



Environmental Sustainability and Value Creation

OIDD-762

Fall 2019-Q2

Monday and Wednesday 10:30am – 12pm

JMHH G90

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Office hours: by appointment (email to schedule)

Course Description

This course provides an overview of topics related to business sustainability with a focus on how environmentally sustainable approaches can create value for the firm. We will explore trends in corporate practices and consider specific examples to examine the interactions between the firm and the environment. Several guest lecturers will discuss how they have addressed sustainability within their company. This course has three objectives: to increase students' knowledge of sustainability practices and their impact on firm performance; to teach students to think strategically and act entrepreneurially on environmental issues; to help students design business approaches to improve environmental outcomes, while simultaneously creating value.

Course Grading

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| Article reflection | 10% |
| Participation and attendance | 15% |
| Personal case study | 20% |
| Mid-term quiz | 20% |
| Final paper | 35% |

Assignments

Article reflection: For every class, one or two students will find and reflect on a recent article related to the topics of the class. The article should be posted on Canvas, along with three discussion questions, two days before the class and a one-page reflection submitted through Canvas on the day it is due (no later than 5:00pm). Sign-ups for dates should be done on Canvas immediately after the first class. Each student will do one of these, accounting for 10% of their overall course grade (failure to post the article and questions in advance or turn in the reflection on time will lower your grade by 20% for each 24 hours that it is late). The one-page reflection and class questions should address:

- How the article relates to ideas or themes of the course
- What lessons or new insights can be drawn from the article

Participation and attendance: Attending classes and participating fully in class will be 15% of each student's grade. This means being on time, not leaving early, participating in class

discussions, demonstrating that readings and assignments have been completed, and sharing relevant examples of course themes. Absence in class will be marked as excused or unexcused. Absences will be excused only for advanced notice of family or personal medical emergencies, illness, and religious holidays. Unexcused absences will lower your participation grade.

Please use your name tent for every class. You must turn off all phones and electronic devices. Laptops and tablets are permitted only for note-taking; phones should not be used during class. Texting, emailing or other use of electronic devices for non-course purposes during class time will lower your participation grade.

Personal case study: The personal case study is an examination of environmental sustainability in your daily life, used to gain insights and ideas on how companies can contribute to sustainable outcomes. Each student should choose **one** of the three options listed here and then write a 4 - 6 page essay (11 or 12 point font; 1.5 spacing) discussing what they learn from the activity that could be applicable to firms considering how to contribute to environmental sustainability. The essay should discuss how environmental outcomes could have been improved, including a realistic discussion of the options, their costs, and their relative contribution to the overall goal. The personal case study must be handed in on time. For every 24 hours or portion thereof that a paper is late, it will be docked one-third of a letter grade.

Due November 13, by 5:00pm. Submit via Canvas.

- (1) Zero-trash day. Try to go 24 hours without generating any trash. Recycling and composting do not count as trash. Any trash that is created should be documented. While doing this exercise for a day, pay attention to the role of company choices and how they influence your ability to eliminate trash (e.g., packaging choices, default options, etc.), as well as your own habits and behavior. Your write up should discuss several activities for you to eliminate trash in your daily life, but also discuss at least two ways companies could make different choices or offer different products that would help you eliminate trash more easily. Note: your grade does not depend on your ability to successfully eliminate trash, but on thoughtful discussion and analysis.
- (2) Track your carbon footprint for a week. Use an online carbon footprint calculator (such as [this one](#) or [this one](#) or [this one](#)) to calculate your carbon footprint for a typical week. In your write-up examine the largest contributors to your footprint and detail steps you could take to reduce your footprint. Evaluate the cost of these steps (including non-financial costs) and compare those to estimates of the social cost of carbon. Discuss how the choices of firms influence your ability to reduce your own carbon emissions. Note: your grade does not depend on your footprint or your proposed steps but on thoughtful discussion and analysis.
- (3) Eco-premiums paid or rejected. Evaluate your purchases for a week and identify all the times when you did, or could have, paid more money for an environmentally or socially responsible product. When did you choose to pay a premium for more sustainable products and when did you reject doing so? What factors influenced your decisions? What would make you choose differently? Did environmentally friendly

options ever cost less? Note: your grade does not depend on your actual choices but on thoughtful discussion and analysis.

Quiz: There will be one in-class quiz on November 20 testing students on concepts in environmental economics. It will take roughly 30 minutes to complete and will draw on environmental economics concepts from readings and lectures. You will not be permitted to use any notes or electronic devices during the quiz.

Final paper:

The final paper is a chance for students to apply what they have learned in the course to a real-world problem. This paper should be 10 – 15 pages long, 1.5 spacing, 11 or 12 point font. References should be included at the end.

A one to three paragraph proposal for the final paper is due December 2nd, by 5pm (via Canvas). The final paper is due December 16th by 5pm (via Canvas). No excuses for late papers since you have plenty of advance notice on due date. For every 24 hours or portion thereof that a paper is late, it will be docked one-third of a letter grade.

There are two possibilities for the final paper and each student can choose which to pursue:

(1) Propose a potential business opportunity (a new idea or a new version of an existing practice) to improve sustainability.

This opportunity should be well-defined and clearly scoped. Students electing this topic need to be clear that the idea is novel, they need to conduct research on the marketability and feasibility of the concept, and present a plan for how the idea could be developed and implemented, including an examination of costs and potential returns (financial and non-financial). Final paper can be structured like a business plan or as a standard research paper. Evidence of research and thoughtful analysis will inform your grade.

(2) Analyze a company's sustainability efforts and make recommendations for improvement.

Students selecting this topic need to choose a particular company, gather all the information they can on the company's sustainability efforts, evaluate them, and make clear recommendations for improvement. Students should contact the company directly to obtain more information, conduct interviews of decision makers, and seek other sources of information. The final paper should also draw on theories and concepts from the course. Evidence of research and thoughtful analysis will inform your grade.

Collaboration and Plagiarism Guidelines

Students are to work individually on all assignments. Students are encouraged to discuss course themes and topics with each other, but all research, idea generation, and writing for the case study and final paper must be done individually.

All literature or other work used in assignments must be documented using standard author-date parenthetical citations accompanied by a reference list at the end of the paper. See guidelines online [here](#). Plagiarism is taken seriously and will be dealt with according to university policy. Students must adhere at all times to the University of Pennsylvania's Code of Academic Integrity.

Course Outline and Readings

- (1) October 21 – Introduction to the Course and Overview of Environmental Sustainability

Readings:

[Sustainability's Deepening Imprint](#), McKinsey & Company

Lovins, A., Lovins, H. and P. Hawken (2007). "[A Road Map for Natural Capitalism](#)" *Harvard Business Review* July/August 2007.

- (2) October 23 – Beyond Green: Is Sustainability Value Enhancing?

Readings:

Porter, M. E. and M. R. Kramer (2011). "Creating Shared Value" *Harvard Business Review* January/February: 62-77.

Crane, A., G. Palazzo, L. J. Spence, and D. Matten (2014). "Contesting the Value of 'Creating Shared Value'" *California Management Review* 56(2): 130-153.

Optional Readings:

Friedman, M. (1970). "The Social Responsibility of Business Is to Increase Its Profits" *The New York Times* September 13.

Ambec, S. and P. Lanoie (2008). "Does It Pay to Be Green? A Systematic Overview" *Academy of Management Perspectives* 22(4): 45-62.

- (3) October 28 – Introduction to Concepts in Environmental Economics

Readings:

Fullerton, D. and R. N. Stavins (1998). "[How Do Economists Really Think about the Environment?](#)" Washington, DC: Resources for the Future.

Hardin, G. (1968). "[The Tragedy of the Commons](#)" *Science* 162(3859): 1243-1248.

Optional (**note**, while these are optional, they would be helpful in preparing for the quiz on November 20th):

[Economic Invisibility of Nature](#), TED Talk

[Market Failure and the Role of Government](#), Khan Academy

- (4) October 30 – Guest Lecture: Robert Fernandez, Vice President and Director of ESG Research at Breckinridge Capital Advisors
Readings:
 Eccles, R. G. and S. Kilmenko (2019). “Sustainability: The Investor Revolution” *Harvard Business Review* May/June 3-12.
 Fernandez, R. and N. Elfner (2015). “ESG Integration in Corporate Fixed Income” *Journal of Applied Corporate Finance* 27(2): 64-72.
- (5) November 4 – Guest Lecture: Chris van Bergen, Chief Operating Officer and Chief Financial Officer, Nest, Inc.
Readings:
[Retailers, NGO Create Standards for Artisans](#), Wall Street Journal
[The State of Sustainable Supply Chains](#), EY and the UN Global Compact
[Greening Global Supply Chains](#), The Sustainability Consortium
- (6) November 6 – Guest Speaker: Nick McCulloch, Senior Manager of Sustainability from Rubicon
Readings:
[Sustainable Development Goals](#)
- (7) November 11 – Sustainability, Business, and Public Policy
 Hahn, R. W. and R. N. Stavins (1992). “Economic Incentives for Environmental Protection: Integrating Theory and Practice” *The American Economic Review* 82(2): 464-468.
 Economist Intelligence Unit (2002). “The Invisible Green Hand” *The Economist* 364(8280).
 Economist Intelligence Unit (2018). “Companies are Moving Faster than Many Governments on Carbon Pricing” *The Economist* January 11.
- (8) November 13 – Measuring the Environment
PERSONAL CASE STUDY DUE.
Readings:
 Arrow, K. et. al. (1996). “Is there a Role for Benefit Cost Analysis in Environmental, Health and Safety Regulation?” *Science* 272(5259): 221-222.

Kelman, S. (1981). "Cost-Benefit Analysis: An Ethical Critique (with replies)" *Regulation* January/February 33-40.

[Bottom Line on Corporate GHG Inventories](#) (2008), World Resources Institute

[Why Take a Life Cycle Approach?](#) (2004) UNEP

- (9) November 18 – Guest Lecture: Tracy General Manager, Corporate Communications and Sustainability Mitsubishi Corporation (Americas)

Readings:

Dobb, E. (2010). "[Alaska's Choice: Salmon or Gold.](#)" *National Geographic* December.

Two letters about Pebble Mine and other additional readings for Pebble Mine case study (on Canvas in the "Files" section)

- (10) November 20 – B Corps

IN CLASS QUIZ.

Readings:

Surowiecki, J. (2014). "[Companies with Benefits.](#)" *The New Yorker* August.

Kim, S., M. J. Karlesky, C. G. Myers, and T. Schifeling (2016). "Why Companies are Becoming B Corporations." *Harvard Business Review* June 17.

Optional Readings:

Chen, X. and T. F. Kelly (2015). "B-Corps—A Growing Form of Social Enterprise: Tracing Their Progress and Assessing Their Performance." *Journal of Leadership & Organizational Studies* 22(1): 102-114.

- (11) November 25 – Managing Climate Risks

Readings:

[Protecting Our Capital: How Climate Adaptation in Cities Creates a Resilient Places For Business](#), CDP

[New York's MTA to sell \\$125 million 'catastrophe' bond](#), Reuters

[What Land Will Be Underwater in 20 Years? Figuring It Out Could Be Lucrative](#); New York Times

[Axa launches insurance to let farmers protect themselves against the weather](#); The Telegraph

Optional Readings:

[Economic Risks of Climate Change in the United States](#), Risky Business

[Climate Change Preparedness and the Small Business Sector](#), SBM, ASBC

(12) November 27 – NO CLASS

(13) December 2 – The Circular Economy

FINAL PAPER PROPOSAL DUE.

Readings:

[The Circular Economy: From Concept to Business Reality](#), IGEL, Wharton

[Design Innovation](#), William McDonough talk at World Economic Forum

[The End of Garbage](#), Fortune

Optional Readings:

[Toward the Circular Economy](#), World Economic Forum

(14) December 4 – Stakeholders, Activists, and Society’s Problems

Readings:

Zadek, S. (2004) “The Path to Corporate Responsibility,” *Harvard Business Review* December: 125-132.

Rogers, J. E. (2011) “[How I Did It: The CEO of Duke Energy on Learning to Work with Green Activists](#),” *Harvard Business Review* May.

Barnett, M. L. (2016) “The Business Case for Corporate Social Responsibility: A Critique and an Indirect Path Forward,” *Business & Society* DOI: 10.1177/0007650316660044

(15) December 9 – Wrap up

Readings:

Kell, G. (2018). “[The Future of Corporate Responsibility](#).” *Forbes* June 18.