

Technology Entrepreneurship

ENG 461 / TE 461 | Spring 2022 Semester (8 Week Course)

Instructors:

Brian Lilly, PhD

Brian's entrepreneurial experience includes founding and managing several companies. He is president of Smart Solutions, Inc., which manufactures and sells products he designed for outdoor recreation and vehicle industries, and is also vice president of Ergo-Tech, Inc., which manufactures and sells a patented line of industrial washdown equipment throughout North America.

Professor Lilly received his B.S. and M.S. in General Engineering and his Ph.D. in Aeronautical Engineering from the University of Illinois at Urbana-Champaign.

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** This syllabus may be updated throughout the semester **

Location: 206 Transportation Building

Office Hours:

TBD

Zoom Meeting Information:

Join Zoom Meeting

<https://illinois.zoom.us/j/87346809272?pwd=NDRNdkZXNHpjdVdoMGVBVmhFQitDZz09>

Meeting ID: 873 4680 9272

Password: 189657

Text:

There is no required textbook

Course Description:

The course covers a broad range of topics that critically affect technology-based companies and start-up businesses. Primary emphasis is placed on the marketing concerns, company financials, and business plan preparation for these technology-based businesses. The students will apply this information by preparing a business plan for a technology-based product or service of their choice. As an alternative to a business plan, some students will produce prototypes of their idea or work on a grant/funding proposal for their work. Plans may be prepared in teams or as individuals. Several of the best plans will be entered into the Cozad Business Plan competition. The class lectures and case study discussions will cover considerable material that may not be contained in the textbook. Therefore, class attendance and class participation are an important component of the final grade. Prerequisite: An entrepreneurial spirit and a passion for solving the world's problems with innovative products and solutions.

Reading assignments, chapter exercises, and case study summaries are due on the date shown at the start of class. No late work will be accepted. All assignments and dates are subject to change.

Note: TBD means To Be Determined.

Grading:

40% - Project

15% - Homework - Due on the date shown

20% - Final Presentation

10% - Final Multimedia Communication File about Product-Market Fit

15% - Attendance and class participation (show up for zoom)

PRESENTATION/MEETING DAYS will be held approximately once a month. Due to Covid, presentations are prepared in video format and turned into compass prior to the class meeting.

CASE STUDIES will be assigned most weeks. Your written assignments are due on compass before class starts. Please bring a copy to the zoom meeting as a reference during discussion.

For each case study, you are required to write a critical review before we discuss the case in class. Please bring a paper copy of the review to class.

Critical Review Requirements

- Identify and describe key individuals and organizations
- Create a timeline of events
- Identify and describe key decisions
- Give a recommendation and reasoning for action to be taken
- Discuss environmental, social, or economic challenges if applicable
- Discuss the relevance of this case study to your entrepreneurial concept

Your critical review of each case study should be approximately 1 page typed, single-spaced. Due dates are posted on the syllabus. No credit will be given to late assignments.

Case Studies: We will have several Case Studies this semester. As mentioned before, they are due before the beginning of each class. We will discuss each study in class. Our goal of the case studies is to stimulate your business mind. Pay attention to the Case Study Critical

Requirements. Really try to draw parallels between each study and your plans for the future. If you are a budding entrepreneur, you can learn a lot from these documents and our discussions. Each case study is worth 50 points. All together it will make up 40% of your final grade. On Compass you can view good and bad examples of Case Studies from previous semesters. Do not submit one paragraph and take time to format your paper. It does not need to be longer than one page, size 12, Times New Roman. It should take you no more than an hour (outside of the reading) to complete each study and receive full credit.

Project Progress: In this course, we want to see you bring your ideas to life. Specifically, bring ideas that have great potential. By the second week you will decide on your semester long project. For this project, you may work alone or in a team (no more than 3 people), to construct a business model, minimum viable product, presentation, apply for grants, scholarships, incubators, and accelerators and attempt to start a business. Your initial idea must be approved by the instructors, but we are pretty much open to everything.

We **do not** expect you to form a full company and break a million dollars in sales in one semester but we want to see **REAL PROGRESS**. You need to create measurable milestones to be reached throughout the course. These milestones are the criteria we will use to grade your work. Again, if a milestone is something big, it is ok that it was not reached, as long as significant effort has been shown.

This class is designed to be interactive, not overly-demanding, and we hope that you will enjoy it. It is a core class for the Innovation, Leadership and Engineering Entrepreneurship program so we take our work seriously, and we want you to be an engaged and active student. We want to see you advance and grow as engineers, entrepreneurs, and as adults.

Class Schedule:

D A Y	Date	Lecture/Discussion	Assignments Due as Noted
Day 1	1/19	<u>Zoom meeting 9am – 10 am Introduction</u> Syllabus <u>Past successes</u> Case Studies	Nothing due
Day 2	1/24	Watch Video 1 Topic Exercise in company startup Grant opportunities	1-2 paragraphs describing your idea(s) submitted by 9 AM on Day 3. Turn in 10 bullet points from video 1. Due before 9 AM Day 3.
Day 3	1/26	<u>Zoom meeting 9am-10am</u> Business idea discussion	Refine business idea. Due by 9 AM on Day 5.
Day 4	1/31	Watch video 2 Case Study 1: John Roughneen	Turn in 10 bullet points from video 2 due before 9 AM Day 5 Case Study 1: John Roughneen write-up due before 9 AM Day 5.

Day 5	2/2	<u>Zoom meeting 9am – 10 am</u> Watch video 3 Business Communication: How to Present Your Ideas	Turn in 10 bullet points from video 3 due before 9 AM Day 7 Watch -- https://www.youtube.com/watch?v=QoAOzMTLP5s Watch -- https://www.youtube.com/watch?v=IP0cUBWTgpY Submit three sentences about who you think your customer is and what your value proposition is right now. Record a max 2-minute video overview of your business idea. Due before 9 AM Day 7.
Day 6	2/7	Watch video 4 Case Study 2: Jim Poss	Turn in 10 bullet points from video 4 due before 9 AM Day 7. Case Study 2: Jim Poss summary due before 9 AM Day 7 Prepare Business Model Canvas due before 9 AM Day 7
Day 7	2/9	<u>Zoom meeting 9am-10am</u> Watch video 5 Multimedia Communication and Introduction of Final Video Assignment	Turn in 10 bullet points from video 5 due before Day 9 Prepare midterm presentation - Check out "Sample Midterm Videos" on Compass Due before 9 AM Day 9.
Day 8	2/14	Watch video 6 Marketing & How to Sell	Prepare midterm presentation - Check out "Sample Midterm Videos" on Compass due before 9 AM Day 9. Turn in 10 bullet points from video 6 due 9 AM Day 9.
Day 9	2/16	<u>Zoom meeting 9am -10am</u> Midterm Presentation	Revised business model canvas is due 9 AM Day 11. Turn in 10 bullet points from video 7 due 9 AM Day 11.
Day 10	2/21	Watch video 7 Family Business	Work on Final Presentation: Competitive matrix, competition slide (See examples on Compass) Due before 9 AM Day 15. Turn in 10 bullet points from video 7 Due 9 AM Day 11
Day 11	2/23	Zoom meeting 9am -10am	Work on Final Presentation (See examples on Compass) Due 9 AM Day 15. Case Study 3: Howard Head summary due by 9 AM Day 13 Watch video 8 & turn in 10 bullet points due by 9 AM Day 13
Day 12	2/28	Watch video 9 Distribution Strategies	Work on Final Presentation: Funding Plan / Financial Projections / Key Metrics slides (See examples on Compass) Due 9 AM Day 15. Watch video 9 & turn in 10 bullet points from video 9 due 9 AM Day 13.
Day 13	3/2	Zoom meeting 9am -10am Working session on their ideas and progress	Work on Final Presentation: Sales strategy, Go to Market slides (See examples on Compass) Due 9 AM Day 15 Watch video 10 & turn in 10 bullet points due by 9 AM Day 15
Day 14	3/7	Watch video 11 Manufacturing & outsourcing	Work on Final Presentation: remaining slides, Executive Summary, Presentation Video (See examples on Compass) Due 9 AM Day 15 Turn in 10 bullet points from video due 9 AM Day 15
Day 15	3/9	Zoom meeting 9am -10am To Watch Final Presentations Together	Final Presentation Files Due (Pitch Deck Slides, Executive Summary, 2 Minute Video) Watch video 12 Basics of getting started & turn in 10 bullet points. Due 9 AM Day 16

			from video 12 due 9 AM Day 16
Day 16	3/21	Zoom meeting 9am -10am To Watch Final Presentations Together	

COVID

Following University policy, all students are required to engage in appropriate behavior to protect the health and safety of the community, including wearing a facial covering properly, maintaining social distance (at least 6 feet from others at all times), disinfecting the immediate seating area, and using hand sanitizer. Students are also required to follow the campus COVID 19 testing protocol.

Students who feel ill must not come to class. In addition, students who test positive for COVID 19 or have had an exposure that requires testing and/or quarantine must not attend class. The University will provide information to the instructor, in a manner that complies with privacy laws, about students in these latter categories. These students are judged to have excused absences for the class period and should contact the instructor via email about making up the work.

Students who fail to abide by these rules will first be asked to comply; if they refuse, they will be required to leave the classroom immediately. If a student is asked to leave the classroom, the non-compliant student will be judged to have an unexcused absence and reported to the Office for Student Conflict Resolution for disciplinary action. Accumulation of non-compliance complaints against a student may result in dismissal from the University.

Emergency Response Recommendations

Emergency response recommendations can be found at the following website: <http://police.illinois.edu/emergency-preparedness/>. I encourage you to review this website and the campus building floor plans website within the first 10 days of class. <http://police.illinois.edu/emergency-preparedness/building-emergency-action-plans/>.

Sexual Misconduct Reporting Obligation

The University of Illinois is committed to combating sexual misconduct. Faculty and staff members are required to report any instances of sexual misconduct to the University's Title IX Office. In turn, an individual with the Title IX Office will provide information about rights and options, including accommodations, support services, the campus disciplinary process, and law enforcement options.

A list of the designated University employees who, as counselors, confidential advisors, and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: wecare.illinois.edu/resources/students/#confidential.

Other information about resources and reporting is available here: wecare.illinois.edu.

Academic Integrity

The University of Illinois at Urbana-Champaign Student Code should also be considered as a part of this syllabus. Students should pay particular attention to Article 1, Part 4: Academic Integrity. Read the Code at the following URL: <http://studentcode.illinois.edu/>. Academic dishonesty may result in a failing grade. Every student is expected to review and abide by the Academic Integrity Policy: <https://studentcode.illinois.edu/article1/part4/1-401/>. Ignorance is not an excuse for any academic dishonesty. It is your responsibility to read this policy to avoid any misunderstanding. Do not hesitate to ask the instructor(s) if you are ever in doubt about what constitutes plagiarism, cheating, or any other breach of academic integrity.

Religious Observances

Illinois law requires the University to reasonably accommodate its students' religious beliefs, observances, and practices in regard to admissions, class attendance, and the scheduling of examinations and work requirements. You should examine this syllabus at the beginning of the semester for potential conflicts between course deadlines and any of your religious observances. If a conflict exists, you should notify your instructor of the conflict and follow the procedure at https://odos.illinois.edu/community-of-care/resources/students/religious_observances/ to request appropriate accommodations. This should be done in the first two weeks of classes.

Disability-Related Accommodations

To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources and Educational Services (DRES) as soon as possible. To contact DRES, you may visit 1207 S. Oak St., Champaign, call 333-4603, e-mail disability@illinois.edu or go to <https://www.disability.illinois.edu>. If you are concerned you have a disability-related condition that is impacting your academic progress, there are academic screening appointments available that can help diagnosis a previously undiagnosed disability. You may access these by visiting the DRES website and selecting "Request an Academic Screening" at the bottom of the page.

Family Educational Rights and Privacy Act (FERPA)

Any student who has suppressed their directory information pursuant to Family Educational Rights and Privacy Act (FERPA) should self-identify to the instructor to ensure protection of the privacy of their attendance in this course. See https://registrar.illinois.edu/academic_records/ferpa/ for more information on FERPA.