

Master of Science in Sustainability Management

SUMA PS5195 Accounting, Finance, and Modeling of Sustainable Investment

Dates: TBD

Location: TBD

3 Credits

[Area 2E, Area 5]

Instructor: Brad Schwartz, Lecturer, bs3169@columbia.edu, 914-806-1583

Office Hours: By appointment

Response Policy: I will usually respond within one business day to all inquiries

Teaching Assistant: See Course Info TAB on Canvas for Teaching Assistant(s)

Office Hours: By appointment

Response Policy: They will usually respond within one business day to all inquiries

Course Overview

Course Description

This course is designed to provide students with working knowledge on how to make successful investments in sustainable companies and to prepare students to be conversationally literate in financial reporting. As you leave the school and become leaders of organizations, financial literacy will be a skill set that will be vital to success no matter what career path you go down. It starts with a strong foundation in accounting and corporate finance, then moves on to ESG/Impact screening of potential investments, along with valuation techniques used to arrive at a purchase price. It will explore financial models that can aggregate multiple variables used to drive investment decisions.

Larger Programmatic Goals

To understand and lead a transition to a sustainability-aware business, managers must first be familiar with the terminology, practices and consequences of traditional accounting and finance. Students will learn traditional financial and accounting methods and tools. We will examine how these methods and tools are changing to improve product and service design, resource efficiency and allocation, employee productivity and sustainability performance outcomes. Students will learn how value is created in a company and the different methods employed to create that value, conduct due diligence, discuss optimal capital structure to finance a transaction, execute a transaction, and implement a Sustainability-based value-added operating plan to the target company. The course will conclude with students preparing a persuasive investment memo and accompanying financial model to the investment committee of an impact investing asset management firm. The course also provides a practical introduction to selected non-financial accounting topics including sustainability reporting standards, ESG corporate performance indicators and corporate social responsibility report (CSR Reporting).

Course Logistics

- Elective
- Open, space permitting, to cross-registrants from other fields and/or Columbia University programs such as SIPA, etc.
- No prerequisite knowledge or course work in the discipline are required
- Course Modality is online (Summer Only), on-campus (Fall & Spring)
- Duration is full semester

Learning Objectives

Students are assumed to have little-to-no previous exposure to accounting or finance. By the end of the course, students should be able to:

L1 Read traditional financial reports and be able to understand and critically interpret them with an emphasis on balance sheet, income statement and cash flow statement financial information.

L2 Understand financial and sustainability reporting standards, as well as initiatives to improve them.

L3 Calculate appropriate performance ratios and complement those with non-financial sustainability performance measures.

L4 Become familiar with corporate finance concepts, valuation, and risk management.

L5 Develop financially quantifiable and sustainability-aligned financial models and an investment thesis.

L6 Develop Basic to intermediate Excel Skills

L7 Understand the lifecycle and execution of an impact-oriented investment.

Readings

Each week, before the evening lectures, students are expected to complete readings from core texts and resources posted to the course website. Previewing the foundational concepts is essential in helping to understand core lecture materials, will enrich student participation during class and will help with successfully completing course assignments.

*Additional articles and resources will be provided in the course modules or in the Canvas files.

Required:

- (a) Financial Intelligence: A Manager's Guide to Knowing What the Numbers Really Mean. Karen Berman & Joe Knight
- (b) HBR Guide to buying a small business: Think Big, Buy Small, Own Your Own Company. Richard S. Ruback

Recommended:

- (a) Green to Gold: How Smart Companies Use Environmental Strategy to Innovate, Create Value, and Build Competitive Advantage. Daniel Esty & Andrew Winston
- (b) The New Sustainability Advantage: Seven Business Case Benefits of a Triple Bottom Line. Bob Willard

The following texts are not required for the course but, in addition to the texts above, are a set of reference material you might want to add to your professional toolbox.

- (a) The goal: A process of ongoing improvement
- (b) Managing the Small to Mid-Sized Company, Jim Collins
- (c) The CFO Guidebook, Steven M. Bragg
- (d) Building Financial Models, John Tjia
- (e) Due Diligence: Planning, Questions, Issues, Gordon Bing
- (f) Investment Banking: Valuation, Leveraged Buyouts, and Mergers and Acquisitions, Joshua

- (g) Rosenbaum
- (h) Valuation, McKinsey & Company, Tim Koller
- (i) Business Ratios and Formulas
- (j) Double your Profits in 6 months or less, Bob Fifer
- (k) Investment Valuation: Tools and Techniques for Determining the Value of any Asset, Aswath Damodoran

Assignments and Assessments

There are three individual assignments, one group presentation and one group assignment. The grade weighting on each assignment is listed below.

Multiple Choice Exam & Preparation of Financial Statements (L1, L2, L3)

For this assignment you will be asked to complete a problem set online to test your knowledge of accounting. You will also be given a sustainability-focused private company whose CFO has suddenly left the firm. You, playing the role of Controller, will be responsible for closing the books, producing a set of financial statements [balance sheet, income statement, cash flow statement], and providing the relevant key performance indicators (KPIs) in a financial package to be submitted to the Board of the Company.

Multiple Choice Exam & ESG Screened Company Valuation (L4)

For this assignment you will answer problem sets focused on financial concepts, (such as the time value of money). In addition, you will be asked to value a company chosen by the professor that ranks high on the ESG scoring criteria. Playing the role of CFO, you will make a recommendation to the CEO, in the form of an "email", based on your valuation analysis to either use excess cash to buy back stock of the company or return it to shareholders in the form of a dividend.

Group Presentation (L1-L5)

Acting as an Investment Analyst, you will choose a target company screened for sustainability and discuss the company, its results and footprint, and an investment thesis and recommend to an investment committee to allocate resources to pursue the deal. You will have to deliver a simple PowerPoint presentation of 5 minutes.

Group Investment Committee Recommendation & Financial Model (L5-L7)

Choosing the company screened for sustainability in the group presentation, develop an investment memo for an Impact Investing Private Equity firm. You will develop a sustainability-aligned financial model and document the assumptions made to future returns of the investment. You will also discuss the market, the opportunity, the impact initiatives to drive value, and risks involved in the investment, as well as formulate an exit strategy. The investment memo should be between 5 and 10 pages long and should entail a cohesive investment thesis.

Class Participation

Your individual contributions to the class discussion are vital. You are expected to attend and participate in class. You may also for points, post relevant articles/topics you come across to Canvas during the semester to foster discussion out of class.

Grading

The final grade will be calculated as described below:

FINAL GRADING SCALE

Grade	Percentage
A+	98–100 %
A	93–97.9 %
A-	90–92.9 %
B+	87–89.9 %
B	83–86.9 %
B-	80–82.9 %
C+	77–79.9 %
C	73–76.9 %
C-	70–72.9 %
D	60–69.9 %
F	59.9% and below

Assignment/Assessment	% Weight	Individual or Group/Team Grade
Multiple Choice Exam & Preparation of Financial Statements	20%	Individual
Multiple Choice Exam & ESG Screened Company Valuation	25%	Individual
Group Presentation	15%	Group
Group Investment Committee Recommendation & Financial Model	30%	Group
Class Participation	10%	Individual

Course Schedule/Course Calendar

Module/Week

Module (by topics) NOT WEEKS	Topic	Readings & Resources	Activities/Assignments
1	Introduction & Fundamentals of Business	How To Create Profit Like Warren Buffett (14 min) How The Economic Machine Works (30 min) Porter's Five Forces (~5 min) Optional Reading BRT- Statement on the Purpose of a Corporation	Review Readings and Resources Attend Class Session Watch videos prior to Class Session
2	Accounting Part I	Financial Intelligence: A Manager's Guide to Knowing What the Numbers Really Mean. Karen Berman & Joe Knight. Ch. 1-8	Review Readings and Resources Attend Class Session
3	Accounting Part II	Financial Intelligence: A Manager's Guide to Knowing What the Numbers Really Mean. Karen Berman & Joe Knight. Ch. 9-13	Review Readings and Resources Attend Class Session
4	Financial Performance Measurement	Financial Intelligence: A Manager's Guide to Knowing What the Numbers Really Mean. Karen Berman & Joe Knight. Ch. 14-18	Review Readings and Resources Attend Class Session 1 st assignment assigned
5	Corporate Finance Part I	Financial Intelligence: A Manager's Guide to Knowing What the Numbers Really Mean. Karen Berman & Joe Knight. Ch. 19-25	Review Readings and Resources Attend Class Session 1 st assignment due
6	Corporate Finance Part II	HBR Guide to buying a small business: Think Big, Buy Small, Own Your Own Company. Richard S. Ruback. Part I	Review Readings and Resources Attend Class Session
7	Valuation Part I, ESG Screening	HBR Guide to buying a small business: Think Big, Buy Small, Own Your Own Company. Richard S. Ruback. Part II	Review Readings and Resources Attend Class Session
8	Valuation Part II	HBR Guide to buying a small business: Think Big, Buy Small, Own Your Own Company. Richard S. Ruback. Part III Optional Reading Redacted ESG Policy	Review Readings and Resources Attend Class Session 2 nd assignment assigned
9	Financial Modeling Part I	HBR Guide to buying a small business: Think Big, Buy Small, Own Your Own Company. Richard S. Ruback. Part IV	Review Readings and Resources Attend Class Session 2 nd assignment due
10	Financial Modeling Part II	HBR Guide to buying a small business: Think Big, Buy Small, Own Your Own Company. Richard S. Ruback. Part V	Review Readings and Resources Attend Class Session
11	Financial Modeling Part III	None	Review Readings and Resources Attend Class Session
12	ESG/Impact Investment	Optional Reading Long Run Returns to Impact Investing in Emerging Market and Developing Economy	Review Readings and Resources Attend Class Session
13/14	Review	None	3 rd assignment due, 4 th due 1 week

Course Policies

Participation and Attendance

You are expected to complete all assigned readings, attend all class sessions, and engage with others in online discussions. Your participation will require that you answer questions, defend your point of view, and challenge the point of view of others. If you need to miss a class for any reason, please discuss the absence with me in advance.

Participation matters and enhances the quality of the class experience for yourself and others. This involves making relevant and useful comments in class, or posing pertinent questions, in clear and succinct language.

I will keep track of attendance and look forward to an interesting, lively and confidential discussion. If you miss an experience in class, you miss an important learning moment, and the class misses your contribution. More than one absence will affect your grade.

Late work

Work that is not submitted on the due date noted in the course syllabus without advance notice and permission from the instructor will be graded down 1/3 of a grade for every day it is late (e.g., from a B+ to a B).

Citation & Submission

All written assignments must use standard citation format (e.g., MLA, APA, Chicago), cite sources, and be submitted to the course website (not via email).

School and University Policies and Resources

Copyright Policy

Please note—Due to copyright restrictions, online access to this material is limited to instructors and students currently registered for this course. Please be advised that by clicking the link to the electronic materials in this course, you have read and accept the following:

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials. Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the photocopy or reproduction is not to be “used for any purpose other than private study, scholarship, or research.” If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of “fair use,” that user may be liable for copyright infringement.

Academic Integrity

Columbia University expects its students to act with honesty and propriety at all times and to respect the rights of others. It is fundamental University policy that academic dishonesty in any guise or personal conduct of any sort that disrupts the life of the University or denigrates or endangers members of the University community is unacceptable and will be dealt with severely. It is essential to the academic integrity and vitality of this community that individuals do their own work and properly acknowledge the circumstances, ideas, sources, and assistance upon which that work is based. Academic honesty in class assignments and exams is expected of all students at all times.

SPS holds each member of its community responsible for understanding and abiding by the SPS Academic Integrity and Community Standards posted at <https://sps.columbia.edu/students/student-support/academic-integrity-community-standards>. You are required to read these standards within the first few days of class. Ignorance of the School's policy concerning academic dishonesty shall not be a defense in any disciplinary proceedings.

Diversity Statement

It is our intent that students from all diverse backgrounds and perspectives be well-served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that the students bring to this class be viewed as a resource, strength and benefit. It is our intent to present materials and activities that are

respectful of diversity: gender identity, sexuality, disability, age, socioeconomic status, ethnicity, race, nationality, religion, and culture.

Accessibility

Columbia is committed to providing equal access to qualified students with documented disabilities. A student's disability status and reasonable accommodations are individually determined based upon disability documentation and related information gathered through the intake process. For more information regarding this service, please visit the University's Health Services website: <https://health.columbia.edu/content/disability-services>.

Class Recordings

All or portions of the class may be recorded at the discretion of the Instructor to support your learning. At any point, the Instructor has the right to discontinue the recording if it is deemed to be obstructive to the learning process.

If the recording is posted, it is confidential and it is prohibited to share the recording outside of the class.

SPS Academic Resources

The Division of Student Affairs provides students with academic counseling and support services such as online tutoring and career coaching: <https://sps.columbia.edu/students/student-support/student-support-resources>.

Columbia University Information Technology

Columbia University Information Technology (CUIT) provides Columbia University students, faculty and staff with central computing and communications services. Students, faculty and staff may access University-provided and discounted software downloads.

Columbia University Library

Columbia's extensive library system ranks in the top five academic libraries in the nation, with many of its services and resources available online.

The Writing Center

The Writing Center provides writing support to undergraduate and graduate students through one-on-one consultations and workshops. They provide support at every stage of your writing, from brainstorming to final drafts. If you would like writing support, please visit the following site to learn about services offered and steps for scheduling an appointment. This resource is open to Columbia graduate students at no additional charge. Visit <http://www.college.columbia.edu/core/uwp/writing-center>.

Career Design Lab

The Career Design Lab supports current students and alumni with individualized career coaching including career assessment, resume & cover letter writing, agile internship job search strategy, personal branding, interview skills, career transitions, salary negotiations, and much more. Wherever you are in your career journey, the Career Design Lab team is here to support you. Link to <https://careerdesignlab.sps.columbia.edu/>

Netiquette

Online sessions in this course will be offered through Zoom, accessible through Canvas. A reliable Internet connection and functioning webcam and microphone are required. It is your responsibility to resolve any known technical issues prior to class. Your webcam should remain turned on for the duration of each class, and you should expect to be present the entire time. Avoid distractions and maintain professional etiquette.

Please note: Instructors may use Canvas or Zoom analytics in evaluating your online participation.

More guidance can be found at: https://jolt.merlot.org/vol6no1/mintu-wimsatt_0310.htm

Netiquette is a way of defining professionalism for collaborations and communication that take place in online environments. Here are some Student Guidelines for this class:

- Avoid using offensive language or language that is not appropriate for a professional setting.
- Do not criticize or mock someone's abilities or skills.
- Communicate in a way that is clear, accurate and easy for others to understand.
- Balance collegiality with academic honesty.
- Keep an open-mind and be willing to express your opinion.
- Reflect on your statements and how they might impact others.
- Do not hesitate to ask for feedback.
- When in doubt, always check with your instructor for clarification.