Overview

The purpose of this guided study entrepreneurship course is to participate in the 2013-2014 Duke Case Competition. The Duke Competition requirements are described separately.

Learning Objectives

- Identify, select and describe specific ways to improve and sustain the environment in a substantive and systemic manner by effectively utilizing energy resources.
- Work effectively in teams and make effective arguments to business executives.
- Apply the three innovation criteria (business viability, people desirability and technology feasibility) using a guided process to achieve a successful implementation of an innovative project that demonstrates cost effective use of energy resources.
- Analyze the customer and business needs and trends, prepare a strategy document and a working model.

Expectations

All students are expected to complete the Stage 1 Strategic Plan and the Stage 2 Prototype deliverables for the entire competition.

The winning team from UC will compete against the winning teams from MU and IU.

The winning UC team and the runner-up UC teams will continue till the conclusion of the competition.

All team members must be recognized as good team members by peer evaluation.
**Team Participation Peer Evaluation**

There will be a peer review to assess team participation that will be determined according to the following guidelines:

<table>
<thead>
<tr>
<th>Points</th>
<th>Evaluation Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100</td>
<td>Exceptional Teamwork</td>
</tr>
<tr>
<td>80-90</td>
<td>Good Teamwork</td>
</tr>
<tr>
<td>70-80</td>
<td>Average Teamwork</td>
</tr>
<tr>
<td>60-70</td>
<td>Limited Teamwork</td>
</tr>
<tr>
<td>0</td>
<td>No Teamwork</td>
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</tbody>
</table>

Students will assign each teammate a score ranging from 0-100. The average of the peer evaluations (from all of an individual’s teammates) will be used as follows:

- Average peer evaluation between 100 and 90: No penalty.
- Average peer evaluation below 90: the grade of the individual for that assignment will be multiplied by the factor indicated in the average. For example, if the average peer evaluation is 80 in the project, the total project grade will be multiplied by 0.80 (a penalty of 20% of the grade for that individual).

Points will be deducted from a person when more than one of his/her teammates gives him/her a low evaluation. In other words, evaluations must be consistent and the average below 90 for the person to have points deducted.

The peer evaluations may impact a student’s course grade either positively or negatively depending on an individual’s performance on the team.

**Grading Scale**

The standard university grades for undergraduate and graduates will be used including the pluses and minuses described in the following:

http://www.uc.edu/registrar/faculty_resources/grading_scales.html
**Total Evaluation**

The students will be evaluated based on how effectively the required deliverables are prepared by the team to meet or exceed the three innovation criteria.

- Consumer (people) desirability: the results must fulfill the customer’s needs in a meaningful way.
- Business viability: the result must add value and be financially viable.
- Technical feasibility: the result must be technically and organizationally feasible.

All students are expected to complete all of the deliverables, continue till the conclusion of the competition and be recognized as at least good team members by peer evaluation.

**Full Participation Fall and Spring Semesters**

All students are expected to fully participate in both semesters and complete the Stage 1 Strategic Plan and the Stage 2 Prototype deliverables for the entire competition. All team members must be recognized as good team members by peer evaluation.

- Fall registrants will receive an in progress - satisfactory progress (SP) grade if they meet expectations and a letter grade in the Spring.
- Spring registrants will receive a letter grade if they meet the expectations.

**Registration**

Registration instructions are described separately. The following are important topics.

- ENTR6099 is approved as an elective course in the UG entrepreneurship major and minor
- Team members are expected to earn two or three credit hours of elective (graduate or undergraduate) course credit.

**Team Meetings:**

Each of the teams is expected to meet separately on a weekly basis to report progress and to prepare the deliverables. Team leaders need to provide weekly progress reports.

**Graduate Students**

Graduate students will be expected to perform at a high level and demonstrate leadership to the other team members.
**MBA Capstone Evaluation**

MBA graduate students intending to use the Duke competition as a Capstone must have declared this early in the competition. This is documented on the student roster. MBA students must meet the course expectations. In addition, at the conclusion of the competition the students will complete a short narrative that describes their contribution to the project, summarizes their learning in the competition, and assesses the team's performance in the competition on relevant criteria. Based on peer reviews, the narrative, and the Duke Deliverables the student must earn a PASS from the instructor and a second reader.

**Typical MBA Capstone Outline**

For the MBA Capstone requirement the final report format will vary depending on the strategic issues identified for analysis, but will usually include the following:

1) Industry and Market Analyses  
2) Competitive and Competitor analyses  
3) Organizational and Financial Analyses  
4) Strategic Issues, Alternatives and Recommendations  
5) Implementation Plan

Typical analyses and content in each area:

- **Industry Analysis**  
  - Industry description  
  - Forces driving change analysis  
  - Industry key success factors

- **Competitive and Competitor analyses**  
  - Five Forces analysis  
  - Competitor descriptions, strategic approach and market position (segment analysis)  
  - Strategic group analysis  
  - Competitive strength assessment

- **Organization Analysis**  
  - Firm analysis including strategic approach, mission statement, objectives, value proposition and market position  
  - Financial analysis of the firm

- **Key findings from external and internal analyses**  
  - SWOT analysis

- **List of key strategic issues**

- **Strategic alternatives**

- **Recommendations that address the identified major issues**

- **Implementation suggestions addressing key resources (people and capital), functional plans and significant leadership or culture issues.**

The outline for the final project may vary depending on student preferences, but it’s expected all of the above analyses will be conducted and the findings used to develop your strategic agenda and recommendations.
Student Administration

General

Your engagement is critical. Attendance will be recorded as well as late arrivals or early departures. Be resourceful and network with classmates to obtain materials you miss. Be professional! – Plan ahead to avoid last minute glitches (like faulty printers) and to avoid receiving a zero on any late or missed assignment. No cell phones in class except for emergencies. Cell phones cause disruptions and reduce the ability of you and others to fully engage. Laptops can be tools or distractions. Be courteous of the ways it distracts you and peers. This course is your responsibility. Changes to the schedule or syllabus will be announced as far in advance as possible. Be sure to check the course Blackboard site for updates.

Academic Integrity

Academic dishonesty as defined by University policy (e.g., plagiarizing, cheating, etc.) will not be tolerated in any form. The University Rules, including the Student Code of Conduct, and other documented policies of the department, college, and university related to academic integrity will be enforced. Any violation of these regulations, including acts of plagiarism or cheating, will be dealt with on an individual basis according to the severity of the misconduct.

As with all Lindner College of Business efforts, this course will uphold the highest ethical standards, critical to building character. Ensuring your integrity is vital and your responsibility. LCB instructors are required to report ANY incident of academic misconduct (e.g., cheating, plagiarism) to the college review process, which could result in severe consequences, including potential dismissal from the college.

For further information on Academic Misconduct or related university policies and procedures, please see the UC Code of Conduct (http://www.uc.edu/conduct/Code_of_Conduct.html).

Cellphones, Tablets, Laptops and Smartphones

You are expected to turn off cellphones, laptops, tablets and smartphones because they are distracting to the purpose of this course. The digital world will be there after class.

Withdrawal/drop

According to University policy, you must drop the course by specific dates published by the Office of the Registrar in order for it not to appear on your academic record.

Cancelled classes

If the University cancels classes on a regularly scheduled class day, any assignments will be due at the next regularly scheduled class. The University will notify the students if a cancelation occurs.
Incomplete

Incompletees will not be given. If you do not complete all of the course requirements, you will be assigned the letter grade corresponding to your contribution and the peer evaluation.

Extra credit

No extra credit assignments or projects will be given under any circumstances in this course.

Grade appeals

If you have a concern about a grade that you receive in this class, you are invited to submit a written appeal within one week of receiving the grade in question to the instructor. The appeal should outline your specific concerns with the grade and provide evidence supporting why the grade should be changed. The instructor will then review your appeal and respond as quickly as possible.

Special needs policy

If you have any special needs related to your participation in this course, including identified visual impairment, hearing impairment, physical impairment, communication disorder, and/or specific learning disability that might influence your performance in this course, you should meet with the instructor at the beginning of the course (first week) to arrange for reasonable provisions to ensure an equitable opportunity to meet all of the requirements of this course. Any accommodations will require prior approval by Disability Services.
Eco-Architecture

Dashboard (Business Viability)
University of Cincinnati
- Inter-University
- University
- College
- Department
- Personalization

Resource (Technology Infrastructure) Sources
- Water
- Electrical
  - Central Utility Plant
  - Smart Grid
- Natural Gas
- Gasoline
- Renewables (Wind, Solar)

Resource (Consumption) Uses
- Food, Packaging
- Smart Appliances
- Electrical Devices
- Transportation
- Data Center
- HVAC (Buildings and Dorms)

Figure 1
**Process**

**Design Thinking**

The project team will use Design Thinking for the Innovation Team Project. The iterative three spaces of innovation are as follows:


The HCD Toolkit will be used as the framework to guide the design process. The Human Centered Design Toolkit, IDEO, 2nd Edition, 2011 was the result of a project funded by the Bill and Melinda Gates Foundation (BMGF) that is available on Blackboard and at the following location: [http://www.ideo.com/work/human-centered-design-toolkit/](http://www.ideo.com/work/human-centered-design-toolkit/)

**Human Centered Design**

The project team will use Human Centered Design which is a complementary approach to design thinking.

- **Hear (inspiration)**
  - “During the Hear phase, your Design Team will collect stories and inspiration from people. You will prepare for and conduct field research.”

- **Create (ideation)**
  - “In the Create phase, you will work together in a workshop format to translate what you heard from people into frameworks, opportunities, solutions, and prototypes. During this phase you will move together from concrete to more abstract thinking in identifying themes and opportunities, and then back to the concrete with solutions and prototypes.”

- **Deliver (implementation)**
  - “The Deliver phase will begin to realize your solutions through rapid revenue and cost modeling, capability assessment, and implementation planning. This will help you launch new solutions into the world.”
Guided Study Entrepreneurship:
13FS and 14SS ENTR6099

Acknowledgement: "An Introduction to Design Thinking PROCESS GUIDE," Institute of Design At Stanford

Figure 2 ²
Innovation Criteria

The innovation team project will incorporate design thinking and needs to address the following three innovation criteria:

- **Consumer (people) desirability**
  - What do people desire?
  - What are the unmet and latent needs?

- **Business viability**
  - What is the business model, will it add value?
  - What can be financially viable?

- **Technical feasibility**
  - What is technically and organizationally feasible?
  - Will it work? build a prototype

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**Figure 3**

Design Thinking, Kelly, Brown
Suggested Topics and Questions Regarding the Competition

Consumer Desirability

- What measurements can be created to motivate consumers to use their energy more efficiently?
- How do you increase the consumer awareness such that there is a measurable outcome?
- What are the customer unmet and latent needs?
- How can the compelling story be explained to consumers (residential and business)?
- How do you get customers to understand their energy usage?
- How do you explain to customers what actions they need to take?
- How do you get the customer to take explicit actions that will improve their energy usage?
- How do you create an energy system where usage is shifted to time periods of low demand and low cost? By shifting usage away from peak periods, the capital costs of building new power plants can be avoided ultimately resulting in lower energy prices.
- How can the compelling story about the sustainability be implemented?
- How can the compelling story about the sustainability be explained to consumers (residential and business) and (this is not an explicit deliverable of this project) provided to K-12 educational institutions? Active interaction engagement is one option.

Business Viability

- What needs to be done to provide a viable strategy?
- What are the implications on the current energy business model? Because energy efficiency will likely reduce energy revenue, the cost recovery from the public utility commissions for expenditures of appropriate critical infrastructure needs to be protected.
- Ohio mandates include but are not limited to the following: “The 2008 law mandates least 25 percent of all electricity sold in the state by 2025 come from alternative energy, of which half must come from renewable sources like solar, wind, hydropower, geothermal or biomass. The remaining half can be met through other ways, such as energy-efficiency programs, clean coal technology or fuel cells.”
- What is the future business model that can accommodate change due to decreased use of energy and thereby reduced revenue streams?
Technology Feasibility

- What is the technological feasibility of how smart appliances, smart digital meters and the smart grid can be integrated to improve energy utilization?
- How can open systems be addressed and the need for data standardization and retrieval between power producers and customers?
- HVAC, water heating, pool pumps and electric vehicles will be the focus on energy efficiency because these devices represent the majority of usage in contrast to lighting.
- There are multiple technologies that can be used to add intelligence to the management of residence and business energy. This generally means that there would be a two-way flow. This works when current flows to the device and a digital signal is sent back to a residence or business network device that provides the usage. The following are some examples:
  - Add an intelligent thermostat such as the Nest learning thermostat.
  - Add a networking device to each energy appliance.
  - Purchase an appliance with the networking device built-in.
  - In the breaker box (digital meter), add breakers that can detect usage
  - Use a current sensor device that detects electrical current (AC or DC) in a wire, and generates a proportional signal of usage information.
- In-home power usage can be linked to smart thermostats and appliances to regulate energy use over periods of low and peak demands, thereby reducing the need for power companies to use secondary generators.
- Open systems need to be encouraged for broader interest amongst third party developments.
- The smart grid enables two-way communications to a residence or business. The current flows toward the residence or business and a signal is sent back to a network node that is managing 5-7 users. The digital usage signal is relayed wirelessly back to a central location.
STUDENT DATA FORM
Guided Study Entrepreneurship

Date_________________

Name_______________________________________________________ M#____________________

  First          MI          Last

Major/Concentration__________________________________________

Address_____________________________________________________________________________

  Street               Apt

  City               State

  Zip

Work Phone______________________ Home Phone____________________ ________________

(Area Code)  (Area Code)

Email____________________________________  Cell Phone_____________________________

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(Area Code)

Full- and Part-time work experience (job title, brief description):

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Endnotes


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