Course Description:

Students will work in teams developing sustainable business and technical solutions to address an environmental or social challenge in India. Teams may address a challenge related to water supply, energy availability, food/agriculture production or distribution/marketing. During the semester a product or service must be designed, and a sustainable business model must be created around it.

Typical UMN team size is 4-6 students. Each UMN team will be associated with a collaborative team from the Xavier Institute of Management Bhubaneswar (XIMB) in Orissa. Technical and business development professionals based in the US and India will be available as mentors to provide advice to each team. Each team will have one US-based mentor and one India-based mentor. Strong involvement of all team members and communication between UMN and XIMB teams, mentors and outside experts is critical to success.

The teams are expected to use a discovery process, design thinking, ideation and input from field research in solving the challenge. A primary focus of the course is up-front work to identify the "right" problem to solve. Teams must then develop a product or service, and corresponding financially sustainable business model for delivery of the product or service. A sustainable business model means the venture delivering the product or service can do so by generating revenue. The business model could be either for-profit or non-profit, but in either case the same evaluation criteria would be used. The model should be built around the customer's needs and wants, as they will need to pay for the product or service to achieve a scalable model. Presentations will be required on the preliminary and final solutions. Each team member is expected to participate in the preparation of the business plan and presentation. The final course deliverables will be a well-designed business plan and presentation before a panel of business professionals.

Students must be graduate students or advanced undergraduates. There are no prerequisites, other than a strong interest in the topic. Instructor permission is required to register for the course.

Required Reading:


Poor Economics by Abhijit Banerjee and Esther Duflo.


Other, shorter, readings will be assigned during the semester.

Recommended Reading:

A collection of relevant readings can be found through dropbox at: https://www.dropbox.com/sh/0fhlypse2b9olt7/5GuyxWNUsE

Teaching Methods:

- In-class presentations by instructors, practicing professionals and other invited speakers.
- Ongoing communication with collaborative teams from XIMB.
- Weekly interaction between mentors and team members.
- Feedback on written documents from instructors and mentors.
- Feedback on oral presentations from instructors, mentors, and audience.
- In-class discussion on written and oral communication of technical material.

Credits and Workload Expectations:

1 credit is defined as equivalent to an average of 3 hours of learning effort per week (over a full semester) necessary for an average student to achieve an average grade in the course. A student taking a 4-credit course should expect to spend at least 12 hours of effort per week. This amount is the minimum effort expected in this course. Thus, a total effort of about 180 to 190 effort hours per students is expected during the semester. You will spend more time as you develop your solutions and business plans. Time must also be spent communicating with your mentors and Indian partner teams.

Educational Objectives:

The course is designed so students will be able to demonstrate

- An ability to apply core knowledge of the student’s major to problems,
- Teamwork skills,
- An ability to identify, formulate, and solve problems,
- Self management skills,
- Leadership skills,
- Inter-cultural skills,
- An understanding of professional and ethical responsibility,
- An ability to communicate effectively, in writing and orally,
- Recognition of the need, and an ability, to engage in life-long learning.
Course Focus:

• Problem Solving:
  o Address a real-world problem.
  o Synthesize knowledge from various courses.
  o Design thinking, discovery and ideation skills.
• Teamwork:
  o Interact with international team members, peers and mentors.
  o Collaborate across disciplines and cultures.
• Communications:
  o Concise, thorough professional report.
  o Concise, thorough, and persuasive oral presentations.
• Project Management:
  o Project planning.
  o Financial planning.
  o Time management.

Final Report:
The final report is a significant effort, and includes a written and an oral portion. The written portion is up to 10 pages, including figures and tables. Appendices outside of the 10 pages are allowed. The report needs to be concise yet provide sufficient detail so that the solution can be demonstrated. The report will be reviewed by instructors and by professionals from outside the University, and will need to make a strong case for the proposed solution.

Technical competence, numerical accuracy, documentation, neatness, organization, timeliness and clarity of presentation will be considered in evaluating students' work.

The oral presentation requires a concise, persuasive pitch to audience members from inside and outside the University.

The oral and written reports must answer, concisely and persuasively, these questions:
1. What problem are you addressing? Why is it important? Why are you passionate about solving it?
2. Why do you think it is a problem, and what evidence do you have? A "problem" is not one to the student, but to the customer or group you wish to engage.
3. What is your solution, and how does it work? What gap or opportunity have you realized? What is the value proposition?
4. Why do you think your solution will work? What evidence do you have? Why hasn’t someone else done it already? Who are your customers and key partners?
5. How will your solution be sustainable and scalable? What is your financial model?

Key Course Dates:
Sept 6, 2013, 9am-noon – Course introduction
Sept 9, 2013, 5pm-7:30pm – Acara Open House (IonE)
Sept 13, 2013, 9am-noon – Team selection
Nov 8, 2013, 9am-noon – Mid-term presentations
December 6, 2013, 9am-noon – Final business plan, grant fund, online business models due
December 13, 2013, 9am-noon – Final presentations

Grading:
The overall course grade will include the following components:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Individual Assignments (4)</td>
<td>10%</td>
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<tr>
<td>Team Evaluation (includes Grunt Fund)</td>
<td>15%</td>
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<tr>
<td>Business Model Canvas Online</td>
<td>10%</td>
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<tr>
<td>India Reviews</td>
<td>10%</td>
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<tr>
<td>Presentations (3: problem, solution, midterm)</td>
<td>20%</td>
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<tr>
<td>Final Plan</td>
<td>25%</td>
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<tr>
<td>Final Presentation</td>
<td>10%</td>
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The University of Minnesota’s Uniform Grading Policy is:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
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<tbody>
<tr>
<td>A</td>
<td>Achievement that is outstanding relative to the level necessary to meet course requirements.</td>
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<tr>
<td>B</td>
<td>Achievement that is significantly above the level necessary to meet course requirements.</td>
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<tr>
<td>C</td>
<td>Achievement that meets the course requirements in every respect.</td>
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<tr>
<td>D</td>
<td>Achievement that is worthy of credit, even though it fails to meet fully the course requirements.</td>
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<tr>
<td>F</td>
<td>Represents failure and signifies that the work was either: 1) completed but at a level not worthy of credit, or 2) not completed and there was no agreement between the student and instructors that the student would be awarded an Incomplete.</td>
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</table>

Miscellaneous grade contributions: attendance, punctuality of document submittals, participation, etc. Attendance at all sessions is mandatory. Participation in class discussions is also required, including reading assigned materials before class (see class schedule). If you cannot make a date, you are required to notify the instructor in advance via email, and to supply a written note from a doctor stating that you were unable to attend class. Late assignments may not be accepted.

This class aims to be a real-world experience in the needs and solutions for sustainable development. The mentors should be treated with respect, as future offerings of the course will depend on their continued involvement to make it a success.

Readings must be done before class, as preparation for that day’s lecture and discussion. Students should read business plans from prior years, available at [http://acara.umn.edu](http://acara.umn.edu) under the Acara Challenge menu listed by year.

A detailed course schedule is attached.
University Policies

Persons with disabilities that require accommodations will be assisted on an individual basis. Contact Disability Services (626-1333) and the instructor in advance to arrange accommodations.

Cheating is not allowed in the course and will not be tolerated. Anyone found cheating will immediately receive a grade of zero on that assignment. If such behavior occurs more than once, the student will receive a grade of F in the class.

Harassment and disruptive and disturbing behavior will not be tolerated; students will be asked to leave immediately if such behavior occurs, as defined in the Student Conduct Code.

Grading:  
http://policy.umn.edu/Policies/Education/Education/GRADINGTRANSCRIPTS.html

Student conduct code:  

Makeup work:  
http://policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html

Student responsibilities:  
http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html

Sexual harassment:  
http://regents.umn.edu/sites/default/files/policies/SexHarassment.pdf

Equity, diversity, equal opportunity and affirmative action:  
http://regents.umn.edu/sites/default/files/policies/Equity_Diversity_EO_AA.pdf

Academic freedom and responsibility:  
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Objective</th>
<th>Lectures</th>
<th>Class Activity</th>
<th>Assigned Work</th>
<th>Assignments Due</th>
<th>Readings due</th>
<th>Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6-Sep</td>
<td>Introduction to Course and Objectives</td>
<td>* Introduction and Overview of the Course.</td>
<td>* Intro to the 4 Challenge areas: Water, Energy, Food, Distribution, including videos of Challenge areas.</td>
<td>* A way to introduce each other (name tag exercise). * FlipGrid video - Poor Economics (what, so what, now what). * Reading Assignment - Read an Acara Business Plan, write a summary. * Read Acara Challenge Handbook.</td>
<td>* Assignments due that day. * A short intro video on FlipGrid.</td>
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<td>What is the objective and description of this week? This syllabus assumes class meetings are once a week, 3 hours a week.</td>
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<td>2</td>
<td>13-Sep</td>
<td>Team Selection and Discovery Process</td>
<td>Framework for starting (create the question, how to look for answers). Discovery Process - Toby Nord Social Venture Case studies - models that work.</td>
<td>* Team selection, * Mentor selection. * Give students the interview template for their India teammates and mentors. * Team meeting</td>
<td>* Set up and have the first interviews with India students and mentor(s). * Set up a Grunt Fund for each team. * Set up the Business Model Canvas online for each team. * Read an Acara Plan, write a summary. * FlipGrid video - Poor Economics</td>
<td>* Challenge choice ranking, and potential teammates, due end of day on Wednesday prior to class. * FlipGrid video discussing Poor Economics reading Ch 1. (what, so what, now what) * Acara Business Plan review. * Acara Student Handbook * Poor Economics (Beginning - Ch1, page 18) * One Acara Business Plan.</td>
<td></td>
<td>The objective of this week is to introduce the concept of design thinking. Since students are not doing primary design research, they should get some guidance on how to do reflective secondary research and how to assess input they get from India.</td>
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<td>3</td>
<td>20-Sep</td>
<td>High Level Ideation</td>
<td>Insight Sharing- Toby Nord Design activity (structured and facilitated).</td>
<td></td>
<td>* Read and Create a summary of one previous Acara plan. * FlipGrid video - Poor Economics</td>
<td>* BMC online set up * FlipGrid video discussing Poor Economics reading Ch 2-5 (what, so what, now what) * Acara Plan Summary * Poor Economics (Ch 2-5, pp 19-132) * One Acara Plan</td>
<td></td>
<td>Teams will be assigned based on their choice rankings. Mentors will be selected/assigned and guidelines given for interaction with mentors. Give students a few tools to help with the structure to look at their chosen challenge. Some basic discussion of Poor Economics, and examples of social ventures.</td>
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<td>4</td>
<td>27-Sep</td>
<td>Social Value Proposition</td>
<td>Social Value Proposition</td>
<td>Work session. Define the social value proposition for your idea.</td>
<td>* Create a 5 min presentation of the problem you have identified. * Read value prop canvas material * 1 page summary of a randomized control trial (RCT) for your problem area</td>
<td>* First pass on value proposition canvas * Presentation (5 min) of problem area targeted * 1 page summary of an RCT</td>
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<td>This class is to talk about social value proposition, social impact, and what makes a social venture different from a &quot;regular&quot; venture.</td>
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<td>5</td>
<td>4-Oct</td>
<td>Define a Value Proposition</td>
<td>Value Proposition map (Fred) and Ideation Session (Toby)</td>
<td>Student present their problems they have identified.</td>
<td>* Reading on social value proposition</td>
<td>* Poor Economics (Ch 9 - end, pp 205 - end) * One Acara Plan</td>
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<td>Use their research to begin a value proposition canvas. Describe on what a value proposition is, how to use the empathy map, etc. Ideation session.</td>
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<td>6</td>
<td>11-Oct</td>
<td>Business Models</td>
<td>Review of social venture models.</td>
<td>Creation of online Business Model template. Discussion of problem/solution.</td>
<td>* Create a 5 min presentation on the solution you have identified. * Schedule 2nd interview/review with India</td>
<td>Summary log of interactions with India teammates and mentors.</td>
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<td>Fit in Scott Nelson into one of these weeks.</td>
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<td>7</td>
<td>18-Oct</td>
<td>Business Models</td>
<td>Business Models, Opportunity Analysis Framework - Toby Nord</td>
<td>Work session on BMC</td>
<td>* 5 min presentation of proposed solution.</td>
<td>Business Model Generation (remainder of book)</td>
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<td>This class is an introduction to business models, the business model canvas and its components. Students should have read the Business Model Generation book by this class. The class will focus on the main points of value proposition, market segment and customer relationship.</td>
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<td>8</td>
<td>25-Oct</td>
<td>Effective Presentations and venture pitching - Toby Nord</td>
<td>Effective Presentations and venture pitching - Toby Nord</td>
<td>Work session</td>
<td>* Summary of review with Indian partner team.</td>
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<td>The focus is on making good presentations.</td>
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<tr>
<td>Date</td>
<td>Time/Activity</td>
<td>Description</td>
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<td>10-Nov</td>
<td>Mid Term Presentations</td>
<td>Students give their mid term presentation. Mid term presentation - 15 min</td>
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<td>13-Nov</td>
<td>Practice, Review</td>
<td>Final day of class discussion, practice presentations. Practice presentations. Final Presentation. * Final Business Plan * Final Grunt Fund * Final Business Model Canvas * Summary of final review with India.</td>
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<td>14-Dec</td>
<td>Final Presentations</td>
<td>Students present to external panel. Presentations. Final Presentation - 15 min</td>
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* A speaker about financial considerations for the plan.  
* Mid term presentation to outside group (Carlson Venture MBA students, others). The objective of the mid term is to a) force putting ideas on paper; b) getting substantial feedback from others.  
* Review feedback from mid term panel and others.  
* Final practice presentations, discussion.