

VITA

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HONORS

Alumni Award for Graduate Teaching, College of Business, Chicago, 2010.
Bharat Gaurav (India Pride) Award, India International Friendship Society, Delhi, India, 2010.
International Humanitarian Award, Champaign-Urbana, 2008.
Social Entrepreneurship Award, Innovation Celebration, University of Illinois and Champaign County Economic Development, 2008.
Finalist for Best Paper Award and Article in Best Paper Proceedings, Academy of Management Conference, 2007, Philadelphia.
Faculty Fellow, Academy for Entrepreneurial Leadership, University of Illinois, 2006.
Excellent Instructor, Incomplete List of Excellent Instructors, University of Illinois, Numerous occasions.

EDITORIAL SERVICE

Editor - *Special Issue of Journal of Business Research on Subsistence Marketplaces*, Forthcoming.
Associate Editor - *Journal of Public Policy and Marketing*, 2009-.
Editorial Review Board - *Journal of Consumer Psychology*, 1999-, *Journal of Consumer Research*, 2002-2005, *Journal of Macromarketing*, 2007, *Psychology and Marketing*, 1999-2009.

SELECTED RESEARCH GRANTS - Social Science and Humanities Research Council Grant, Canada, 2007-09; National Collegiate Inventors and Innovators Alliance Grants, 2008, 2006; Association for Consumer Research Grant for Transformative Consumer Research, 2006-07; CIBER Grants, College of Business, University of Illinois, 2001-Present; Academy for Entrepreneurial Leadership Grants, University of Illinois, 2006-Present; National Science Foundation Grant 2002-05.

TEACHING – Measurement and Research Methods/Marketing Research at undergraduate, graduate, and doctoral levels; Courses on Subsistence and Sustainability at graduate and undergraduate levels (<http://www.business.illinois.edu/subsistence/teaching/>)

SOCIAL INITIATIVES – Founder and Director, Marketplace Literacy Project (<http://www.marketplaceliteracy.org>)

SELECTED PUBLICATIONS SINCE 2005

Books

Viswanathan, Madhubalan, S. Gajendiran, and R. Venkatesan (2008), *Enabling Consumer and Entrepreneurial Literacy in Subsistence Marketplaces*, Springer.

Viswanathan, Madhubalan (2005), *Measurement Error and Research Design*, Sage Publications.

Books (Edited)

Tucker, Eric, Madhubalan Viswanathan, and Geoffrey Walford, *Handbook of Measurement*, Forthcoming, Sage Publications.

Rosa, Jose, and Madhubalan Viswanathan (2007), *Product and Market Development for Subsistence Marketplaces: Consumption and Entrepreneurship Beyond Literacy and Resource Barriers*, Advances in International Management Series, Joseph Cheng and Michael Hitt, Series Editors, Elsevier.

Articles in Refereed Journals

Viswanathan, Madhubalan, Jose Antonio Rosa, and Julie Ruth, "Exchanges in Marketing Systems: The Case of Subsistence Consumer Merchants in Chennai, India," *forthcoming, Journal of Marketing*.

Viswanathan, Madhubalan, Anju Seth, Roland Gau, and Avinish Chaturvedi, "Internalizing Social Good Into Business Processes in Subsistence Marketplaces: The Sustainable Market Orientation" *Journal of Macromarketing*, 29, 406 - 425.

Chaturvedi, Avinish, C. Y. Chiu, and Madhubalan Viswanathan (2009), "Bounded Agency and Analytical Thinking among Low Literate Indian Women," *Journal of Cross-Cultural Psychology*, 40 (5), 880-93.

Viswanathan, Madhubalan, Ali Yassine, and John Clarke (2009), "Sustainable Product and Market Development for Subsistence Marketplaces: Creating Educational Initiatives in Radically Challenging Contexts," *Journal of Product Innovation Management*, *forthcoming*.

Viswanathan, Madhubalan, Srinivas Sridharan, Roland Gau, and Robin Ritchie (2009) "Designing Marketplace Literacy Education in Resource-Constrained Contexts: Implications for Public Policy and Marketing," *Journal of Public Policy and Marketing*, 28 (1), 85-94.

Viswanathan, Madhubalan, Lan Xia, Carlos Torelli, and Roland Gau, "Literacy and Consumer Memory," *Journal of Consumer Psychology*, 19, 389-402.

Viswanathan, Madhubalan, Manoj Hastak, and Roland Gau (2009), "Enabling Processing of Nutritional Labels Among Low-Literate Consumers," *Journal of Public Policy and Marketing*, 28 (2) Fall 2009, 135-145.

Viswanathan, Madhubalan, Jose Antonio Rosa, and James Harris (2005), "Decision-Making and Coping by Functionally Illiterate Consumers and Some Implications for Marketing Management," *Journal of Marketing*, 69(1), 15-31.

Spencer, Lori

From: Qualls, William [wqualls@illinois.edu]
Sent: Monday, March 08, 2010 4:16 PM
To: Bartanen, Crystal
Cc: Monroe, Julie; Viswanathan, Madhu; Environmental Change Institute
Subject: Letter of Support

TO: Crystal Bartanen
Program Administrative Assistant

FROM: Professor William Qualls
Department Head-Business Administration

This letter is in support of the proposal "**Enhancing Educational Content on the Environment for Sustainable Product and Market Development for Subsistence Marketplaces – A Proposal for Course Revision**" submitted by Professor Madhu Vishwanathan to revise the course BADM532 and 533 **Sustainable Product and Market Development for Subsistence Marketplaces.**

BADM 532 and 533 started as an experimental interdisciplinary course designed to address the issues faced by subsistence marketplaces in today's dynamic environments. The course remains a popular course offering. The funds would be used to enhance the environmental perspective of the course and develop teaching materials and modules to provide real time knowledge of environmental challenges faced by subsistence markets.

As one of the pillars of excellence of the graduate course program offerings, materials developed through this proposed grant could also be used by other graduate courses on sustainability and in our undergraduate program offerings.

The Department of Business Administration is strongly in favor and supportive of the proposal. Please let me know if I can be of further assistance

**Enhancing Educational Content on the Environment for Sustainable Product and Market
Development for Subsistence Marketplaces – A Proposal for Course Revision**

“The challenge of education is to prepare students for their future – not our past” - Anonymous

Overview

We designed and offer a year-long graduate-level course on subsistence marketplaces (BADM 532 and 533, recently approved courses). Students in business, engineering, and industrial design spend the Fall semester understanding subsistence marketplaces through *immersion* in this context and through *emersion* of business principles. The class travels for immersion in the context and to conduct market research during part of the winter break (<http://www.business.uiuc.edu/subsistence/teaching/immersion.html>). Spring semester is spent converting concepts to workable prototypes, and developing manufacturing, marketing and business plans. Prototypes emphasize environmental sustainability and examples include a solar heating device for mobile entrepreneurs that provides a distributed, renewable energy solution. Our learning experience emphasizes the importance of holistically examining environmental, social and economic sustainability by beginning in the most unsustainable of conditions in all of these dimensions. Through this, we have created a unique approach to viewing environmental sustainability. Our focus on subsistence marketplaces is also helpful in highlighting the global nature of issues surrounding sustainability. With the imminent increases in population largely among the poor and the failing ecology they already confront, this is an ideal context from which to learn. With an emphasis on a holistic perspective, students develop an appreciation for how global poverty accentuated by ecological problems is central to the global marketplace. Examples such as the role of subsistence producers (e.g., coffee growers and Starbucks) and entrepreneurs and their role in global supply chains reiterate this issue.

Thus, our approach is bottom-up, understanding environmental challenges and coping from the voice of the subsistence consumer and entrepreneur. Such an approach allows students to analyze the data and connect the dots for themselves. Why is such a focus on the environmental conditions of poverty so important? It highlights

- contexts where the consequences of environmental degradation have taken root and are immediate
- solutions born out of necessity and extreme resource constraints, that may point the way for all contexts through reverse innovation
- the global interconnectedness of the challenges we face, as population increases and associated environmental degradation forecast in the coming decades will disproportionately affect the poor
- the need to find approaches to poverty alleviation and consumption that do not multiply the environmental disasters that are already being predicted
- the ethical dimensions and a fuller understanding of stakeholders arising from negative impacts of climate change and other problems affecting those least capable of adapting
- the cultural dimension to sustainable solutions and the need for these solutions to be based on an understanding of subsistence marketplaces to facilitate adoption

Proposal for Revision

Our challenge is to enhance the educational content that relates to subsistence marketplaces and the environment. We have been working toward this goal through research

on this topic and through including assignments where students develop models that incorporate the environment, as well as through environmental sustainability being a key part of the product design and the final business plan. But just as our research led to key insights and educational materials on subsistence marketplaces, we believe that we can develop cutting edge content on the environment of subsistence marketplaces.

Through ongoing qualitative research, we are understanding the spheres of life where subsistence individuals view a conflict between ecology and economic activity and the need for sustainable solutions. On the one hand, areas of serious concern include the local physical environment (e.g., pollution, garbage disposal, plastic use and burning, deforestation, overuse of chemicals such as pesticides in agriculture), basic physical needs (e.g., scarcity and contamination of drinking water, lack of nutritious foods), the socio-cultural environment (e.g., weakening of human relationships, erosion of culture and tradition), and the local economy. In each arena, with the lack of action among powerful interests and lack of infrastructure and resources that characterize subsistence contexts, individuals cope through makeshift solutions and conserve resources, through reuse and cross-usage (reusing plastic containers for storage, using clothes to screen against pollution at home or during travel, using public transportation, adjusting day-to-day life to maintain human relationships, making rather than buying to save money and enhance nutrition, finding indigenous solutions for pest control, harvesting rainwater, locally producing products, using innovative cooking methods to retain nutritive ingredients). What is emerging from our research is a local notion of sustainability which at its heart is holistic – an interconnected web of issues ranging such as deterioration of the physical environment reinforcing lack of civic values and social networks and the erosion of local culture, and the attenuation of human relationships.

Such research is providing the “data” for students to understand the interlinkages between poverty and the environment. We aim to provide students with qualitative data in the form of transcribed interviews that enables them to understand the issues that individuals face. Such material facilitates bottom-up learning akin to what we have developed for issues relating to poverty.

To translate such research to the classroom, we also need to develop multi-media material in these contexts that capture environmental problems in urban and rural settings, ways in which individuals cope with these problems, and case studies of organizations working to solve these problems. Such material would greatly enhance the student experience.

Our request is related to these two items that will enhance the environmental dimension of our course. We propose to conduct interviews of subsistence consumers and entrepreneurs as well as organizations working to find solutions. We propose to develop professional video that highlights problems with the local environment and impact on households and communities. Such visual media enables both a deeper understanding as well as a means to envision product usage situations that then enable the design of sustainable solutions.

Narrative Budget

Interviews and transcriptions of subsistence consumers, entrepreneurs, and representatives of environmental organizations (Research assistants in India)	\$2000
Professional development of videos of subsistence marketplaces and environmental issues (Videos of interviews, conditions, coping strategies)	\$3000

Course Outline – Sustainable Product and Market Development for Subsistence Marketplaces

**Fall 2009
Mondays 5:00-8:00 pm**

Course Description

Sustainable Product and Market Development for Subsistence Marketplaces - Students in business, engineering, industrial design and other areas will spend five weeks of virtual immersion in subsistence contexts, including analysis of life circumstances in subsistence through interviews, simulation, and videos, and development of conceptual models of poverty, needs, products, and market interactions. Next, the course will focus on emersion of principles for business and engineering using a rich set of cases and a wide range of guest speakers. Student groups will formed to balance technical and business skills and match interests with our company sponsors. Groups will generate and evaluate a long list of possible ideas, and design market research to be conducted during an optional international field trip over part of the winter break. Students have the option to enroll in a spring course which will focus on taking the product idea to a prototype and a business plan.

This course is differentiated from other courses offered at the university in the extent of experiential learning and in its highly cross-functional nature. It is differentiated from cross-functional experiential new product development courses offered elsewhere in the nation by focusing on products for low-literate, low income individuals in subsistence marketplaces, such as in transitional economies, like India and China.

Background

Recent work has begun to provide broad insight into the role and nature of innovation targeted at the 4 billion living in poverty in the global marketplace, also referred to as the bottom of the pyramid. These subsistence marketplaces have been described in terms of their size and accessibility, with brand conscious, connected customers willing to accept new technology. The literature has emphasized the market development imperative in terms of creation of the capacity to consume, the need for new goods and services, dignity and choice for the poor, and the importance of developing trust between buyer and seller. Several principles of innovation have been discussed including finding sustainable solutions, understanding functionality, innovating with process and deskilling work, educating low-literate consumers, designing for hostile infrastructure, and designing innovative distribution chains. Issues of importance to business research and education about the nature of product and market development for these distinctly different marketplaces will be addressed through our Laboratory Course on Sustainable Product and Market Development for Subsistence Marketplaces.

New product development lab courses are not new; however, what is new here is a course that focuses on developing products and services to serve the needs of those living in subsistence marketplaces. Overlaying the content in a typical new product develop lab course will be a separate module that develops contextual understanding of subsistence marketplaces. This type of immersion in the unique context will set the stage for new product development.

The course spans issues from business to engineering. It covers, at one end, the bottom-up understanding of buyers, sellers, and marketplaces beyond literacy and resource barriers. At the other end, it covers the technologies that could be used to develop innovative products. In between, the course includes issues in product and market development as well as the nature of research methods to employ.

The course will address a number of issues, a few of which are listed as exemplars.

- What are the characteristics of successful and unsuccessful products for subsistence marketplaces?
- How should products be designed for such marketplaces?
- What is the nature of distribution channels for successful versus unsuccessful products?
- How should market research be conducted throughout the new product development process? How should research be designed to obtain feedback about concepts, prototypes, and distribution channels from low-literate, low-income consumers and distribution channel members?
- How do buyers and sellers make decisions and participate in subsistence marketplaces?

Unique Learning Opportunities

The unique and pioneering nature of this course lends itself to some learning opportunities for students over and above the content described above.

- ❖ An opportunity to compare, contrast, and, therefore, sharpen Marketing skill sets for traditional marketplaces. To enroll in this course, it is not at all necessary that students have clear plans to work in subsistence marketplaces. On the contrary, experience in a radically different context, as different as can be, and comparison and contrast, can serve to sharpen existing knowledge. Lessons learnt for subsistence marketplaces can in turn be applied in other marketplaces.
- ❖ An opportunity to contribute to knowledge creation in this area. This is the first course of its kind we know of and there is no book out there. We expect project reports from students to form the basis for future learning material to be disseminated widely through publications.
- ❖ An opportunity to broaden one's perspective across, cultural as well as literacy and resource barriers.

Place in the Curriculum

The target students are Master's students in engineering, marketing and other areas of business (MBA's) and a few select areas in the college of liberal arts such as cross-cultural psychology, sociology and anthropology. In the MBA program, the courses will count toward concentrations in marketing, and in some other areas.

Important Administrative Issues

A number of issues including intellectual property and to internal immersion costs and participation will be discussed in class and will require signed agreements. The actual cost of the field trip to be borne by students is also contingent on the number of

participants. In providing financial support for the field trip, priority is given to graduate students. However, every effort is made to extend support to all students enrolled in the course. In the event of lack of resources or of sufficient demand, the field trip may be cancelled.

Readings

Cases from the book, *Fortune at the Bottom of the Pyramid*, by C. K. Prahalad will be used.

Recommended books

- Fortune at the Bottom of the Pyramid - by C. K. Prahalad
- Enabling Consumer and Entrepreneurial Literacy in Subsistence Marketplaces – Madhu Viswanathan, S. Gajendiran, and R. Venkatesan
- Capitalism at the Crossroads – Stuart Hart

Articles on online reserve will be used

Detailed article reading list provided as appendix

Grading

Group Project..... 50%
Class Participation & Assignments..... 50%

Attendance & Participation

50% of the grade for this class is for participation in in-class assignments and discussions, and tutorials. Therefore, attendance is very important and a necessary condition for participation. Students who do not attend class regularly cannot participate effectively and can easily lose one or more letter grades. In-class work will involve presentations and write-ups of cases and other assignments throughout the semester.

Project

The course emphasizes hands-on experience and applications. Therefore, a sizable portion of the grade is for a project where you will design a new product and develop a sustainable marketing plan. You will work in a group which will serve as a resource for completing several assignments and a final presentation and written report. Each individual's contribution to his/her group will be assessed by peer evaluation. The peer evaluation form is attached to the end of this handout. A deduction in the points earned for group assignments will be made in proportion to the group peer evaluations. This often leads to reduction of an individual's overall grade by one or more letter grades. Free riding will be identified & penalized in this course.

Grading

The two most important aspects for grading are in-class work and participation in the group project. Therefore, lower performance in class work (i.e., missing class-work for more than 1 class) or in participation in group work (as indicated by peer evaluation below 100%) can lead to reduction in overall grade by one or more letter grades.

Fall Course Schedule
Monday – 5:00 - 8:00 pm

Part 1 – Immersion

The aim of this part of the course will be to provide an opportunity for students to immerse themselves in the context of subsistence marketplaces through cases and findings from research. Whereas the field trip will provide an opportunity for actual immersion, the first 5 weeks of the course will attempt to create a learning environment to simulate such immersion.

Week 1 (Aug 21)	Orientation/Introduction to the Course Group Formation Exercises Poverty Simulation – Robin Orr, Cooperative Extension, University of Illinois
Week 2 (Aug 31)	Understanding the Subsistence Context – Individuals, Groups, and Society Analysis and Profile of Interviews and Videos
Week 3 (Sep 14)	Understanding the Subsistence Context – Individuals, Groups, and Society Analysis and Profile of Interviews and Videos Developing Conceptual Models of Poverty Guest speaker
Week 4 (Sep 21)	Understanding the Subsistence Context – Products and Markets Analysis of Interviews and Videos Developing Models of Needs, Products, and Markets Guest Speaker
Week 5 (Sep 28)	Understanding the Subsistence Context - Summary Comparisons and Contrast of Literacy and Poverty in the US versus India Readings: Viswanathan, Madhubalan, Jose Antonio Rosa, and James Harris (2005), "Decision-Making and Coping by Functionally Illiterate Consumers and Some Implications for Marketing Management," <i>Journal of Marketing</i> , 69(1), 15- 31. Viswanathan, Madhubalan (2007), "Understanding Product and Market Interactions in Subsistence Marketplaces: A Study in South India," in <i>Product and Market Development for Subsistence Marketplaces: Consumption and Entrepreneurship Beyond Literacy and Resource Barriers</i> , Editors, Jose Rosa and Madhu Viswanathan, Advances in International Management Series, Joseph Cheng and

Michael Hitt, Series Editors, 21-57, Elsevier.
Guest speaker

Part 2 – Emersion

The aim of this part of the course is to extract general principles on buyer and seller behavior, market research, and the marketing mix elements for subsistence marketplaces while contrasting them with traditional marketplaces.

- Week 6 (Oct 5) Product Design Primer
Guest Speaker
- Week 7 (Oct 12) Technology
Assignment - Case – ITC e-Choupal
Group Projects – Idea Generation
Reading: Urban, Glen L. and John R. Hauser. "Ch. 5: Idea Generation." *Design and Marketing of New Products*. Prentice Hall, 1993. 117-161.
- Week 8 (Oct 19) Products and Distribution
Assignment - Case – Annapurna Salt
Understanding the Subsistence Context - Implications for Market Research
Guest Speaker
Group Projects – Idea Generation
- Week 9 (Oct 26) Promotion and Pricing
Assignment - Case - Lifebuoy Soap
Group presentation of ideas
Group Projects – Idea Screening and Evaluation
- Week 10 (Nov 2) Marketing and Market Research
Group Projects – Idea Screening and Evaluation
- Week 11 (Nov 9) Marketing and Market Research
Group presentation of idea screening and evaluation
Group Projects - Idea Screening and Evaluation and Development of Market Research Instruments
Reading: Viswanathan, Madhubalan, Roland Gau, and Avinish Chaturvedi (2008), "Research Methods for Subsistence Marketplaces," in *Sustainability Challenges and Solutions at the Base-of-the-Pyramid: Business, Technology and the Poor*, Forthcoming, Editors Prabhu Khandachar and Minna Halme, Greenleaf Publishing.
- Week 12 (Nov 16) Marketing and Market Research
Group presentation of market research plans
Group Projects – Idea Screening and Evaluation and Development

of Market Research Instruments

Week 13 (Nov 28) Field Trip Planning and Orientation
Group Projects - Development of Market Research Instruments

Parts 1 and 2, immersion and emersion, will lay the foundation for students to embark on specific product and market development research projects.

**Optional Field Trip – 10 day trip between December 26 – January 15
(approximately)**

Trip Objectives and Plans

Immersion in subsistence marketplaces through first hand observation of the influences of poverty, literacy, and culture

- Individual and group interactions in urban and rural settings
- Observations in urban and rural settings

Learning about a diverse set of organizations and their initiatives in subsistence marketplaces

- Field trips to observe profit and non-profit organizations

Market research for projects

- Individual and group interviews in rural and urban settings
Discussions with company sponsors regarding projects

Option of registering for Spring Course – Sample Schedule and Topics are in the Appendix

Assignments

Immersion

In this part of the course, there will be a number of individual assignments. Using materials such as poverty simulations and interviews, students will write first-person profiles of individuals in poverty, draw broader impressions about living in subsistence, and build conceptual models of poverty and related factors and behaviors. A broader appreciation of lives and living in subsistence will then be followed by a focus on the economic realm. Students will use interviews to derive the set of needs, products, and markets for individuals living in subsistence.

Emersion

In this part of the course, each group will be assigned to lead the discussion on two cases. Their responsibility will be to distribute broad discussion questions and lead the discussion. The other groups will submit write-ups. These write-ups will be due before class on the day of the case and with a maximum limit of 2 single spaced pages. The write-ups as well as the class discussion will assume thorough knowledge of the case and focus on analyzing the material and not on describing the facts available in the case. As is clear from the nature of the assignments, everyone is expected to have carefully read each case and analyzed and discussed it with their group members. Each group will appoint a leader for each write-up whose name will be listed in the assignment. Everyone in the group will have a turn at being the leader, who will be responsible for consolidating the discussion.

The analysis of each case will focus on the following issues:

- Needs and Consumer Behavior
 - o Specific need being served
 - o Relevant consumer behaviors
 - o Product and market context
 - o Larger context of life circumstances
- Market Research
 - o Examples of methods used
 - o Suggestions for methodological improvements
- Management and Engineering Issues
 - o Technology
 - o Products
 - o Distribution
 - o Promotion
 - o Pricing
- Recommendations for Product and Market Development for Subsistence Marketplaces
 - o Specific lessons learnt for group project

Group project

Group Formation

The aim of this stage is to enable interactions between students and allow for the formation of a group with balanced functional skills and interest in the project topic.

Week 1 - Group Formation Exercises

Week 4 - Group Formation

Idea Generation

The aim of this stage is to generate a wide range of ideas, essentially erring on the side of inclusion. Brainstorming sessions and focused meetings to which students bring a set of ideas are suggested approaches. This stage can be facilitated by reviewing video and interview based material to consider needs and ways to address them, a market based approach. Alternatively, technologies can be considered that could lead to innovative product ideas. Groups will be asked to summarize their discussions to the rest of the class.

Week 7 - *Group Projects –Idea Generation*

Week 8 - *Group Projects – Idea Generation*

Idea Screening and Evaluation

In this stage, the list of ideas are narrowed carefully to a smaller list. Each idea is carefully considered and the group decides on one at the end of this process. Groups will be asked to summarize their discussions to the rest of the class.

Week 8 - *Group Projects – Idea Generation, Screening and Evaluation*

Week 9 - *Group Projects – Idea Screening and Evaluation*

Week 10 - *Group Projects – Idea Screening and Evaluation*

Development of Market Research Instruments

The aim of this stage is to develop qualitative and quantitative market research instruments that are ready for use during the field trip.

Week 11 - *Group Projects – Idea Screening and Evaluation and Development of Market Research Instruments*

Week 12 - *Group Projects – Idea Screening and Evaluation and Development of Market Research Instruments*

Week 13 - *Group Projects - Development of Market Research Instruments*

**The Treatment of Intellectual Property
Generated from Student Projects under
Sustainable Product and Market Development for Subsistence Marketplaces
Course**

Confidentiality and Intellectual property are handled in a straightforward manner for the purposes of this product and market development course. In order to provide relevant, real world opportunities for students, the professors have sought out corporate sponsors who have agreed to work with the students and the University on selected projects course. As a condition of their participation, such corporate sponsors often require that they maintain **ownership and control** of the resulting student solution and intellectual property. They also require strict confidentiality. Students electing to work in this course will be asked to sign documents that indicate the student's acceptance of these terms, as a condition of participation in this course.

It is important for the students, the advisors, and the corporate sponsors to have a complete understanding regarding confidentiality and the handling of intellectual property considerations for projects offered in this course.

Ownership :

Under the University's *General Rules*, The University owns intellectual property developed by anyone using University resources, facilities, funds and equipment. Intellectual property developed in this class utilizes significant University resources to support the projects and the trip to India and is owned by the University¹. Corporate Sponsors often require assignment of the Student's intellectual property as a condition of their participation and sponsorship in this course. In 2001, the University decided to facilitate such interactions and support the required transfer of ownership to the corporate Sponsor, either directly between the Students and the Sponsor, or through the University.

Confidentiality

Attached is a simple student non-disclosure agreement (NDA). It is structured to cover (1) all information disclosed by the companies to the students and (2) all information and results generated by the students during the course of their projects. The reports generated by the students are kept strictly confidential, and are released only after receiving written permission from the original sponsoring company.

Agreements

Each student participating in this course is expected to sign either (a) the confidentiality and acknowledgement of University ownership documents such as attached or (b)

¹ In order to support the company's needs and encourage interesting corporate projects, a few years ago, the Urbana Campus Vice Chancellor decided that, as an exception to the University's General Rules, the University would not claim an ownership interest in the students' intellectual property developed in such student class projects, as long as there was only minimal use of University resources. This exception enabled the student to work directly with the company, just as the student would under a consulting arrangement, and to sign the required company documents.

confidentiality and ownership documents provided by the company. The documents required for each project will be available prior to election of the projects but must be signed prior to first team meeting or visit to the sponsoring company. If you have questions or concerns about signing such documents, please contact the Course Chairman or the Faculty Director.

Inventions

In such an event that the student team's solution appears to be patentable, the student should talk to the Faculty Director to determine ownership and subsequent next steps. Teams should be aware the projects are to be their own original independent work. Project solutions should not be based on preexisting University intellectual property rights or of intellectual property rights of others.

Please contact the course Chairman or the faculty director for further details. As intellectual property encompasses more than just inventions, (such as the copyright in your reports), please feel free contact us if you have questions. We can schedule times for representatives from the OTM to come to our classes and to be available for questions.

John Clarke,
Course Chairman

Madhu Viswanathan
Faculty Director

NONDISCLOSURE AGREEMENT
For Sustainable Product and Market Development for Subsistence Marketplaces
Course

CONFIDENTIALITY:

By my signature below, I confirm my obligation to keep confidential certain proprietary information, as described below, that I may receive or have access to in connection with my performance of the work required for the above-referenced course during the period of September, 2007 to June, 2008.

Confidential Information shall include:

- (1) Business and technical information disclosed by Corporate Sponsors for my Project or for any of the Class Projects
- (2) My Project results and reports (unless specific permission is obtained for release to third parties) and other student class results and reports

I agree that all Confidential Information shall be maintained in trust and confidence and shall not, directly or indirectly, be disclosed, except as permitted under this Nondisclosure Agreement. I also agree to use all reasonable diligence to prevent disclosure of the information to any third party that is not under an obligation of confidentiality with respect to such Confidential Information to the University or to Corporate Sponsor and to refrain from using the Confidential information for any purpose other than for this Class.

I understand that I do not have any obligation of confidentiality with respect to any information that:

- (a) Was already in my possession on a non-confidential basis prior to receipt from the University; or
- (b) Is in the public domain by public use, general knowledge or the like, or after disclosure hereunder, becomes general or public knowledge through no fault of mine; or
- (c) Is properly obtained by me from a third party not under a confidentiality obligation to the University; or
- (d) Is explicitly approved for release by written authorization of the University.

I understand that my obligations under this Nondisclosure Agreement will continue after this class has ended.

ACKNOWLEDGED AND AGREED:

Date

ACKNOWLEDGEMENT OF ASSIGNMENT OF INTELLECTUAL PROPERTY
For
Sustainable Product and Market Development for Subsistence Marketplaces

ASSIGNMENT OF INTELLECTUAL PROPERTY

The *General Rules Concerning University Organization and Procedure*, can be found at <http://www.uillinois.edu/trustees/rules.cfm>.

Article III, Section 5 of the *General Rules* covers ownership of intellectual property.

"Except as otherwise specified in this Article or by the University in writing, intellectual property shall belong to the University if made: (1) by a University employee as a result of the employee's duties or (2) through the use by any person, including a University employee, of University resources such as facilities, equipment, funds, or funds under the control of or administered by the University."

This course, including the trip to India, was developed with, and is offered to Students through the use of significant University resources. Therefore, the University owns the intellectual property, such as the inventions resulting from your work in this Project.

I agree, upon request, to execute an assignment document transferring ownership in such intellectual property to the University.

ACKNOWLEDGED AND AGREED:

Date

Course Agreement

This is to state that, by enrolling in this course on Product and Market Development for Subsistence Marketplaces for 2009-10, I agree to abide by all the rules and procedures described in the course outline and explained during communications about the course in the preceding semester and during the first class by Professor Madhu Viswanathan. These rules and procedures include but are not restricted to those relating to intellectual property, grading, and participation in the field trip.

Name _____

Signature _____

Date _____

Appendix – Sample Schedule and Assignments for Spring Follow Up Course

Spring Course Schedule

Monday – 5:00-8:00 pm

The aim of this part of the course is to develop an understanding of a systematic and structured approach for designing sustainable products and developing business plans that address the issues of economic, social and ecological sustainability. This project-based course will serve as a capstone experience in business and engineering that incorporates issues of sustainability at the intersection of these two areas. It will cover conceptual design, system (architectural) design, detailed design, cost modeling, and testing & prototyping methods. In addition, it includes writing project mission statements, business plans, and other related topics at the intersection of business, design, and engineering. The course will overlay traditional product design and business plan development with topics covering sustainable product design, sustainable supply chain management, and design and communication of sustainable value propositions.

The course is a project based experience that will draw from two sets of students. Students who enrolled in the course on sustainable product and market development for subsistence marketplaces in Fall can continue with this course, building on concepts developed in Fall and refined during the international immersion trip over winter break. Students interested in sustainable product design and business plan development may enroll for the spring course as a stand alone learning experience, including second year MBAs students and MS Tech students. (Some of these students would have been introduced to the topic through a first year MBA course entitled Sustainable Marketing Enterprises.) For such students, project topics will be chosen that provide opportunities with local entrepreneurs and larger companies. Thus, the course provides an opportunity for learning about sustainable product design and business plan development in resource-rich and resource-poor contexts.

This course together with other current offerings, aims to provide a set of learning experiences for graduate students in business and engineering that lead to integrative understanding of the central role of sustainability and the challenges and opportunities in this arena.

Week 1 (Jan 26)	Introduction to the course Semester Overview Debrief of International Immersion for students from Fall course Brainstorming of project ideas
Week 2 (Feb 2)	Guest Speaker Project Team Presentations of possible ideas – (5 min per team up to 15 min discussion)
Week 3 (Feb 9)	Overview of product development Concept generation and selection Overview of Market research for concept testing Student presentation of 3-5 Concepts Reading on concept generation and selection (Ulrich and Eppinger, 2008)

- Week 4 (Feb 16) Customer needs and engineering specs
 Student presentation of criteria and narrower set of concepts
 Assignment to develop detailed design/specs
 Reading on customer needs and engineering specs (Ulrich and Eppinger, 2008)
- Week 5 (Feb 23) Conceptual Design, Prototyping and Testing
 Recommended Reading: Frontier Design: A product usage context method," ASME paper by Green et al. 2006
 Reading on prototyping (Ulrich and Eppinger, 2008)
 Student presentation of chosen concept and results from concept testing
- Week 6 (Mar 2) Sustainable product design (Design for replacement, Design for longevity
 Dematerialization)
 Overview of product testing
- Week 7 (Mar 9) Product testing
- Week 8 (Mar 16) Midterm Presentations
 Faculty Consulting & Team Meeting
 Detailed Design Due – PowerPoint presentation and a written report
- Week 9 (Mar 23) Spring Break
- Week 10 (Mar 30) Financial Modeling and Sustainable Business Plans
- Week 11 (Apr 6) Designing Sustainable Supply Chains
- Week 12 (Apr 13) Designing and Communicating Sustainable Value Propositions
 Sustainable Business Plan Development
 Financial Modeling and Manufacturing Plan Due
- Week 13 (Apr 20) Faculty Consulting Sessions
- Week 14 (Apr 27) Final Business Proposal Presentation walk though
- Week 15 (May 4) Final Business Proposal Presentations
 (Last Class Session)
 Written Detailed Business Plan, Prototype, and Engineering Plan due May 8 by noon
 Peer evaluations due May 8

Several guest speakers have been invited to present.

Text and Readings

Chapters from the Ulrich and Eppinger text on product design will be used as readings along with articles available on online reserve.

Articles and cases on online reserve will be used.

Case Studies

In this part of the course, each group will be assigned to lead the discussion on two cases. Their responsibility will be to distribute broad discussion questions and lead the discussion. The class discussion will assume thorough knowledge of the case and focus on analyzing the material and not on describing the facts available in the case. As is clear from the nature of the assignments, everyone is expected to have carefully read each case and analyzed and discussed it with their group members.

The analysis of each case will focus on the following issues:

- Needs Assessment
 - o Specific need being served
 - o Relevant consumer behaviors
- Technology Appropriateness
 - o Why is the technology appropriate & how does it work
 - o Suggestions for improvements
- Engineering Issues
 - o Product Design: comment on design and its innovation
 - o Industrial Design: comment on design and its innovation
 - o Manufacturing Technology: explain and comment
- Recommendations for Design & Development for Subsistence
 - o Specific lessons learnt for group project

Grading

Group Project..... 50%
Class Participation & Assignments..... 50%

Attendance & Participation

50% of the grade for this class is for participation in in-class assignments and discussions, and tutorials. Therefore, attendance is very important and a necessary condition for participation. Students who do not attend class regularly cannot participate effectively and can easily lose one or more letter grades. In-class work will involve presentations and write-ups of cases and other assignments throughout the semester.

Project

The course emphasizes hands-on experience and applications. Therefore, a sizable portion of the grade is for a project where you will design a new product and develop a sustainable marketing plan. You will work in a group which will serve as a resource for completing several assignments and a final presentation and written report. Each individual's contribution to his/her group will be assessed by peer evaluation. The peer evaluation form is attached to the end of this handout. A deduction in the points earned for group assignments will be made in proportion to the group peer evaluations. This often leads to reduction of an individual's overall grade by one or more letter grades. Free riding will be identified & penalized in this course.

Grading

The two most important aspects for grading are in-class work and participation in the group project. Therefore, lower performance in class work (i.e., missing class-work for more than 1 class) or in participation in group work (as indicated by peer evaluation below 100%) can lead to reduction in overall grade by one or more letter grades.

Group Projects deliverables and deadlines

Mission Statements, Business Plan & Project Schedule

At this stage, the project team delivers its missions statement and preliminary business plan. This includes figuring out the purpose of their existence as a start-up company, identifying major stakeholders, target markets, and milestones.

Conceptual Design

The aim of this stage is to develop sketches of the one or two most promising alternative solution concepts.

Detailed Design

In this stage, your conceptual design is to be detailed by providing detailed drawings, engineering specifications, material selection, and preliminary cost analysis.

Financial Modeling and Manufacturing Plans

Development of Prototype and Business Plan

Appendix

Relevant Readings on Subsistence Marketplaces²

Understanding Low-Literate Consumer Behavior – Weeks 1-5

Viswanathan, Madhubalan, Jose Antonio Rosa, and James Harris (2005), "Decision-Making and Coping by Functionally Illiterate Consumers and Some Implications for Marketing Management," *Journal of Marketing*, 69(1), 15-31.

Viswanathan, Madhubalan, S. Gajendiran, and R. Venkatesan (2008), *Enabling Consumer and Entrepreneurial Literacy in Subsistence Marketplaces*, Dordrecht: Springer.

Understanding Subsistence Marketplaces – Weeks 1-5

Viswanathan, Madhubalan (2007), "Understanding Product and Market Interactions in Subsistence Marketplaces: A Study in South India," in *Product and Market Development for Subsistence Marketplaces: Consumption and Entrepreneurship Beyond Literacy and Resource Barriers*, Editors, Jose Rosa and Madhu Viswanathan, Advances in International Management Series, Joseph Cheng and Michael Hitt, Series Editors, 21-57, Elsevier.

Viswanathan, Madhubalan, Srinivas Sridharan, and Robin Ritchie "Resource-Poor, But Network-Rich: Understanding Consumers and Entrepreneurs in Subsistence Marketplaces".

Research Methods in Subsistence Marketplaces

Viswanathan, Madhubalan, Roland Gau, and Avinish Chaturvedi (2008), "Research Methods for Subsistence Marketplaces," in *Sustainability Challenges and Solutions at the Base-of-the-Pyramid: Business, Technology and the Poor*, Forthcoming, Editors Prabhu Khandachar and Minna Halme, Greenleaf Publishing.

Product Development for Subsistence Marketplaces

Donaldson, Krista (2006), "Product Design in Less Industrialized Economies: Constraints and Opportunities in Kenya," *Research in Engineering Design* 17(3), 135-155.

Green, M., Linsey, J., Seepersad, C., Wood, K., and Jensen, D. (2006), "Frontier Design: A Product Usage Context Method," *Proceedings of the ASME Design Engineering Technical Conference*, Philadelphia, PA: Paper Number: DETC/DFM 2006-99608.

² As this is a nascent area and we have pioneered research in it at the University of Illinois, most of the readings are from our work.

Viswanathan, Madhubalan, Srinivas Sridharan, Roland Gau, and Robin Ritchie (2009) "Designing Marketplace Literacy Education in Resource-Constrained Contexts: Implications for Public Policy and Marketing," *Journal of Public Policy and Marketing*, 28 (1), 85-94.

Viswanathan, Madhubalan, and Srinivas Sridharan "Sustainable Product Development for Subsistence Marketplaces".

Sridharan, Srinivas, and Madhubalan Viswanathan (2008), "Marketing in Subsistence Marketplaces: Consumption and Entrepreneurship in a South Indian Context," *Journal of Consumer Marketing, Special Issue on Base of the Pyramid Research*.

Viswanathan, Madhubalan, Srinivas Sridharan, and Robin Ritchie (2008), "Marketing in Subsistence Marketplaces," in *Alleviating Poverty Through Business Strategy*, Editor, Charles Wankel, Palgrave Macmillan, 209-231.

Weidner, Kelly, Jose Antonio Rosa, and Madhubalan Viswanathan, "Marketing to Subsistence Consumers: Lessons From Practice," *Journal of Business Research*, forthcoming.

Viswanathan, Madhubalan, Anju Seth, Roland Gau, and Avinish Chaturvedi, "Internalizing Social Good Into Business Processes in Subsistence Marketplaces: The Sustainable Market Orientation" *Journal of Macromarketing*, forthcoming.

Relevant Readings on Product Development

Ulrich, Karl T. & Steven D. Eppinger. "Ch. 4: Identifying customer needs." *Product Design and Development (4th ed.)*. McGraw-Hill, 2008. 53-70.

Ulrich, Karl T. & Steven D. Eppinger. "Ch. 5: Product Specifications." *Product Design and Development (4th ed.)*. McGraw-Hill, 2008. 71-96.

Ulrich, Karl T. & Steven D. Eppinger. "Ch. 6: Concept Generation." *Product Design and Development (4th ed.)*. McGraw-Hill, 2008. 97-122.

Ulrich, Karl T. & Steven D. Eppinger. "Ch. 7: Concept Selection." *Product Design and Development (4th ed.)*. McGraw-Hill, 2008. 123-141.

Urban, Glen L. and John R. Hauser. "Ch. 5: Idea Generation." *Design and Marketing of New Products*. Prentice Hall, 1993. 117-161.

Urban, Glen L. and John R. Hauser. "Ch. 7: Customer Measurement-A Review." *Design and Marketing of New Products*. Prentice Hall, 1993. 176-199.

Urban, Glen L. and John R. Hauser. "Ch. 8: Perceptual Mapping: Identification of Strategic Benefits." *Design and Marketing of New Products*. Prentice Hall, 1993. 201-220.

Urban, Glen L. and John R. Hauser. "Ch. 9: Customer needs and perceptual mapping:

Methods and Procedures." *Design and Marketing of New Products*. Prentice Hall, 1993. 222-251.

Urban, Glen L. and John R. Hauser. "Ch.6: An Overview of the Design Process." *Design and Marketing of New Products*. Prentice Hall, 1993. 164-174.

Ulrich, Karl T. & Steven D. Eppinger. "Ch. 11: Design for Manufacturing." *Product Design and Development*. McGraw-Hill, 2008. 209-243.

Ulrich, Karl T. & Steven D. Eppinger. "Ch. 12: Prototyping." *Product Design and Development (4th ed.)*. McGraw-Hill, 2008. 245-265.

Relevant Readings on Marketing and Management for Non-Business Students

Boone, Louis E. & David L. Kurtz. "Ch. 13: Marketing Channels and Supply Chain Management." *Contemporary Marketing*. Thomson South-Western, 2006. 416-440.

Boone, Louis E. & David L. Kurtz. "Ch. 15: Integrated Marketing Communications." *Contemporary Marketing*. Thomson South-Western, 2006. 482-512.

Kotler, Philip. "Ch. 1: Marketing in the Twenty-First Century (excerpt)." *Framework for Marketing Management*. Prentice Hall, 2001. 1-16.

Kotler, Philip. "Ch. 5: How and Why Consumers Buy (excerpt)." *Framework for Marketing Management*. Prentice Hall, 2001. 88-102.

Winer, Russell S.. "Ch. 11: Pricing." *Marketing Management*. Prentice Hall, 2000. 293-324.

Winer, Russell S.. "Ch. 4: Marketing Research." *Marketing Management*. Prentice Hall, 2000. 75-104.

Winer, Russell S.. "Ch. 5: Consumer Behavior and Analysis." *Marketing Management*. Prentice Hall, 2000. 107-139.

Winer, Russell S.. "Ch. 8: Communications and Advertising Strategy." *Marketing Management*. Prentice Hall, 2000. 193-230.