Course Description
This course will focus on introducing engineering students to the many opportunities and challenges that accompany starting and operating an entrepreneurial venture.

Catalog Description
This course explores the fundamentals of entrepreneurship, with an emphasis on principles suitable for undergraduate engineering students.

Course Pre-Requisites
Enrolled as a graduate student in the Fulton School of Engineering at Arizona State University.

Educational Objectives
Upon completion of this course, you should be able to:

- Envision yourself as an entrepreneur or as someone who contributes value to an entrepreneurial venture.
- Understand the many ways of being involved in entrepreneurial ventures.
- Think about business opportunities as they pertain to your career path and technical strengths.
- Understand the role of technology and intellectual property in the creation of a technology venture.
- Understand the importance of engaging stakeholders and, especially, of customer development in the venture creation cycle.
- Think through all aspects of a technology venture’s business model, plan and presentation.
- Prepare basic Proforma financial statements.
- Identify sources of capital for new ventures.

About Your Instructor
Dan O’Neill is the lead instructor for the course. He is Lecturer in the College of Technology and Innovation on the Arizona State University Polytechnic campus where he is Program Director of the Technology Entrepreneurship and Management degree program. Prior to this role he was Director of Venture Acceleration for the ASU Office of Knowledge Enterprise Development. In these roles, Mr. O’Neill has has taught, coached, mentored, advised and provided venture development services for hundreds of early-stage innovators and entrepreneurs from around the globe. Mr. O’Neill teaches entrepreneurship courses in the ASU Ira A. Fulton School of Engineering, the ASU Polytechnic College of Technology Innovation, and the ASU American Indian Studies program. Prior to ASU, Mr. O’Neill co-founded and ran Hologix, an enterprise software company backed by $25 million of venture capital. Mr. O’Neill began his career as a Marketing Representative for IBM in 1980 after graduating from ASU with degree in Math and Computer Science. Mr. O’Neill is Past President of the Board of Trustees of Childsplay, Arizona's professional theatre for young audiences, which recently completed an $8 million capital campaign.

Mr. O’Neill is joined in instruction by Larry Lunetta, a successful technology entrepreneur and executive who is also an alumni of the ASU Fulton School of Engineering, Eric Menkos, a professor in the ASU Sandra Day O’Conner College of Law where he instructs the Innovation Advancement Program (http://www.law.asu.edu/tvg/InnovationAdvancementProgram.aspx) and a growing number of technology entrepreneurs and executives who join the class via videotaped interviews and guest lectures.

Educational Approach
Team Work: Business Model
As has been often observed, entrepreneurship is a team sport. Much of the work you do will be in the context of a team. In the first two weeks, you will self-organize into teams of 1 to 4. We have found that it is often very difficult for online engineering graduate students, many of whom work full time, to form into teams and coordinate the meeting schedules of 4 professionals. So, you may work in any size team up
to 4, including a team of 1. The caveat is that, whatever the team size you decide on, ALL of the team work must be done. It is a fair amount of work for one or two people to do, but it can be done. The one bonus of working as a team of 1, is that you can make your Edson proposal and your team project the same, so that you are not developing two ideas.

In the third and fourth week, the teams will select an opportunity for which to develop a business model, plan and presentation over the course of the semester. If you form into a team of greater than 1, you are expected to collaborate in-person and/or virtually with your teammates using tools such as Skype, tokbok, VuRoom and GoogleDocs. You are expected to collaborate in-person and/or virtually using tools such as Skype, Vidyo, Google Docs, and our ASU Mentor Network System. You are welcome to use whatever other collaborative tools make sense to your team. You are also more than welcome to meet in person as you can, though that is not a requirement. Having said that, we highly recommend that you attempt to have as many in-person meetings as you can. It’s the best way to build a team and get work done. It is equally important to learn to work virtually, so try to combine the two approaches.

The end goal of the team work is to develop a sound business model to deliver on the opportunity the team has identified. The majority of the team work is focused on doing a set of one-page exercises that help you to think through the many aspects of the business model. These exercises are due each week by Sunday midnight of the week in which they are assigned.

The aspects of the business model are then put into a few story forms: elevator speech, 12-minute presentation, executive summary, 5-year Proforma financials and team Edson proposal. At the end of the semester, the presentation is to be recorded and loaded to YouTube or some similar website. All team members are expected to participate. The executive summary and financials are to be submitted electronically. As with the individual Edson proposal, the Team Edson proposal must follow Edson guidelines (http://studentventures.asu.edu). See the weekly outline for further information.

By the time your team has decided on an opportunity, your team will have a mentor assigned to it. The mentors come from a growing database of mentors in our ASU Mentor Network. All are very experienced entrepreneurs, executives and/or business people. We administer the mentoring process with an online mentor system that enables teams to connect with mentors in a virtual, asynchronous manner. You will be invited to the system and connected to a mentor via the system. You are expected to make use of your mentors for input into your information seeking and decision making processes. You are expected to make use of the system. The system is NOT intended to replace face-to-face meetings with virtual meetings. How and when you meet is up to you and your mentor. Most typically, your team and your mentor may choose to meet in person a few to a handful of times during the semester, conducting the rest of your interactions through the ASU Mentor Network system.

The purpose of the mentors are not to QA your homework. That is the role of the course instructors and facilitators. The role of the mentor is to provide technology venture advice and guidance. The best way to work with your mentor is through presentations and Q&A. To this end, 5 short video presentations that represent the major deliverables of a business model are required through the semester. The mentor can look at the videos, or watch you give them in person, and then comment on the quality of thinking behind those major deliverables. When you trim them up and put them together, you will have the final 12-minute presentation. So, all of the team exercises and short presentations build toward the final deliverables.

One word on stakeholder, especially customer, interviews: the greatest mistake engineers most often make in the development of new technology-based products and service is to not interact with the market, especially with customers, soon enough or often enough. It is absolutely critical to this class that you “get out of the building” by doing real interviews with real potential customers. It will change the way you think about the business model you are developing. Interact with potential customers, partners, investors and other key stakeholders early and often. It is the key to success.

You will find the weekly outline document on the course Blackboard site under the Course Information heading. Please read through this document so you can better understand what to expect over the course of the semester. There are many requirements with weekly deadlines, so please manage your time to ensure you are able to receive full credit for all of your work. There is a significant amount of material that will need to be completed over these next few months. This online course includes many
individual and team-based assignments. By the end of the first week, you must introduce yourselves to each other and begin choosing teams based on interests and availability. By the end of the fourth week, your team must choose an opportunity area to address with a new business model. At the conclusion of the course each team is required to film a 12-minute business pitch with their team.

Individually, you will produce an Edson project proposal (http://studentventues.asu.edu). You will take a number of simple, open-book quizzes that are intended to reinforce the materials in the readings, lectures and videos. You will also be graded on how well you work as a team member and how well you interact with your mentor, who will be assigned to your team within the first four weeks of the class.

During this course you will be assigned various reading assignments, online video viewings, homework assignments, and projects that can be completed in your own time (as long as you meet the deadlines). We will be using a variety of tools for this class that you may or may not be familiar with. Please see the following pages of this document for helpful information and tips.

Each week of the semester is a session. The week and session begin Thursday at 12:00 a.m. and end Wednesday at 11:59 p.m. See the Weekly Outline for the week/session mapping. All of the materials for that week/session are made available on Blackboard as of the beginning of the week (Thursday) in which they are due. All of the related material (assignments, reading, quizzes, etc.) are outlined in the “FSE 501 Fall 2011 Weekly Outline” document posted on the Blackboard site. Generally speaking, on or before Thursday of each week the online assignments and quizzes for that week’s topics will be posted. Assignments, including quizzes, are due by 11:59pm of the Wednesday of the week, unless otherwise noted.

Required Texts
You must have all three of the required texts. They are not available through the ASU bookstore. The Ryan and Swanson-Baird books are available online through internet bookstores. The Enable Ventures Supercoach® Entrepreneurial Training workbook is available through a page of the Venture Catalyst at ASU website that is not generally available to all users. The link to purchase the Supercoach® workbook is listed in the Course Information section of the course Blackboard site, as well as below. Your purchase of the workbook is how we pay the license fee for the materials. It is also how we fulfill our license IP obligations to Enable Ventures and how they, in turn, fulfill theirs to their content providers. You MUST purchase the workbook new. Please do so early in the semester. You will need to log-in to the system, create a profile, purchase the book and we will ship it to you. Make sure you give us the correct shipping address.


Required Tools
Blackboard [http://myasucourses.asu.edu]
Our Blackboard course site will be our primary mode of communication and will be used for accessing online lectures, discussion postings, grade management, and any other communication the instructors have for you. The Blackboard Discussion Board is one way you can seek help from the instructors. Discussion Board forums will be used primarily to answer common questions and have an open discussion. If you have a question or comment on a particular session, post it under the forum for that session.

YouTube [http://www.youtube.com] or some similar site: Throughout the semester and at the end of it, you will be required to post videos to YouTube or a similar site to share with your instructors and mentors.
Each team must have the capability to film and post a video. If you do not have a camera, please make arrangements to borrow a camera for this component of the class. If you cannot make other arrangements, you may schedule time to come to ASU SkySong during to use a video camera. Posting to YouTube requires a personal Google (Gmail) account, separate from your ASU Gmail account. For class assignments, you must set your videos as public, for the duration of the semester, so that your classmates can see them. If you have concerns about posting material for anyone (and potentially everyone) to see, please discuss this with me. If you have other questions, please ask me. If you are unfamiliar with posting to YouTube, visit: http://www.wikihow.com/Upload-a-Video-to-YouTube

Optional Tools

Vidyo [http://www.aaa.com]: Vidyo is a new videoconferencing tool that ASU is piloting this summer. It can accommodate lots of people in virtual videoconference “rooms” that are of very high quality video and interaction. If all goes according to roll out plans, each team in FSE 301 will be offered a Vidyo room for use during the semester. Use of Vidyo requires downloading a plug-in. We will be providing you with more information on how to use Vidyo when it becomes available for class use.

ASU Google Docs [http://docs.asu.edu]: You may wish to use Google Docs as a way of collaborating on documents with your peers. You can share files with them to collaborate (edit) or just read (view). All ASU students already have an ASU Google Docs account, separate from their personal Gmail account. How to Use Google Docs: http://www.youtube.com/watch?v=eRqUE6IHTEA

Blackboard Groups [http://myasucourses.asu.edu]
You may want to explore the Group functions of Blackboard. Blackboard has some pretty good collaboration functionality. When you have formed into teams, you will probably want to have some collaborative site for exchanging documents, having discussions, and doing other work in a collaborative manner. Try the Blackboard Group site for your team.

Blackboard [http://myasucourses.asu.edu]
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Grading
All homework assignments and exams will use a 1000 point grading scale, in which a points are equal. Grades of 900 points and above are equivalent to an A, 800 points and above equivalent to a B, and so on. Grades below 600 points are considered F. The grading scheme is as follows:

- Team Exercises 200 points (20%)
- Team Final Deliverables 200 points (20%)
- Working as a Team Member 200 points (20%)
- Individual Quizzes 200 points (20%)
- Individual Project 200 points (20%)
- Extra Credit Available for various assignments throughout the semester

The following are the grading brackets for the final grade, based on the above 1,000 point system:

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<th>Points</th>
<th>Percentage</th>
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<tr>
<td>A+</td>
<td>970 – 1000</td>
<td>&gt;= 97%</td>
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<tr>
<td>A</td>
<td>930 - 969</td>
<td>93.0% to 96.9%</td>
</tr>
<tr>
<td>A-</td>
<td>900 - 929</td>
<td>90.0% to 92.9%</td>
</tr>
<tr>
<td>B+</td>
<td>870 - 899</td>
<td>87.0% to 89.9%</td>
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<tr>
<td>B</td>
<td>830 - 869</td>
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<td>B-</td>
<td>800 - 829</td>
<td>80.0% to 82.9%</td>
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<td>C+</td>
<td>770 - 799</td>
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**Teams and Teamwork.** Teamwork consists primarily of working on a new venture as a team. Students will organize into 4 person teams by the end of the first week or two, and will collaborate in person and/or virtually. By the end of the fourth week, teams will select an opportunity to address with a new venture from one of three sources: 1) one or more students on the team may have a technology or idea s/he wishes to explore and the team becomes convinced that it is an opportunity worth pursuing over the course of the semester, or 2) an opportunity will be identified through a team process of brainstorming and analyzing opportunities during the third and fourth weeks of class.

**Team Exercises (200 points):** Each team must complete the exercises by the date specified to receive credit. Exercises are worth 10 points. Both level of effort and quality of work will be taken into consideration when scoring each exercise.

**Team Final Deliverables (200 points):** Each team will develop a set of final venture business model deliverables. They include a final presentation, executive summary, Proforma (forward-looking) financials and team Edson proposal. The most important of these deliverables is the final presentation, which is full expression of your envisioned business model. You will build up to the final presentation over the course of the semester by creating five shorter presentations of five minutes in length, each of which explore a major aspect of the business model as you develop it.

**Teamwork (200 points):** Team members will evaluate one another at the end of the semester based on their contribution and attitude as team members. Course instructors will then assign student a teamwork score of 0-100 points based on the feedback from their team members and instructor observations of team function and health throughout the semester.

The other 100 points for teamwork will be assigned based on mentor feedback. Each team will be assigned a mentor within the first four weeks of the class. Mentors are experienced technology entrepreneurs and executives. The primary purpose of the mentor is to provide your team with a “been there, done that” technology venture experience. Your mentor can provide you with practical business and technology guidance. You are expected to make good use of your mentor. Your team is expected to review each of its five presentation segments, the “dry run” of the final presentation and the final presentation with your mentor. Mentors will evaluate the team and each of the team members on how well the team engaged with them. Instructors will then assign a score of 0-100 points based on the feedback from the mentor and observations of the mentor relationship throughout the semester.

If you are a team of 1, all 200 points of the Teamwork score will be based on your use of your mentor.

**Individual Work.** Individual work consists of quizzes and an individual Edson proposal project.

**Quizzes (200 points):** Quizzes will be given frequently throughout the semester. They are intended to reinforce what you learn from the readings, lectures and videos. The 10 quizzes generally consist of 10 questions worth 2 points each.

**Individual Edson Project (200 points):** The individual project is your chance to explore an idea that is solely your own, independently of any team members. If you have a unique idea, market opportunity or technology that you do not wish to expose to the rest of the class or outside world, do not propose it as a team project. Use it as the basis of your individual project. The project proposal will take the form of a proposal to the Edson Student Entrepreneur Initiative [http://studentventures.asu.edu/]. Each individual will develop an Edson proposal in four parts, as well as a final draft. See the Weekly Outline for due dates. The Edson proposal will be finished in time for submission to the Edson competition in the spring of 2012. The submission deadline will be around the first of April. See the Edson site above for the actual calendar.

You will choose a venture idea (product or service) during the second week of class and you will use that idea throughout the course. The format of the final individual project (due at the end of the term) is the ASU Edson format. Your individual project will need to meet all of the requirements listed. Some sections you will write regarding future plans rather than things that you have already accomplished. Please note that the questions posed on this link are the questions that will be used to grade your project. The Edson Proposal will proceed in 6 steps: an abstract, the four parts, and a final draft, as follows:
Edson Proposal Abstract: Reflect on the team exercise of Opportunity Identification and Analysis. Select an opportunity that appeals to you. Write an “elevator speech” about the opportunity and why you can uniquely address it. This will be the basis of your Edson proposal.

Edson Proposal Part 1: Business Concept and Strategy
- What is your business/product/service idea? How does it work?
- What market need does your venture fulfill or create?
- How will your venture solve the need/problem it seeks to address?
- What activities will lead to the advancement of your venture’s stated purpose?
- What legal protections might your product/service need? What legal entity might you establish? Why?
- Ensure your concept proposal is well-written, clear and consistent, and is it free of spelling and grammatical errors!

Edson Proposal Part 2: Marketing Strategy
- Who are your competitors and who are some potential alliance partners?
- How will you get your products/services to the market?
- Explain your understanding of the market size and structure, and how much of the market your venture plans to capture. Where did you get this information? What else could you research in the future to better understand your market?

Edson Proposal Part 3: Management Team and Qualifications
- Who is on the team?
- Have you considered team members from multiple disciplines?
- What are the qualifications of the team members to build the venture?
- Have team members taken entrepreneurial courses or had entrepreneurial experiences?
- Mentor(s) and Advisor(s)
- Has the team developed relationships with one or more business mentor(s)?
- If so, who are they and what are their qualifications?
- Has the team developed an advisory board?
- If so, who is on it and what are their qualifications?

Edson Proposal Part 4:
- Milestones.
  - Determine the steps you will take over the next year to move your venture forward, assuming you were to win an Edson Student Entrepreneur award that you request.
  - The Milestone plan should be in sync with the Budget & Uses of Capital below.
- Budget & Uses of Capital
  - With the information gathered above, create a budget for the first year that reflects an understanding of the true costs of the proposed activities.
  - What other resources do you have that are not on the budget (i.e. bootstrapping resources such as your own time and expertise, your parent’s garage as office space, etc.)?
- Sustainability / Potential for Return on Investment.
  - Does the venture plan include funding from potential partners, investors, and/or revenue from customers)?
  - If the venture is successful, explain what the financial and/or social impact will be?
  - Does the venture plan to obtain non-Edson funding (e.g. grants from foundations, government [SBIR/STTR program], and how would it factor into the overall budget?

Edson Proposal Final:
- FINAL PROJECT – Complete all remaining sections (management team, sustainability and anything else you find helpful and valuable to your proposal) and make any necessary updates to previous sections. Should be 7 – 10 pages in length
- Have someone proofread your document for grammar, spelling, and general flow of writing!
SPECIAL NOTE: All homework assignments are due on the date specified, generally by the end of the day Wednesday of the week they are assigned, with a few exceptions noted in the assignments. Only computer copies will be accepted. They are to be delivered via the assignment submission functions of Blackboard. No hardcopies will be accepted.

Reasonable Accommodations
ASU adheres to all applicable federal, state, local laws, regulations and guidelines with respect to providing reasonable accommodations for students with disabilities. Students with disabilities should register with Disabled Student Services and contact their instructor(s) in a timely manner to arrange for appropriate accommodations.