000

GRADING POLICY

Letter Grade	Range	Letter Grade	Range	Letter Grade	Range
A	1000 - 930	B	869-830	C	759-700
A-	929-900	B-	829-800	D	699-600
B+	899-870	C+	799-760	F	<600

Department Regulations Concerning Incomplete Grades. To qualify for an Incomplete, a student:

1. Must contact the instructor or secretary before or during missed portion of class
2. Must be passing the course prior to that part of the course that is not completed
3. Must make up the incomplete work through the instructor of the course
4. Must see the instructor. All missed work must be finished before last two weeks of the following term

WEEKLY SCHEDULE

Class Date		Topic/Pre-Class Assignments
August 22	Module 0	Introductions and Business Canvas <ul style="list-style-type: none"> • Read Syllabus and prepare a list of questions to clarify in class • Present a short individual introduction • Business Canvas Videos: What We Now Know, Business Model Canvas, Why get out of the classroom, Startup Tools • Discussion Board #1: due Aug 28 at 11:59pm
August 29	Module 1	Team Assignments and Project Approvals Submit presentation/project file #1 in Canvas by Sep 11 at 11:59pm
September 5		No School – Labor Day
September 12	Module 2	Value Proposition / Presentation #1 <ul style="list-style-type: none"> • Value Proposition Videos: Finding the Strategy, Value Proposition Canvas, Value Proposition Canvas, Value Proposition • Discussion Board #2: due Sep 18 at 11:59pm • Submit presentation/project file #2 in Canvas by Sep 18 at 11:59pm

Class Date		Topic/Pre-Class Assignments
September 19	Module 3	Customer Segments / Presentation #2 <ul style="list-style-type: none"> Customer Segment Videos: The Right Customer, Customer Segments, Customer Pains Quiz #1 due Sep 25 at 11:59pm Submit presentation/project file #3 in Canvas by Sep 25 at 11:59pm
September 26	Module 4	Customer Discovery / Presentation #3 <ul style="list-style-type: none"> Customer Discovery Videos: Customer Discovery Process, Doing Customer Discovery, Acting on Customer Discovery, http://startupweekend.wistia.com/projects/zt618zz0r7, http://startupweekend.wistia.com/medias/tao3s8hf7l Submit presentation/project file #4 in Canvas by Oct 2 at 11:59pm
October 3	Module 5	Customer Acquisition / Presentation #4 <ul style="list-style-type: none"> Customer Acquisition Videos: Getting out of the building, "Startup Metrics for Pirates" Quiz #2 due Oct 9 at 11:59pm Submit presentation/project file#5 in Canvas by Oct 9 at 11:59pm
October 10	Module 6	Channels / Presentation #5 <ul style="list-style-type: none"> Channel Videos: Channels1, Channels2, Distribution Channels Discussion Board #3: due Oct 16 at 11:59pm Submit presentation/project file #6 in Canvas by Oct 16 at 11:59pm
October 17	Module 7	Customer Relationships / Presentation #6 <ul style="list-style-type: none"> Customer Relationship Videos: Customer Relationships Quiz #3 due Oct 23 at 11:59pm Submit presentation/project file #7 in Canvas by Oct 23 at 11:59pm
October 24	Module 8	Revenues / Presentation #7 <ul style="list-style-type: none"> Revenue Videos: Revenue Streams, Market Type and Revenue, Revenue Stream and Pricing Discussion Board #4: due Oct 30 at 11:59pm Submit presentation/project file #8 in Canvas by Oct 30 at 11:59pm
October 31	Module 9	Cost / Presentation #8 <ul style="list-style-type: none"> Quiz #4 due Nov 6 at 11:59pm Submit presentation/project file #9 in Canvas by Nov 6 at 11:59pm
November 7	Module 10	Activities, Partners, and Resources / Presentation #9 <ul style="list-style-type: none"> Partners/Resources Videos: Partners, Defining Partners, Resources, Activities and Costs Quiz #5 due Nov 13 at 11:59pm Discussion Board #5: due Nov 13 at 11:59pm Submit presentation/project file #10 in Canvas by Nov 13 at 11:59pm
November 14	Module 11	Preparation for Final Presentations / Presentation #10 <ul style="list-style-type: none"> Discussion Board #6: due Nov 27 at 11:59pm Submit Final Presentation and Project file by Nov 27 at 11:59pm
November 21		No School – Thanksgiving Week
November 28	Module 12	Final Presentations
December 5		Final Exam Week: No final exam for this class