**FINANCE & SUSTAINABILITY**

**B8349**

**Fall 2015**

Professor Bruce Usher

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Office Hours: By appointment only (bmu2001@columbia.edu)

**REQUIRED COURSE MATERIAL**

The Finance & Sustainability course utilizes the following cases, articles and background notes:

Financing Land Conservation

* + - * Financing Biodiversity by the Global Conservation Fund
			* Patagonia Sur: For-Profit Land Conservation in Chile

Carbon Markets and Climate Change

* + - * The Political Economy of Carbon Trading
			* International Carbon Finance and EcoSecurities

Financing Renewable Energy

* + - * Jersey-Atlantic Wind Farm
			* Keystone Solar

Catch Shares and Sustainable Fisheries

* + - * Sustaining America’s Fisheries (Environmental Defense)
			* Clearwater Seafoods

Financial Innovation for the Environment

* + - * The Solar Services Model (World Resources Institute)
			* Berkeley going solar (SFGate.com)
			* The Black Rhino

Socially Responsible Investing

* + - * Responsible Investing Takes Root
			* The Norwegian Government Pension Fund: The Divestiture of Wal-Mart Stores
			* Stanford Dumps Coal

Microfinance in Developing Countries

* + - * It Took a Village
			* Banco Compartamos
			* Microfinance’s Success Sets Off a Debate in Mexico
			* IPO Pits Profit vs Altruism
			* The Battle for the Soul of Microfinance

Impact Investing and Financing SMEs in Developing Countries

* + - * Root Capital
			* E+Co: A View from the Boardroom

Project Finance in Developing Countries

* + - * International Rivers Network and the Bujagali Dam Project
			* Financing the Mozal Project
			* The Equator Principles: An Industry Approach to Managing Environmental and Social Risks

Community Development Finance in the United States

* + - * EasyPay: An Alternative Loan for the Underbanked
			* SJF Ventures and Ryla Teleservices: 2003

Financial Innovation for Poverty Reduction

* + - * Social Finance Inc.
			* Mobile Banking for the Unbanked

**REQUIRED PREREQUISITES AND CONNECTION TO THE CORE**

Students must have completed or be concurrently enrolled in B8306 - Capital markets and investments.

The learning in this course will utilize, build on and extend concepts covered in the following core courses:

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| **Core Course** | **Connection with Core** |
| Corporate Finance | 1. Time value of money
2. Efficient markets
3. Risk
4. Capital Asset Pricing Model
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| Decision Models | 1. Use of analysis in decision making
2. Decision making under uncertainty and risk
3. Sensitivity analysis
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| Global Economic Environment I | 1. Role of financial markets in the economy
2. Exchange rates
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| Managerial Economics | 1. Analyzing complex decision making under uncertainty
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Students will be expected to have mastered these concepts and be able to apply them in the course.

**COURSE DESCRIPTION**

This is a finance course, designed around a combination of cases and financial tools to reach our course objectives. The course is composed of two modules:

1. Financing Environmental Solutions
	1. Financing land conservation – capital markets and investment management
	2. Carbon markets and climate change – capital markets and project finance
	3. Financing renewable energy – project finance
	4. Catch shares and sustainable fisheries – capital markets
	5. Financial innovation for the environment – various financial tools
2. Financing Sustainable Economic Development
	1. Socially responsible investing – investment management
	2. Microfinance in developing countries – commercial banking
	3. Financing SMEs in developing countries – commercial banking and investment management
	4. Project finance in developing countries – project finance
	5. Community development finance in the US – investment management
	6. Financial innovation for poverty reduction – various financial tools

**COURSE OBJECTIVES**

This course is designed for both MBA students planning a career in financial services who want to understand the potential impact of their work on issues of sustainability, and for students planning a career in social enterprise who want to understand the application of financial tools. Specifically, the course objectives are to:

1. Understand the relationship between finance and sustainability.
2. Analyze which financial tools are effective (as measured by both sustainable impact and the ability to earn a financial return), and which are not.
3. Learn how the effective implementation of finance to address sustainability can be practically applied in a variety of contexts.

This course provides a high level introduction to the financial tools that can be used to address sustainability across a broad range of issues. By design, this course does not provide a deep dive on any specific issue. Students interested in a deeper exploration of climate change are recommended to take Carbon Finance (B8363), and students with a strong interest in impact investing are recommended to take the Impact Investing Seminar (B8355). Note that there is some overlap between the Finance & Sustainability course, which provides an introduction to these topic areas, and the Carbon Finance and Impact Investing courses, which include more in-depth analysis.

**ASSIGNMENTS**

Students are required to individually prepare 3 case write-ups during the course, each of which is a maximum of one page, plus one case write-up that includes building a financial model. The final exam is a take-home case, due five days after the last class.

**METHOD OF EVALUATION**

This course relies predominately on the case method. Although this is a finance course, there is relatively little modeling required, as the focus of most of the classes is on understanding concepts, and the challenges and opportunities of applying those concepts in real-world settings. The chosen cases analyze companies that use financial tools to create sustainable social and/or environmental value, in order to understand why certain business decisions and models have succeeded while others have failed. This course requires active class participation, and students’ grades will be heavily dependent on the quality of class discussion. Guest speakers will be invited to some classes and will provide an opportunity for students to meet industry specialists. Students are expected to challenge each other and to challenge the professor and our guests.

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| Class participation | 50% |
| Case write-ups (Type C - individual) | 15% |
| Case write-up with financial model (Type C - individual) | 10% |
| Final take-home exam (Type C- individual) | 25% |

**CLASSROOM NORMS AND EXPECTATIONS**

Students are required to prepare for each class by reading and analyzing the assigned cases, utilizing the study guidance questions which are provided in the Canvas system. Students are expected to add thoughtful analysis to each class discussion.