Global social and environmental trends represent pressing concerns for the future of the planet and human populations. This course presents entrepreneurs and innovators as powerful agents who can drive our movement to a sustainable economy and environment. A central proposition is that entrepreneurs, politicians, and others can embrace the market system to enable environmental and social sustainability, and that entrepreneurial action can capture economic value associated with environmental resources and alleviate non-sustainable systems. Nowhere are global challenges more evident than in our present sources and uses of energy, and understanding the dynamics of the new energy economy is critical to contributing entrepreneurial solutions. From predictions of peak oil and rising prices of fossil fuels to increasing constraints on carbon emissions, it is evident that a sustainable system will require the development and commercialization of new energy technologies. But perhaps most importantly, these trends and the global movement to sustainability will create tremendous opportunities for entrepreneurial action and the capture of economic profits.

Sustainable Venturing integrates intellectual foundations of economics with entrepreneurial thinking and applied knowledge of industry sectors. The course viewpoint is from theory on the relationship between market failures, which are argued to be the cause of non-sustainable economic behaviors, and entrepreneurial opportunity. On the practical side it examines the economic drivers, industry structures, and competitive dynamics of sustainable business. It also examines the processes and issues of venture creation. Through simulations, readings, examples, and assignments, the course also focuses on specific venture strategies that are being utilized to capture economic opportunities in these and other sectors. Finally, a large portion of the course is focused on the business planning process and business development for the GSSE team projects.
Course Objectives

1. Recognize the economic sources of social and environmental problems and the transformation necessary to eliminate those underlying conditions.

2. Develop an understanding of the role of entrepreneurs in resolving market failures and environmental problems, and transitioning to a more sustainable economy.

3. Discover the economic opportunities present in the resolution of social and environmental issues and the specific means of capturing those opportunities.

4. Become familiarized with sustainable energy and other sectors that are moving towards more sustainable business models.

5. Learn how to write a business plan and use the process of writing one to learn about developing a new venture.

The course will consist of three learning threads that will help elucidate opportunities for social and sustainable venturing.

1) The first is foundational content on social and sustainable venturing, including the nature of opportunities in the market space and practical issues of developing a new venture. The underlying theme of the class content is the relationship between market systems and entrepreneurial opportunity. In this vein, we will examine the nature of market failures and their relationship to environmental challenges and entrepreneurial opportunity.

2) The second thread examines the economic drivers, industry structures, and competitive dynamics of sustainable business sectors. Specific attention will be given to four prevalent sectors; energy, climate change, social entrepreneurship, and organic foods. Through readings and examples, we will focus on specific venture strategies that are being utilized to capture economic opportunities in these sectors. While we will focus primarily on start-up firms, we will not exclude the entrepreneurial activities of existing firms who have responded to these trends.

3) The final thread of the course is the team business plan (or, if preferred, sector opportunity study). The goal of this portion of the class is to learn the dimensions and processes of venture creation and business development.

Course Principles

1. Ambition: Effort and determination represent the foundation of personal progress and success.

2. Positive Attitude and Humor: A lighter, positive side exists to most daily activities and events; let's have some fun.

3. Engaged Learning: I view myself as a facilitator of your learning and feel strongly that learning occurs best through experience and by active interaction between the students and the instructor. It is important that you recognize this philosophy places greater responsibility on your being prepared for class as well as on your active and informed participation.
4. Academic Integrity: Students will uphold the University academic integrity standards in all matters pertaining to this course (see 2007-2008 General Catalog). All work submitted must be original and all non-original concepts integrated into student papers must be referenced as such. Cheating on examinations or other assignments will result, at a minimum, in an F grade for the assignment. All information in written reports from other sources than the author should be cited appropriately. Copying material from the internet without proper citation is considered plagiarism.

5. Respect for Others: We will treat each other in a professional manner. Students should exhibit professional classroom values and behavior and contribute to a positive learning environment.
   - Laptops are allowed in class, but please no web surfing and e-mailing, except as it contributes to class discussions. Please turn off cell phone ringers and no texting.
   - I will make every effort to begin class on time. Please arrive early and be prepared at the start of the class.
   - Please refrain from conversations during discussions and lectures. When a person is speaking, the remainder of the class should remain attentive. During debates, we will attempt to use appropriate timing when presenting our thoughts (allow others to complete their argument before speaking on your own opinion).
   - If you qualify for accommodations because of a disability, please submit a letter from Resources for Disabled Students (1-6385) in a timely manner so that your needs may be addressed.
   - Please reference the CSU student conduct code for further information.

6. Environmental Awareness and Action: Recognizing that human activities are having increasingly negative impacts on natural resources and on the ability of those resources to sustain economic growth, we will attempt to minimize our own impact through actions such as recycling beverage containers, recycling papers, and printing on two sides of the page when appropriate.

Course Requirements

Class Attendance and Participation - 150 points (15%)

Class attendance, preparation, and participation are a fundamental aspect of this course and crucial to your performance in the class. Since much of your learning will occur as a result of class discussion, both the success of you as a student and of the class as a whole are dependent upon your demonstrations of preparedness. Please note that I prefer quality of contribution above quantity. Each session, I will ask a couple members of the class to help me identify those students who have made a meaningful contribution to the class. It is also difficult to participate and learn in the class if you are not present. However, in order to accommodate emergencies, interviews, etc. you may miss one class without suffering any attendance grade penalty. Each missed class beyond one will reduce your participation grade at an increasing rate. In general, my approach to grading attendance and participation is that A grades are earned by students who exhibit both exemplary attendance and participation. Part of this grade will also be determined by your participation in GSSE events throughout the semester. These will be kept to a minimum (2 or 3 events). Attendance at the events will be monitored by GSSE staff, so please be sure to sign in with them at each event. Please see Jess Rawley for further details if necessary.

Venture Strategy Reports – 200 points (20%)

You will be asked to submit two Venture Strategy Reports, due on days when we discuss a specific sector (2/20-Energy, 4/3-Social, 4/10–Climate, 5/8-Organic Foods). Students will be asked to submit a report on a venture (or venture investor) in that particular sector and to present the report to the class (time allowing). I’m open to
creative reports, or reports on companies not in that particular sector-just check in with me before you proceed. You may submit your reports in teams of two (maximum) if desired. Your assignment is to find a venture within the sector and report on the nature of the venture, its business strategy, and current state of the business. This could be a division or effort of a large corporation, but a start-up or small public company is preferred. I can help you to locate a suitable venture, or you may find one on your own. The written report should follow the format provided on RamCT Blackboard. I’m open to creative reports, or reports on companies not in that particular sector-just check in with me before you proceed.

Reports should be three to four typed pages (1 to 1.5 spacing). I expect that your research be extensive and much more inclusive than a simple Internet search, or a repeat of company documents. Independent evaluations, such as newspaper articles, trade magazine reports, or investment analyses are essential. Please include a list of references at the end of the report, and cite the sources of information throughout the text. Your presentation in class will be informal yet should be sufficiently specific to generate discussion. Better reports are well researched, well written, and utilize the concepts and language from the class and other courses. I will grade the hardcopy, so please make sure you submit all reports in hardcopy.

Quizzes – 225 points (22.5%)

I will give quizzes at the beginning of some classes to insure that the assigned materials are read in preparation for class. Quizzes will not be given on days when venture strategy reports are due.

Team Project – 425 points (42.5%)

Overview: This project asks you and your team to write a business plan for your GSSE project. Substantial time will be spent in class discussing the various components of the business plan and the process of business planning. We will walk step-by-step through each of the sections. It is understood that your projects are in various stages and you may not have the information necessary for all parts of the plan. Nevertheless, the process of considering each aspect of the business should be very productive and prepare you for your summer fieldwork. In addition, the complete financial statements for your plan will not be required for this course. I do strongly encourage you to include basic information on revenues/costs and profitability, particularly for your final presentation. I will also ask you to provide information on funding and offering, sources and uses of funds.

If the business plan approach does not work for you or your team, I ask that you perform a Sector Opportunity Study. The Sector Opportunity Study approach starts with a given sector or technology (i.e. green building, residential solar) and utilizes the process of analysis to arrive at a set of potential business opportunities. The deliverable is a report of the analysis, the generation of a list of potential opportunities, and the development of a business model for at least one opportunity. The project can be seen as an intelligent, flexible, and narrowing search process. While searching various information sources, you should be alert to indications of potential opportunities, as the identification of an opportunity will likely result from your attentiveness (see RamCT for further information).

Schedule:
Prior to 2/6: Meet with Mark Newhouse
2/6: Project Proposals and First Screen (10 points)
2/20: Name and Tagline, Cover Page, Table of Contents, Executive Summary (15 points)
3/13: Line of Fire Session (Industry and Market Analysis (written & oral - 30 points)
3/14: Meet with Mark Newhouse
4/24: Line of Fire Session (Marketing, Operations, Development, and Mgmt Plans (written & oral - 30 points)
4/25: Meet with Mark Newhouse
5/15: Business Plans due and Project Presentations (340 points)
Research: Some of the search methods I suggest include the following:

- Extensive search of library literature databases (journals, magazines, newspapers): This is a good place to start, and will lead you to other sources of information.
- Trade magazines: Be sure you find relevant trade journals, as the information is often of high quality.
- Industry groups: Seek these out and look for publications relevant to the topic.
- Experts in the field: Calling experts in the field can really expedite your search process and lead you to superior information.
- Government publications: These publications can provide excellent information regarding the future of technologies, demographic changes, and even technologies that are available.
- Web searches. Do not limit your information search to web sites.

Working as Teams: Teams are expected to meet together weekly, and take written notes about who will take on what tasks. Should a team member not be pulling their weight, the first step is for the team to address the issue with the participant directly. If this does not resolve the problem, the instructor should be notified. A student who is not meeting expectations runs the risk of being “fired” by their team. If this should occur, the student will need to work as a team of one on a project. I will also collect peer evaluations at the middle and end of the course to gauge the extent of each individual’s participation in the project, and will adjust individual grades accordingly.

Final Report and Presentations: I will evaluate the business plan based on the following criteria: 1) Grammar, writing style, and organization, 2) Quality and extensiveness of research, 3) Conceptual analysis and understanding, 4) Quality of recommendations and entrepreneurial ideas, 5) Level of effort, and 6) Quality of presentation. I may also use the grading criteria for the plan and presentation on RamCT Blackboard. Please cite the sources of your information in the text, with the complete reference in a separate bibliography at the end of the report. Tables and figures can greatly enhance the quality of your report, but be sure to integrate these into the text/content of the report. Longer, less central materials should be placed in the appendix. Please hand in two written and one electronic copy of both the business plan and your presentation.

Events/Organizations of Interest

NREL Industry Growth Forum. [http://www.industrygrowthforum.org/about.html](http://www.industrygrowthforum.org/about.html)


Point Carbon News Service Online. [www.pointcarbon.com](http://www.pointcarbon.com)

Carbon Market North America. [www.pointcarbon.com](http://www.pointcarbon.com)

Clean Edge Alert. [http://www.cleanedge.com](http://www.cleanedge.com)

Overview Calendar

1/23:  Introduction to the Course/Tragedy of the Commons Simulation

1/30:  Opportunities in Sustainable Venturing

2/6:   Understanding Environmental Economics and Market Systems

2/13:  Business Planning I: The Business Planning Process

2/20:  Sector Study I: Energy; Opportunities in a Fossil Constrained World

2/27:  Institutional Strategies in Sustainable Venturing

3/6:   Business Planning II: Marketing, Operations, Development and Mgmt Plans

3/13:  Line of Fire Session I (Industry and Market Analysis Due)

3/20:  Spring Break

4/3:   Environmental Marketing
       Sector Study II: Social Entrepreneurship

4/10:  Launching the Sustainable Venture
       Sector Study III; Climate Change: Opportunities in a Carbon Constrained World

4/17:  Financing the Sustainable Venture
       Business Planning III: Financials, Funding, Offering, Sources and Uses, Exit

4/24:  Line of Fire Session II (Marketing, Operations, Development, and Mgt Plans Due)

5/1:   Business Planning IV: Publishing and Presenting Your Plan

5/8:   Sector Study IV; Organic Foods
       Overflow/Course Summary/Wrap-Up

5/15:  4:30-10:30pm, Final Exam Period
       Student Project Presentations (Exact time to be determined)
       Papers Due
Detailed Course Schedule

1/23

Introduction to the Course/Tragedy of the Commons Simulation
1. Introduce students to content and structure of the course.
2. Utilize the “Tragedy of the Commons” simulation to A) develop an interactive culture in the classroom, B) demonstrate the basic fundamentals of market failure and C) begin to understand the nature of solutions to market failures.

Read In-Class
Course Introduction
Tragedy of the Commons simulation and discussion
A Beautiful Mind video clip (time permitting)
Governing dynamics: http://www.youtube.com/watch?v=CemLiSI5ox8
Nobel Prize: http://www.youtube.com/watch?v=H7Y_mHNgnpA
Elinor Ostrom: http://www.npr.org/blogs/money/2012/06/12/154872185/remembering-elinor-ostrom-nobel-laureate
Game Theory: http://www.youtube.com/watch?v=CemLiSI5ox8

Assignment

References

1/30

Opportunities in Sustainable Venturing
1. Translate the knowledge of market failure into an understanding of market-based solutions to social and environmental sustainability challenges.
2. Explicate the role of entrepreneurship in resolving market failures and environmental challenges.
3. Understand the nature and magnitude of economic opportunity available to sustainable and environmental entrepreneurs.
4. Begin to understand the specific entrepreneurial actions leading to profitable and sustainable business models.

Read

In-Class
Tragedy of the Commons Overflow
Drivers and Opportunities in Sustainable Venturing
Get the Chips (time permitting)
Quiz?
Magic Washing Machine (time permitting):
Goldman Sachs: Market Based Solutions to Environmental Challenges
http://www.youtube.com/watch?v=l2mUOBZI50c

**Assignment**
Consult with Mark Newhouse

**Resources**
- www.greenbiz.com/enewsletter/ - GreenBuzz Newsletter
- www.cleantech.com – Cleantech Venture Group
- www.cleanedge.com - Clean Edge, Inc.
- http://www.perc.org/ - Property & Environment Research Center

**References**

2/6

**Understanding Environmental Economics and Market Systems**
1. Introduce students to the fundamentals of environmental economics and the concept of market failure.
2. Understand the various types of market failure and their relationship to environmental issues and unsustainable economic behaviors
3. Introduce students to foundational terminology in the field of sustainable development

**Read**

**In-Class**
Environmental Economics and Market Systems
Dollar Auction (time permitting)
Quiz?

**Assignment**
Project Proposals and First Screen (one page proposal and fill out Barringer Appendix 2.1)

**Resources**
Business Planning I: The Business Planning Process

1. Introduce students to the business planning process and the components of a business plan
2. Review the basic fundamentals of industry and market analysis
3. Understand industry and market analysis and content necessary for a business plan.
4. Learn the fundamentals of library research skills

Read
1. Barringer, Chapter 1
2. Barringer, Chapter 2
3. Barringer, Chapter 4
4. Barringer, Chapter 5
5. Barringer, Chapter 6

In-Class
Discussion: To Plan, or Not to Plan?
Discussion: Developing and Screening Business Ideas
Discussion: Getting Started
Discussion: Industry Analysis and Market Analysis
Librarian visit?
Sample Business Plans
Quiz?

Assignment

Resources
Lawrence & Moyes, Writing a Successful Business Plan 2007 (on RamCT)
Concept Statement description in Barringer, p. 56-57
Elevator Pitch description (on RamCT)
Sample Business Plans (on RamCT)
http://libguides.colostate.edu/entrepreneurship
Louise Feldmann (1-4262, louise.feldmann@colostate.edu)
Template of competitor analysis grid and examples (on RamCT).
Two questions: http://vimeo.com/8445969

References
Sector Study I: Energy: Opportunities in a Fossil Constrained World

1. Discuss foundational concepts and trends in the energy industry.
2. Overview various technical, economic, and political trends in renewable and sustainable energy.
3. Discuss the technologies, economic drivers, industry structure, and competitive dynamics of the renewable energy industry.

**Read**


**In-Class**

Foundations of Energy
Foundations of Renewable and Sustainable Energy
Venture Strategy Reports
Videos (time permitting)

- BP: 2012 Energy Report: [http://www.youtube.com/watch?v=y8f1Ev5lCBE&feature=c4-overview-vl&list=PLaxBnE1FlI02KtWiWytAlTzKCYasFyFxw](http://www.youtube.com/watch?v=y8f1Ev5lCBE&feature=c4-overview-vl&list=PLaxBnE1FlI02KtWiWytAlTzKCYasFyFxw) (Infographic, 3min)
- BP Statistical Review 2013: [http://www.youtube.com/watch?v=tt_GHwY7uZQ&list=PLaxBnE1FlI02KtWiWytAlTzKCYasFyFxw](http://www.youtube.com/watch?v=tt_GHwY7uZQ&list=PLaxBnE1FlI02KtWiWytAlTzKCYasFyFxw) (Interview, 4 minutes)
- BP America’s Energy Future 2030: [http://www.youtube.com/user/BPpltc?v=PN6Nq_hpUck](http://www.youtube.com/user/BPpltc?v=PN6Nq_hpUck) (Infographic, 2 min)
- The Energy Mix: Outlook for the Next 30 years: [http://www.youtube.com/watch?v=LUAWa1vbTTk](http://www.youtube.com/watch?v=LUAWa1vbTTk) (9 min)
- Michael Levi: [http://www.youtube.com/watch?v=UvXu7yxM6zU](http://www.youtube.com/watch?v=UvXu7yxM6zU) (60 minutes)
- Modern Marvels: Renewable Energy: [http://www.youtube.com/watch?v=BIz2pLz18ck](http://www.youtube.com/watch?v=BIz2pLz18ck) (44 mins)
- Quayle Hodek: [http://www.youtube.com/watch?v=IEWYLbQXg4U](http://www.youtube.com/watch?v=IEWYLbQXg4U)

**Assignment**

Name and Tagline, Cover Page, Table of Contents, Executive Summary
Venture Strategy Reports

See the following for company ideas:

- Top Clean Energy Companies: [http://images.businessweek.com/ss/09/07/0714_sustainable_planet/1.htm](http://images.businessweek.com/ss/09/07/0714_sustainable_planet/1.htm)

**Resources**

- [www.eia.doe.gov/](http://www.eia.doe.gov/) - DOE Energy Information agency
- [www.industrygrowthforum.org/about.html](http://www.industrygrowthforum.org/about.html) - NREL Industry Growth Forum.
- [www.windpoweronline.com](http://www.windpoweronline.com) International investment clearinghouse
- [www.awea.org](http://www.awea.org)

**References**

- BP Statistical Review of World Energy
Institutional Strategies in Sustainable Venturing

1. Understand the concept of institutional entrepreneurship and its potential for resolving market failure, solving social and environmental challenges, and capturing economic value.
2. Discuss externalities, public goods, property rights, inappropriate government intervention, and monopoly power as opportunities for entrepreneurial action.
3. Illustrate the means to capture opportunities for institutional entrepreneurship through various cases and/or illustrations.

Read

In-Class Assignment
Institutional Strategies in Sustainable Venturing Quiz?

Resources
www.perc.org/

References

Business Planning II: Marketing, Operations, Development, and Management Plans

1. Discuss marketing, operations, development and management plans

Read
1. Barringer, Chapter 7
4. Barringer, Chapter 8
5. Barringer, Chapter 9

In-Class Discussion: Marketing Plan
Discussion: Management Team and Company Structure
Discussion: Operations and Development Plan Quiz?

Assignment

Resources

References
3/13
Line of Fire Session I (Industry and Market Analysis written and oral presentations due)
Overflow
Mid-term peer evaluations due

3/20
Spring Break

4/3
Environmental Marketing
Sector Study II: Social Entrepreneurship

1. Understand the basics of environmental marketing
2. Discuss the nature of the green market as an emerging customer base.
3. Understand the opportunities and approaches to environmental marketing
4. Understand the nature of and trends in social entrepreneurship.
5. Learn about the unique resources available to social entrepreneurs.
6. Experience the process of social entrepreneurship through examples and illustrations.


In-Class
Environmental Marketing and Informational Strategies in Sustainable Venturing
Environmental Marketing Exercise (time permitting)
Opportunities in Social Entrepreneurship
Venture Strategy Reports
Video: Social Entrepreneurs: Pioneering Social Change (9:04)
http://www.youtube.com/watch?v=jk5LI_WcosQ
Video: Husk Power Systems: Electricity from Crop Waste:
http://www.youtube.com/watch?v=d0XcoeqVoal&feature=player_embedded
Video: Central Asia Institute. CAI Story, 60 Minutes
http://www.cbsnews.com/video/watch/?id=7363068n
Video: Kony 2012: http://www.youtube.com/watch?v=Y4MnpzG5Sqc

Assignment
Quiz?
Venture Strategy Reports
See the following for company ideas:
Forbes’ List of the Top 30 Social Entrepreneurs (2011)
Echoing Green Fellows List: http://www.echoinggreen.org/fellows
Unreasonable Institute Fellows: http://unreasonableinstitute.org/all-fellows/

Resources
www.green-e.org certification
www.ecolabelling.org Ecolabel Index
www.renewablechoice.com/ Renewable Choice Energy
www.Ashoka.org
www.Skoll.org

References


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**4/10**

**Launching the Sustainable Venture**

**Sector Study III: Climate Change; Opportunities in a Carbon Constrained World**

1. Discuss the various elements of building and implementing a sustainable venture
2. Overview basics of climate science, policy, and business.
3. Examine how climate change is impacting business and creating opportunities for entrepreneurial strategies.

**Read**


**In-Class**

Launching the Sustainable Venture
Climate Change and Opportunities in a Carbon Constrained World

Venture Strategy Reports

How Cap and Trade Works (2 minutes)

[http://www.youtube.com/watch?v=EKT_ac4LPkU&amp;feature=related](http://www.youtube.com/watch?v=EKT_ac4LPkU&amp;feature=related)

Video: The Island President Trailer

[http://www.youtube.com/watch?v=ryhr_T7cRnY](http://www.youtube.com/watch?v=ryhr_T7cRnY)

Videos: Unburnable Carbon

[http://www.youtube.com/watch?v=gn7T_AvPToY](http://www.youtube.com/watch?v=gn7T_AvPToY) (4 mins)


**Assignment**

Venture Strategy Reports

**Resources**

[www.pointcarbon.com](http://www.pointcarbon.com) - Point Carbon News Service Online.
Financing the Sustainable Venture

Business Planning III: Financial Statements, Funding and Offering, Sources and Uses of Funds, Exit Strategy

1. Understand venture financing and unique opportunities for funding the sustainable venture
2. Understand the financial aspects of the business plan

Read
2. Barringer, Chapter 10

In-Class
Financing the Sustainable Venture
Overview of Financial Statements
Funding and Offering, Sources and Uses of Funds, Exit Strategy
Quiz?

Videos
Goldman Sachs: The Clean Technology and Renewables Market
http://www.youtube.com/watch?v=jdyRCCAnph8
Cleantech Group: 10 years of Clean Technology Innovation (4 mins) http://www.youtube.com/watch?v=BBYlhx_UpuI

Assignment
Resources
Green VC: List of Green and Social Venture Funding Sources.
http://www.greenvc.org/green-funding-sources.html
Financial Projections models (on RamCT)
References


4/24
Line of Fire Sessions Marketing, Operations, Development, and Mgt Plans (written and oral presentations due)

5/1
Business Planning IV: Publishing and Presenting Your Plan

Overflow

1. Learn how to integrate your business plan into a final document.
2. Understand how to make an effective business plan presentation and the context of those presentations.

Read Barringer, Chapter 11
In-Class Discussion: Business plan publication and presentation
Quiz?
Assignment
Resources
References Kawasaki, G. The Art of the Start

5/8
Sector Study IV: Organic Foods

Overflow/Course Summary/Wrap-Up

1. Familiarize students with the natural and organic foods industry
2. Understand the role of purpose, passion, and persistence in the entrepreneurial process
3. Identify potential opportunities in this industry

Read Opportunities in Organic Foods
In-Class Speaker?
Venture Strategy Reports
Video: Whole Foods Parking Lot:
   http://www.youtube.com/watch?v=2UFc1pr2yUU
Assignments
Resources
Naturally Boulder
New Hope Communications
Lohas Journal
Organic Trade Association

References

5/15; 4:30-10:30pm (exact time to be determined)
Final Exam Period
Student Project Presentations
Papers Due