Engineering Entrepreneurship (EGN4641) - Entrepreneurship for Engineers (EGN6640)

Course Syllabus

Instructor:
Lawrence Tinker, Ph.D.
Assistant Director, UF Engineering Innovation Institute

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Office Phone: 352-294-7908
Office location: Weil Hall Room 309
Office hours: By appointment via email
Teaching Assistant: None
Web site: UF course Canvas web site

Class Periods and Location:
Tuesday, Periods 2-4; NEB102

Course Description:
Engineering Entrepreneurship (EGN4641) and Entrepreneurship for Engineers (EGN6640) meet as a combined undergraduate/graduate level course that introduces engineering students to the concepts and practices of technology entrepreneurial thinking and entrepreneurship. Using lectures, case studies, business plans, and student presentations, the course teaches life skills in entrepreneurial thought and action that students can utilize in starting technology companies or executing R&D projects in large companies.

Credit Hours:
3 Credit Hours. Note that graduate students will not receive graduate credit for taking the undergraduate version of the course (EGN4641).

Course Pre-Requisites/Co-Requisites:
EGN4641 – Junior/Senior Standing; EGN6640 – None

Course Objectives:
Entrepreneurs have started new ventures for generations. Success was more a function of tenacity and a measure of the idea underpinning the business. Errors in the structure and early conduct of the enterprise could be overcome with time through learning. In the new paradigm, tolerance for such errors is acutely narrow. Competition has become intense, technology-based, market-focused and highly competent. In such a competitive environment the lack or misuse of the application of currently available technology to the structure and conduct of a new business could quickly spell its demise. Similarly, the inability to adapt the enterprise to the emergence of new technologies to make it market-driven and structure-perfect could have the same effect. In summary, competition is just too tough; the end could come quickly.
Organizational size neither offers a safe harbor nor increased risk. New ventures exist either as a new, small business or as an element of a large organization. Large companies have become competitive in this new paradigm by redefining their cultures to one of entrepreneurial thinking in large companies – termed by many as “intrapreneurship.”

Every student that plans a career, therefore, will face the need to negotiate these new realities, whether through a big company, small company, new company or old. The goal of this course is to provide the background necessary to understand the entrepreneurial approach to technology businesses and the tools required to function effectively in that environment.

The Student Learning Objectives and how those objectives will be accomplished include:

- Students will gain and demonstrate an understanding of the entrepreneurial thought process as applied to organizations ranging from startup to large, multinational companies through exercises that test the students’ proficiency in the key skills sets associated with starting and building technology-based entrepreneurial ventures.
- Students will learn and demonstrate their understanding of the key attributes of technology entrepreneurs and the organizations they start and lead through team projects that mimic real world entrepreneurship.
- Students will learn to function and thrive in multidisciplinary team environments while creating measurable value in meeting the needs of myriad stakeholders through team-based projects to create and promote a technology entrepreneurial venture.

**Material and Supply Fees:** None

**Required Textbooks and Software:** None, but students should expect to have reading and viewing (e.g. video) assignments from current events related to the course topics that will be posted in the Canvas course website.

**Recommended Materials:**
Course Schedule:
The course will be delivered weekly through three periods typically consisting of lecture overviews of the weekly topics by the instructor, presentations and interviews facilitated by the instructor with guest speakers that exemplify technology entrepreneurship, in-class assignments and student presentations that illustrate their grasp of the course materials.

The course is firmly presented in a “real-world” format, including students taking the roles of company founders and investors, creating a vision and execution plan for their company, and raising funds – exactly as they would in a true entrepreneurial endeavor.

The course consists of three main modules. The expected topics and/or activities to be covered each week in the course modules are summarized below. The actual weekly outline of topics and activities is subject to change from that indicated below at the course instructor’s discretion and will be reflected in the updated course schedule that students will have access to via the Canvas course website. The finalized course schedule will include weekly topics, reading requirements, assignment due dates, and dates for other course activities. The course is delivered along the following outline of major course modules:

I. Introduction to Entrepreneurship – Introduction to Technology Entrepreneurship and Technology Ventures, Attributes and Myths of Technology Entrepreneurs, Engineers as Entrepreneurs, Mindset of the Entrepreneurial Leader, Value Proposition Introduction.


Attendance Policy, Class Expectations, and Make-Up Policy:
For on-campus students, attendance is mandatory at all sessions and more than one unexcused absence can result in loss of one final course full letter grade per each unexcused absence over one at the discretion of the instructor and subject to the UF attendance policies. Attendance may be taken by the instructor during any class period. Excused absences are consistent with university policies in the undergraduate or graduate catalogue and require appropriate documentation.

On-campus students are expected to arrive to class on time and to remain in class through completion. Students are expected to come to class prepared, including completion of all assigned readings and/or viewings, to actively participate in class discussions and activities.
If a student is absent from a class, it is the student’s responsibility to find out from their classmates, the class website, or the instructor what material was covered, what additional assignments were made, and to obtain any handouts he/she may have missed.

Excessive student use of electronic devices during class sessions for non-class purposes is prohibited and can result in expulsion from a class session, with that session then counting as an unexcused absence.

Except in rare circumstances at the sole discretion of the instructor subject to the policies of the undergraduate (https://catalog.ufl.edu/ugrad/current) or graduate catalogue (http://gradcatalog.ufl.edu/) as appropriate, 1) assignments must be submitted via Canvas by the stated deadline, 2) late submissions will not be accepted, 3) no credit will be given for late or partial assignment submissions, and 4) no-make-up assignments will be accepted.

**Evaluation of Grades:**
The course will be organized around lectures, readings, class discussion and a team project. All students including EDGE students are required to work in teams. All students will organize into teams for the purpose of developing a venture idea into an early stage business plan and presenting that plan. The deliverables for each team will be individual elements and a business plan and a team presentation of the plan to the class.

This course is offered at the graduate level as EGN6640 and at the undergraduate level as EGN4641, and will be delivered in the same class period. Graduate and undergraduate students will learn together as the teaching methodology and structure of the undergraduate and graduate courses are similar. However, graduate students are required to submit two additional assignments (case studies) per below. Grades will be assigned as follows:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Assignment Type</th>
<th>Undergrad. students</th>
<th>Graduate students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Biography</td>
<td>Individual for all students</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Individual Idea Overview</td>
<td>Individual for all students</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Team Idea Overview</td>
<td>Team for all students</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Value Proposition Presentation</td>
<td>Team for all students</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Startup Failure Analysis</td>
<td>Team for all graduate students</td>
<td>Not required</td>
<td>100</td>
</tr>
<tr>
<td>Reading assignment for undergraduates</td>
<td>XXXXXXXXXXXXXXXXXXXXXXXXXXXX</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Business Model Canvas Presentation</td>
<td>Team for all students</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Company Financials Analysis</td>
<td>Team for all students</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Business Plan Presentation</td>
<td>Team for all students</td>
<td>100</td>
<td>100</td>
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</tbody>
</table>
Written Business Plan | Team for all students | 200 | 200 | 
Entrepreneurial Failures | Individual for all graduate students | Not required | 100 | 
Total Points Possible | 800 | 1,000 | 

**Mid-term and Final Team Member Participation Evaluations.** Students are required to submit mid-term and final team member evaluations rating the contributions of themselves and their team members to the team assignments. Submitting these evaluations late or not submitting them at all can result in the loss of 20 points for each one towards the final point total. Failing to include an evaluation of your own contribution can result in a 5 point reduction from your final point total.

In addition, if, in the sole discretion of the instructor, a student is not contributing acceptably to his/her team, the instructor reserves the right to lower an individual student’s grade for any and all team assignments to a degree that the instructor in his/her sole discretion feels appropriate to reflect the lack of contribution of the student to team assignment(s).

**Grading Policy:**
For all students, final course grades will be determined by dividing the number of points that the student has earned by the Total Points Possible for all assignments as given above (student total weighted class score) and applying the following Grading Scale:

<table>
<thead>
<tr>
<th>Percent</th>
<th>Grade</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>93.4 - 100</td>
<td>A</td>
<td>4.00</td>
</tr>
<tr>
<td>90.0 - 93.3</td>
<td>A-</td>
<td>3.67</td>
</tr>
<tr>
<td>86.7 - 89.9</td>
<td>B+</td>
<td>3.33</td>
</tr>
<tr>
<td>83.4 - 86.6</td>
<td>B</td>
<td>3.00</td>
</tr>
<tr>
<td>80.0 - 83.3</td>
<td>B-</td>
<td>2.67</td>
</tr>
<tr>
<td>76.7 - 79.9</td>
<td>C+</td>
<td>2.33</td>
</tr>
<tr>
<td>73.4 - 76.6</td>
<td>C</td>
<td>2.00</td>
</tr>
<tr>
<td>70.0 - 73.3</td>
<td>C-</td>
<td>1.67</td>
</tr>
<tr>
<td>66.7 - 69.9</td>
<td>D+</td>
<td>1.33</td>
</tr>
<tr>
<td>63.4 - 66.6</td>
<td>D</td>
<td>1.00</td>
</tr>
<tr>
<td>60.0 - 63.3</td>
<td>D-</td>
<td>0.67</td>
</tr>
<tr>
<td>0 - 59.9</td>
<td>E</td>
<td>0.00</td>
</tr>
</tbody>
</table>

More information on the UF grading policy may be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx and http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html.

**Students Requiring Accommodations**
Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, https://www.dso.ufl.edu/drc) by providing appropriate documentation. Once registered, students will receive an accommodation letter.
which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Course Evaluation
Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations using the GatorEvals link in Canvas or by going to https://ufl.bluerica.com/ufl/. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/.

University Honesty Policy
UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs, if any, in this class.

Software Use
All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy
There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html

Commitment to a Safe and Inclusive Learning Environment
The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination.

It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.
If you feel like your performance in class is being impacted by discrimination or harassment of any kind please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- Robin Bielling, Director of Human Resources, 352-392-0903, rbielling@eng.ufl.edu
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@ufl.edu

**Sexual Discrimination, Harassment, Assault, or Violence**

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

**Campus Resources:**

**Health and Wellness**

<table>
<thead>
<tr>
<th><strong>U Matter, We Care:</strong></th>
<th>If you or a friend is in distress, please contact <a href="mailto:umatter@ufl.edu">umatter@ufl.edu</a> or 352 392-1575 so that a team member can reach out to the student.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Counseling and Wellness Center:</strong></td>
<td><a href="http://www.counseling.ufl.edu/cwc">http://www.counseling.ufl.edu/cwc</a>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.</td>
</tr>
<tr>
<td><strong>Sexual Assault Recovery Services (SARS)</strong></td>
<td>Student Health Care Center, 392-1161.</td>
</tr>
<tr>
<td><strong>University Police Department</strong></td>
<td>at 392-1111 (or 9-1-1 for emergencies), or <a href="http://www.police.ufl.edu/">http://www.police.ufl.edu/</a>.</td>
</tr>
</tbody>
</table>

**Academic Resources**

| **E-learning technical support**, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. | https://lss.at.ufl.edu/help.shtml. |
| **Library Support**, http://cms.uflib.ufl.edu/ask. | Various ways to receive assistance with respect to using the libraries or finding resources. |
| **Teaching Center**, Broward Hall, 392-2010 or 392-6420. | General study skills and tutoring. https://teachingcenter.ufl.edu/. |
Student Complaints Campus:  