

## **SUMA K4142 Sustainable Finance**

Instructor: Bruce Kahn

### **Course Overview**

This course is an introduction to how sustainability/ESG (economic, environmental, social & governance) issues have become financially material to the global credit, underwriting, insurance, risk management, venture capital and asset management capital markets. These issues have a direct impact on risk exposure and the quality of public, private and government debt/equity investments. By the end of the course, students should understand how these issues affect investment decisions made by institutional investors, corporate lenders, insurance companies, asset management funds, hedge funds, venture capitalists and retail investors, as well as business decisions made by corporate managers. They will be exposed to the global sources of environmental/sustainability corporate performance information, how "best-in-class" environmental investment relates to, and is different from, socially-responsible investing (SRI), and differences between European, North American and Asian markets. Risk management aspects of sustainable finance will be addressed, especially in regards to emerging finance areas such as carbon finance, corporate governance, sustainable development and agriculture/water development projects. SEC Reporting requirements for sustainability risks and opportunities, and the prospect of the issuance of "Integrated Corporate Reports" that combine financial and sustainability reporting will be discussed. The ethics of sustainability issues and their impact on management & finance will also be addressed.

This course satisfies the program's financial management requirement while giving students a foundation in how sustainability issues affect the various sectors of finance and financial approaches, and an understanding of how integrating sustainability principles and practices into finance can be used to make a business become more efficient, effective, reduce risks, create opportunities and provide competitive advantage, for both companies and financial firms alike. Students will gain the tools to evaluate, quantify and assess environmental, social and governance (ESG) metrics of companies as a way of differentiating investment choices, as part of understanding why non-financial metrics now represent 75-80% of the market value of publicly-traded companies. This course satisfies the M.S. in Sustainability Management program's general and financial management curriculum area requirement.

### **Course Objectives**

Students are assumed to have had no or little previous exposure to finance and asset management. By the end of the course, students should be able to evaluate corporate sustainability risks and opportunities from a financial perspective, and understand how to manage/mitigate those risks. They should be able to articulate why standard financial reporting does not adequately account for how corporate sustainability performance can enhance both shareholder and stakeholder value. Students should be able to analyze an organization's work processes and operations in order to understand how it can reduce resource utilization and environmental impact. There is no single text book that can address the rapidly changing issues addressed by sustainable finance, so reading from key reports, websites and magazine/news articles will be supplemented by real practical examples of the use of sustainable

finance issues in today's financial industry. Some guest lectures by experts in their fields will be planned, depending upon availability.

### **Method of Instruction**

#### Course Content

The course will be imparted over 14 weeks in 2-hour sessions each week; see Course Schedule below.

#### Textbooks and Reading

There is no required textbook for the course. There is no single text book that can address the rapidly changing issues addressed by sustainable finance, so reading from key reports, websites and magazine/news articles Readings for the course will be available on the internet and/or be posted on Courseworks or distributed in class.

#### Resources and Software Packages

All readings will be listed in Courseworks. Any readings whose full-text is not available through the links in Courseworks will be placed on reserve at the Business Library. A basic knowledge of Word, PowerPoint and Excel would be useful for this course.

### **Method of Evaluation**

#### Course Requirements and Method of Evaluation

Regular attendance in lectures is required. Students are expected to have done the readings for each lecture before class. There is no single textbook that can address the rapidly changing issues addressed by sustainable finance, so reading from key reports, websites and current magazine/news articles is a critical part of this course. Attendance in the tutorial session is optional, but strongly recommended.

Attendance and participation will account for 20 % of the final grade. For participation, students will be required to:

1. Contribute to class discussions. Contributing to class discussions means enhancing the quality of the class experience for yourself and others. It involves making relevant, useful and non-obvious comments, or posing pertinent questions, in clear and succinct language;
2. Be prepared to give 2-3 minute answers to impromptu questions regarding the readings for that class; and
3. Provide at least 1 carefully considered and substantive (2-3 paragraphs) comment or response to discussions.

The attendance and participation grade will comprise a weighted index of numeric grades that combine performance under each of the three tasks above and actual attendance.

Short (3-5 pages) papers will account for 30% of the final grade. There will be two of these papers assigned during the course. The papers will discuss key issues related to sustainability & finance. Each

problem set will be graded on a categorical scale from check- to check +.

A midterm exam will account for 25% of the final grade. The midterm will consist of 50 multiple choice, true/false and fill-in-the-blank questions. The midterm will be graded on a numeric scale from 1 to 100.

A written analyst report and oral presentation assessing three publicly-traded companies and selecting one of those three firms as the best investment from a long-term sustainability perspective, will constitute 25% of the final grade. The analyst report and oral presentation will be prepared by team groups assigned by the instructor based on stated topic preference (3-4 students per group.) A list of potential companies will be distributed at the first class. The analyst report and oral presentation will be graded on a letter grade scale from F to A+. All students in a group receive the same grade for the analyst report plus individual grades for their oral presentation.

The final course grade will be computed using a weighted index of numeric grades that combine the grades for papers, attendance and participation, midterm exam, analyst report and oral presentation, scaled into a letter final grade scale from F to A+ .

### **Session 1: Introductions: What is Sustainable Finance?**

### **Session 2: Sustainable Themes Overview: Structure of a Financial Institution, Companies, and Implications for Sustainability**

Assignment 1 Due

### **Session 3: Corporate Finance: Financial Statements, Valuation Methodologies, and Implications for Sustainability**

#### ***Readings:***

- Mclellan, Chapter 1
- Generation Investment Management: Sustainable Capitalism
- <http://www.generationim.com/media/pdf-generation-sustainable-capitalism-v1.pdf>
- World Resource Institute: Corporate Ecosystem Services Review
- <http://www.wri.org/publication/corporate-ecosystem-services-review>
- Robert Costanza: The Value of the World's Ecosystem Services and Natural Capital
- [http://www.esd.ornl.gov/benefits\\_conference/nature\\_paper.pdf](http://www.esd.ornl.gov/benefits_conference/nature_paper.pdf)
- McKinsey & Company: Resource Revolution
- [http://www.mckinsey.com/features/resource\\_revolution](http://www.mckinsey.com/features/resource_revolution)
- Harvard Business Review: Creating Shared Value
- [http://www.waterhealth.com/sites/default/files/Harvard\\_Buiness\\_Review\\_Shared\\_Value.pdf](http://www.waterhealth.com/sites/default/files/Harvard_Buiness_Review_Shared_Value.pdf)

#### **Session 4: Corporate Finance: Financial Statements, Valuation Methodologies, and Implications for Sustainability (Part 2)**

##### **Readings:**

- Access Analyst Reports from Thomson One\*
- Drake Peterson and Fabozzi, Chapters 4, 10-11
- Covanta (CVA): "Is Covanta Holding Corporation a Good Long-Term Investment?" SADIF-INVESTMENT ANALYTICS SA (12 pages)
- Suncor (SU): "Suncor Energy : The contrast in conference call confidence" DEUTSCHE BANK RESEARCH (12 pages)
- \*Access Thomson ONE using your UNI with this link. It runs best with Internet Explorer:  
[http://library.columbia.edu/content/libraryweb/indiv/business/elect\\_serv.html](http://library.columbia.edu/content/libraryweb/indiv/business/elect_serv.html)

#### **Session 5: Corporate Finance: Capital Structure Analysis, Equity/Debt and Implications for Sustainability, Valuing Stocks and Bonds**

##### **Readings:**

- Drake Peterson and Fabozzi, Chapters 12,19-20

#### **Session 6: Global Markets: Capital Markets, Exchanges, Transaction Banking (Trade Finance), and Implications for Sustainability**

##### **Readings:**

- Drake Peterson and Fabozzi, Chapters 2 and 3
- Sustainable Stock Exchanges, UNPRI

#### **Session 7: Investment Banking: M&A, IPO/Issuance, Corporate Advisory, and Implications for Sustainability**

#### **Session 8: Asset Management: Asset Allocation, Portfolio Management, and Implications for Sustainability**

##### **Readings:**

- Chapters 15, 16 and 17 in Peterson/Drake
- Viederman Readings
- Mercer Investment Consulting Asset Allocation study

#### **Session 9: Asset Management: Capital Asset Pricing Model and Implications for Sustainability**

#### **Session 10: Asset Management: Sustainable Alternative Investments: Project Finance, Commodities, Hedge Funds, Private Equity, Venture Capital, Community Notes**

##### **Readings:**

- Asset Allocation 1-5

**Session 11: Special Topics: SEC, Insurance, FASB/SASB, UNPRI, ESG, SRI, Impact, Engagement, Proxy Voting, and Sustainability**

Readings

- Fiduciary Responsibility 1 and 2

**Session 12: Special Topics: Energy, Agriculture and Water**

**Session 13: Special Topics: Clean Tech, Renewables, Green Building**

Readings

- CDP Reports
- GS Sustain