



EC Course Offerings Related to Business and the Environment **Fall 2011 and Winter 2012**

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Fall 2011

- Business and the Environment (Assistant Professor Michael Toffel)
- Energy Business and Geopolitics (Associate Professor Noel Maurer)
- Entrepreneurial Finance (Professor William A. Sahlman, Professor of Mgt Practice Joseph Lassiter and Assistant Professor Ramana Nanda)
- Field Course: Commercializing Science: Physical Science Focus (including Clean Tech) (Professor Lee Fleming and Visiting Professor Woodward Yang)
- Real Property (Professor of Mgt Practice Arthur I. Segel)
- Social Entrepreneurship in the Business Sector (Half-Course early) (Associate Professor Christopher Marquis)

Business and the Environment



Term: Fall; Q1; Q2

Number of Sessions: 20 (group paper)

Instructor: Mike Toffel

Overview: This course examines how leading companies are seeking competitive advantage in addressing environmental challenges, both by differentiating products and by reducing costs and risks in operations and supply chains.

Major themes: Do companies reduce the environmental impacts of their operations and supply chains? What metrics should managers use to evaluate progress? What new business models and products are emerging to solve environmental problems, profitably? What challenges and market opportunities are arising from greenhouse gas emissions regulations? How can companies successfully enter these markets?

Context: Cases focus on companies from many industries in many countries.

The Energy Business and Geopolitics



Term: Fall; Q1; Q2

Number of Sessions: 20 (paper)

Instructor: Associate Professor Noel Maurer

Overview: In this course, we try to understand the (interrelated) reasons for energy price volatility and government intervention, and the strategic implications of each.

Students will leave the course with a broad exposure to the kinds of strategic and risk management problems that confront firms in the energy industries, a set of analytic approaches to make sense of those problems, and an enhanced ability to devise and implement strategies that take economic and political considerations into account.

Major themes: The course applies ideas on industry structure, competitive positioning, competitive dynamics, and corporate strategy from the basic Strategy course. It applies ideas from BGIE on the rationales for government intervention, the political factors that influence government policymakers, and how firms deal with the political risk inherent to the energy business.

Content: The course consists of four modules, with representative cases: (1) Extraction and expropriation: Saudi Aramco; oil sands; the Chad-Cameroon pipeline; Laredo Petroleum; (2) Adding Value: oil refining in China; the Macondo oil spill; (3) Electricity: the 2003 blackout; smart grid; and (4) Alternatives: nuclear power (Areva); photovoltaic cells (Suntech); wind (Cape Wind); biofuels (Cosan).

Entrepreneurial Finance



Term: Fall; Q1; Q2

Number of Sessions: 29 (exam)

Instructors: William Sahlman (8:30 am) , Joe Lassiter (10:00 am) , Ramana Nanda (11:40 am)

Overview: Entrepreneurial Finance is designed to help managers make better investment and financing decisions in entrepreneurial settings. The course covers all stages of the process, from startup to harvest. Case protagonists participated in over half of the class discussions.

Content: The course focuses attention on deal structuring, incentives and real options. Approximately one-third of the cases concern technology-based businesses, though the emphasis is on gaining insights into entrepreneurial management, not technology per se.

Field Course: Commercializing Science: Physical Science Focus (including Clean Tech)



Term: Fall; Q1, Q2

Number of Sessions: 13 two-hour sessions (project)

Instructors: Professor Lee Fleming and Visiting Professor Woodward Yang

Overview: Students are selected from Harvard's schools of business, medicine, science, engineering, law, public health, government, and teaching hospitals. The focus is on inventing breakthroughs, working with other professions such as science, medicine, and law, and moving research from the lab to the market place.

Major themes: Module 1 presents an overview of the course and explores how breakthroughs occur. We will learn how to recognize outstanding laboratories that are consistently creative and also rich sources of intellectual property for startups. Module 2 focuses on how to commercialize science. While we discuss a number of cases on university technology transfer and science-based startups, the main learning vehicle in this module is a multi-disciplinary project based on a Harvard research breakthrough.

Content: A center piece of the course is a multi-disciplinary team project to create the plan for commercializing research from a university or private sector lab. Historically, several student teams have selected green technology projects. Final presentations of the projects will be attended by Harvard faculty, alums and local venture capitalists. Students will be encouraged to develop the best projects for new venture creation and entry into the HBS business plan contest in April.

Real Property



Term: Fall; Q1; Q2

Number of Sessions: 29

Instructor: Arthur I Segel

Overview: The course is designed for students wanting to understand real estate from a bottom-up perspective including financial analysis and valuation. The goals of the course are to explain how real estate works, how to assess risks, how to be a better deal maker (including as an investor), how to manage a project and how to be a leader in the industry.

Major themes/Objectives: The course provides students with a broad review of the language, products, analytic tools, decision making process, historical background and core concepts in real asset investment and management along with an understanding of the debt and equity capital markets. Special emphasis is given to taxes, failure, distress, bankruptcy, information asymmetries, agency conflicts and transaction costs.

Content: Financial analysis, property types, capital markets, development process, deal structuring, partnerships, negotiations, and sustainability in an international context.

Social Entrepreneurship in the Business Sector



Term: Fall; Q1 (Half-Course early)

Number of Sessions: 14

(Paired with late fall term Field Study Seminar: Social Entrepreneurship in the Business Sector)

Instructor: Christopher Marquis

Overview: This course examines social entrepreneurs and their companies, providing compelling examples that doing well and doing good can be inextricably linked by using the levers of business to achieve profit and social impact. This course is meant for students who will found or lead social mission oriented businesses, or will advise or work with entrepreneurs, as they seek to create social and business value.

Major themes: The course focuses on four modules. In the first, students learn how to connect business and social value and how to balance social and business missions. In the second and third modules, the course focuses on implementing such dual missions through both leadership and organizational structures such as partnerships. The final module presents a series of cases that integrate the first three modules to better understand how such organizations can grow and scale while staying authentically committed to their original missions.

Content: The course considers such questions throughout all stages of a social venture -- from conception, through start-up to scaling, and then exit or IPO.

EC Course Offerings Related to Business and the Environment

Winter 2012

- Acting in Time: Leadership and Management in the Face of Large-Scale Risks (Professor Herman B. "Dutch" Leonard)
- Business Marketing (Associate Professor Thomas J. Steenburgh)
- Field Course: Creating and Communicating Value: Building Business Models (Professor of Management Practice Robert G. Eccles and Assistant Professor Georgios Serafeim)
- Field Course: Innovation in Business, Energy, and Environment (Professor Lee Fleming, Professor Rebecca Henderson, Professor of Mgt Practice Joseph Lassiter, Senior Lecturer John D. Macomber, and Professor Forest Reinhardt)
- Open Systems Strategy (Half-Course early) (Professor Rebecca Henderson)
- Real Estate Development, Design, and Construction (Half-Course late) (Visiting Lecturer A. Eugene Kohn, Senior Lecturer John D. Macomber, and Senior Lecturer Christopher S. Gordon)
- Real Estate in Emerging Markets (Senior Lecturer Nicolas Retsinas)
- Strategies Beyond the Market (Professor Dennis Yao)
- Sustainable Cities; Urbanization, Infrastructure, and Finance (Half-Course early) (Senior Lecturer John D. Macomber)

Acting in Time: Leadership and Management in the Face of Large-Scale Risks



Term: Winter; Q3; Q4

Number of Sessions: 13 two-hour sessions (paper)

Instructor: Herman B. "Dutch" Leonard

Overview: This course focuses on the challenges of successful leadership and management when confronting risks of large-scale (and typically low-probability) events. Human beings and organizations often do not find their way to the best mix of strategies for managing such risks, either before, during, or after they arise. To successfully "act in time," they must be able to foresee the risks or risk consequences, figure out the best approach to managing them, and then execute effectively against that strategy. Large-scale risks generally involve novel circumstances – which are both difficult to perceive and difficult to respond to. This course considers why leadership and management in this domain this is difficult – and what can be done to improve performance in high-risk, high-consequence situations.

Major themes: Acting in time; comprehensive risk management strategies; cognitive biases in risk management; prevention, preparation, response, and recovery; detection of and response to novel circumstances.

Content: Focuses on leadership issues (rather than on technical risk assessment).

Business Marketing



Term: Winter; Q3; Q4

Number of Sessions: 20 (paper)

Instructor: Associate Professor Thomas J. Steenburgh

Overview: Effective business marketing requires continuous interaction with customers, an understanding of the impact of marketing programs on the value chains of the selling and buying firms, and the ability to use information to make integrative decisions about the process of identifying, communicating, delivering and extracting value.

Major themes: The course focuses on both the strategic and front-line implementation aspects of managing issues in business markets.

Content: The course has four primary modules. In each, we look at situations involving new and existing products/services in embryonic, evolving, and mature markets:

1. Managing Products and Customers: Buying Behavior, Product-Line Strategies, and the Value Proposition.
2. Managing the Go-to-Market Strategy: Channel Development and Management
3. Personal Selling and Sales Management: Selling into Major Accounts and Sales Force Management
4. B2B 2.0: How web 2.0 technologies are changing B2B marketing

In addition to case studies, the course involves exercises, panel discussions, and guest lectures. Students will be asked to develop a sales pitches for their projects.

Field Course: Creating and Communicating Value: Building Business Models



Term: Winter; Q3; Q4

Number of Sessions: 28 sessions with an empirical paper and a field method project

Instructors: Robert G. Eccles and George Serafeim

Overview: In the first module, students will learn about how sustainability can create economic value by promoting social and environmental value through good governance and risk management. Some of the most significant problems of our age will be discussed such as employee motivation, supply chain management, environmental impact, corruption, license to operate, reputation risk, and management of scarce resources. In the second module, students will learn how to analyze and communicate nonfinancial information that measures the progress of the long-term strategic projects of the firm. The third module is field research. The task is to build a business model showing how sustainability can be embedded in the company's strategy and identifying the relationships between financial and nonfinancial performance. This business model will form the basis of an integrated report by the company.

Representative Cases: Novo Nordisk, KKR, Intel, UBS, Natura, Caesars, UFC, European Commission, Aviva Investors, Philips, Oddo Securities, Foxconn, Dow Chemical.

Course Video: http://video.hbs.edu/videotools/play?clip=ccv_course_promo

Field Course: Innovation in Business, Energy, and Environment



Term: Winter; Q3; Q4

Number of Sessions: 3 project management sessions, project meetings with the instructors, and 5 optional class sessions covering key concepts in accomplishing innovation in business and environment.

Instructors: Lee Fleming, Rebecca Henderson, Joseph Lassiter, John Macomber, and Forest Reinhardt

Overview: This field course is designed for students who want to pursue independent research into business innovations which consider environmental & energy impacts, consumer & social attitudes, and political & regulatory processes. These might range from start-ups to established companies to policy and investment research, inquiry, or business plan preparation.

Content: In addition to the attraction typical of all field based research at HBS, participants in this course also benefit from shared project planning, from networking and sharing with the other teams, and from access to all five instructors. Teams of 2-4 students must enter the course with a specific project that they wish to explore in-depth, and a “real world” project mentor/sponsor from outside of HBS.

Facility and Reach: This field course will meet in and take advantage of the Innovation Lab. This course reaches out to other Harvard graduate schools although each team must have one HBS MBA student.

Open Systems Strategy



Term: Winter; Q3; (Half-Course early)

Number of Sessions: 14 (papers)

Instructor: Rebecca Henderson

Overview: Can we address the environmental crisis if managers simply maximize shareholder value? If we continue to view increasing consumption as the primary goal of the economy? Is there any real alternative? What would it mean to manage a firm as if it were intimately connected to the world as an “open system”? This course takes a skeptical, pragmatic look at whether alternative models of firm management or governance are feasible and/or desirable.

Major themes: Integrating personal values and firm goals; Time horizons, discount rates and quarterly earnings; Creating shared value?; Global competition and the role of the state.

Content: Taught using a mixture of readings and cases. Individual 1-2 page paper due every week.

Real Estate Development, Design, and Construction



Term: Winter; Q4 (Half-Course late)

Number of Sessions: 14 (project)

Instructors: Chris Gordon, Eugene Kohn, and John Macomber

Overview: Looks at the conception, design, and delivery of buildings in the commercial and institutional sectors.

Major themes: The course introduces analytical frameworks of development, design, and construction including:

1. Development - What is the potential of a building site? How do the finances, the physical plan, the people, and the exogenous circumstances impact decision making?
2. Design - How does a design vision evolve? How does design create value? What are the major choices in the systems of a building including structure, enclosure, and systems? What are the most innovative and effective aspects of green building design?
3. Construction - How to organize contracts, schedules, cost control, project management, and oversight to accomplish major projects on time and on budget?

Content: Cases include international and US projects in retail, office, residential, and mixed use.

Real Estate in Emerging Markets



Term: Winter; Q3; Q4

Number of Sessions: 20 (paper)

Instructor: Nicolas P. Retsinas

Overview: This course examines the potential and the opportunity for investment returns in markets that are often perceived as too risky and/or too poor to generate either short-term or long-term profits.

Major themes: The first theme is that the poor have purchasing power and represent a viable market as illustrated through affordable housing initiatives in the US and in profitable commercial and residential projects in the developing world. Second, market inefficiencies and the dearth of usable information can elevate perceived risk.

Content: Modules include: Finding Gaps in Developed Markets; Transforming Need to Demand; Finding Hidden Markets; Assessing Contextual Risk; Channeling Capital.

Strategies Beyond the Market



Term: Winter; Q3; Q4

Number of Sessions: 20 (paper/project)

Instructor: Professor Dennis Yao

Overview: In Strategies Beyond the Market (SBM), we analyze a series of advanced strategic problems to show what successful companies do to shape the rules of the game to gain competitive advantage and to perform their role in society.

Major themes:

- Market inefficiencies are central to identifying profitable strategies.
- Political, social, and legal forces shape markets and create first-order opportunities for creating competitive advantage.
- Mitigation of market inefficiencies contributes to a strategy's sustainability.

Content:

- Introduces a framework that is valuable for designing business strategies and which helps identify potential effects of political, social, and legal forces on the success of these strategies.
- Explores how pursuit of competitive advantage raises issues about a firm's role in society.
- Develops and exercises concepts and techniques for analyzing competitive advantage and competitive dynamics and develops oral and written communication skills.

Sustainable Cities: Urbanization, Infrastructure, and Finance



Term: Winter; Q3 (Half-Course early)

Number of Sessions: 15 (exam)

Instructor: John Macomber

Overview: The population of cities is expected to increase by three billion people over the next 30 years. This will take place in the context of worsening resource scarcity of energy, water, clean air and land. Private sector investments in resource productivity have a large impact. Using the tools of finance, entrepreneurship, and design, private sector entities can make money, make a difference, or both.

Major themes: How to create value in sustainable cities. Cases look at resource efficiency in cities; public private partnerships; energy, transportation, water, and waste; and policies which provide private incentives.

Content: The course starts with demographics and the context of the issues. The second module introduces several components of a finance, entrepreneurship, and urban planning toolkit. The third module investigates a number of businesses and their strategies in these areas.