**FINANCE & SUSTAINABILITY**

**B8349**

**Fall 2017**

Professor Bruce Usher

Uris Hall 316A

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

This course meets on Thursdays from 2:15-5:30 pm. In the A-term the course meets in Warren 311. In the B-term the course meets in Uris 142.

**COURSE DESCRIPTION**

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

1. Finance and the Environment
   1. Financing biodiversity and species conservation – capital markets
   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
2. Finance to Reduce Poverty in Developing Countries
   1. Microfinance in developing countries – commercial banking
   2. Financing SMEs in developing countries – commercial banking and investment management
   3. Project finance in developing countries – project finance
   4. Financial innovation for poverty reduction in developing countries - fintech
3. Finance to Address Social Challenges in the United States
   1. Impact investing in the US – investment management
   2. Community development finance in the US – banking and investment management
   3. Infrastructure finance in the US – real estate and project finance
   4. Financial innovation to address social challenges in the US – 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 products. Specifically, the course objectives are to:

1. Understand the relationship between finance and sustainability.
2. Analyze which financial products are effective (as measured by both sustainable impact and financial sustainability), 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 products 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 Climate 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 Climate Finance and Impact Investing courses, which include more in-depth analysis.

**REQUIRED COURSE MATERIAL**

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

Financing Biodiversity and Species Conservation

* + - * Financing Biodiversity by the Global Conservation Fund
      * The Black Rhino

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
      * Clearwater Seafoods

Finance to Reduce Poverty in Developing Countries

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

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

Financial Innovation for Poverty Reduction in Developing Countries

* Mobile Banking for the Unbanked
* M-Kopa Solar – Technology and Partnership for Sustainable Finance

Finance to Address Social Challenges in the United States

Impact Investing in the United States

* + - * The Norwegian Government Pension Fund: The Divestiture of Wal-Mart Stores
      * Impact America Fund: Challenges of New Fund Formation

Community Development Finance in the United States

* + - * Grameen America: An Approach to Mitigating Poverty in the United States
      * EasyPay: An Alternative Loan for the Underbanked

Infrastructure Finance in the United States

* + - * Canyon-Agassi Investing in Charter Schools
      * The Big Easy

Financial Innovation to Address Social Challenges in the United States

* + - * Fresno’s Social Impact Bond for Asthma

**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 |
| Decision Models | 1. Use of analysis in decision making 2. Decision making under uncertainty and risk 3. Sensitivity analysis |
| Global Economic Environment I | 1. Role of financial markets in the economy 2. Exchange rates |
| Managerial Economics | 1. Analyzing complex decision making under uncertainty |

Students will be expected to have mastered these concepts and be able to apply them in the course.

**ASSIGNMENTS**

Students are required to individually complete a short on-line question set prior to each class, and to prepare one case write-up during the course which includes building a financial model. Students will also work in teams on a group project during the last four weeks of the course. The final exam is a take-home case, due one week 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 products to create sustainable social and/or environmental value, 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 a few 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  (including on-line question sets) | 40% |
| Case write-up with financial model  (Type C - individual) | 10% |
| Group project  (Type A – group/group) | 10% |
| Final take-home exam  (Type C- individual) | 40% |

**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, and completing the on-line question set. In class, students are expected to add thoughtful analysis to each class discussion.

There is a “no devices” policy in this course. Please leave your phones and computers off. Violations of this policy will lead to deductions from a student’s class participation grade.

Students are requested to sit in the same seat for the duration of the course to enhance class discussion and facilitate grading of class participation. Please choose your seat in the first class.