

ENVIRON 790.20: Financial Foundations for Environmental Managers

Instructor: Prof. Joseph F. Bachman
Executive in Residence, Natural Resources Finance
4105 Grainger Hall
+1(919) 613-8034
Office Hours: TBD

Meeting Schedule and Locations: M,W - 3:05 PM to 4:20 PM in Grainger Hall 1112

Office Hours: Tuesday, 1:00 Pm to 3:00 PM or by appointment; Grainger Hall 4105

Summary

ENV 790.20 Financial Foundations for Environmental Managers (Financial Foundations) is an introductory finance course designed to cover a broad range of finance topics with the goal of creating a requisite level of financial comprehension and facility amongst all students in the class.

Closely related to the field of Economics, Finance entails the study and practice of asset pricing, money flows and the financial markets. From an applied perspective, it provides the means to understand pricing and the valuation of future cash flows, and in its many disciplines it comprises a critical underpinning of both professional and personal management. Financial decision-making fields of practice such as accounting, budgeting, and investing are cornerstones of modern society and have tremendous environmental implications. As such, students seeking careers in public, private or nonprofit sectors will all find a basic level of financial comprehension, vocabulary and skill to be highly relevant to their success. Nicholas School graduates who can achieve a level of competence in these areas, and can bring the financial conversation to the table in their chosen fields will discover that they are more effective managers who are the best positioned for professional success. In short, Finance, while perhaps not the primary focus of an environmental management career, should be considered a “force multiplier” when combined with other scientific and social science specific knowledge and a basic fundamental aspect of management.

Furthermore ENV 790.20 will serve as a prerequisite course for other Nicholas School courses including finance related courses in specific fields of study including: ENV 790.70 Evaluating Ecosystems for Investment and Conservation; Enery 620, X, Y, Z. The course is expected to have utility in a wide range of other Nicholas courses given the ubiquity of financial and management decision-making in modern life.

Format

Financial Foundations is a traditional format class consisting of twice weekly lectures conducted by the primary instructor (Professor Bachman). The course will utilize weekly problem sets and assignments to assist students in learning both theory and application of financial concepts and practices.

Prerequisites

Financial Foundations is designed to be an entry level course for all students without regard to their field of intended study or undergraduate background. It is designed to be primarily a first-year course. As

ENVIRON 790.20: Financial Foundations for Environmental Managers

such, there are no specific prerequisites for the course, although many aspects of ENV 520 and 521 which will likely be taken concurrently, are expected to be relevant in concept to, but not duplicative of skills taught in this course.

Students with prior coursework in finance, accounting or those who have had a prior business degree are not the intended audience. Questions regarding background or suitability for the course should be raised with the primary instructor.

Homework Assignments and Deliverables

There will be two homework assignments each week of class (i.e. one for each class). The first will be a traditional problem set or group of questions intended to cement understanding of the relevant topics or skills for the week. Problem sets will be derived directly from the readings and will oftentimes require thinking through the relevant material before discussing in class. The first class session for the week will seek to quickly debrief the problem set.

The second assignment will be an application of the concept requiring interpretation, comprehension and applied thinking presented in an environmental framework. These assignments will draw on concepts that are to be developed more broadly in the first class session for the week. Typically, this second assignment will be in the form of a short case question requiring a calculation or simple model to answer some questions in written form.

Homework will be submitted on Sakai just prior to the commencement of the relevant class.

Evaluation

20%	Individual Weekly Assignments
20%	Class Contribution and Engagement
60%	Performance on weekly quizzes

As the course will move quickly through a range of topics, it is important that students quickly master the material at hand. And while topics are related and learning will be cumulative, the pedagogical goal is to gain a full scope of comprehension. To evaluate progress across this spectrum, the course will not have a traditional midterm/final exam, but rather a short weekly quiz taken in class which will serve as a tool to evaluate student progress throughout the term. Quizzes will be given during the second meeting of class each week. Difficulty experienced with a subject or quiz may be remedied with a short assignment designed to address shortcomings. Students may elect to complete up to two of these.

For grading purposes, the lowest two quiz grades will be dropped. Thus across the twelve week program, ten quiz scores will be incorporated into the grade, two of which may be improved through additional work.

Text, Readings, Resources

Given the diversity of topics covered, the course will draw from several texts and will have weekly readings covering the topics at hand. To approach this in a cost-effective way, students are asked to enroll in [Cengage Unlimited](#) which will allow the class to draw electronically from a wide number of resources.

ENVIRON 790.20: Financial Foundations for Environmental Managers

The primary texts utilized by this channel are as follows:

Contemporary Financial Management (MindTap Course List) 14th Edition, Kindle Edition

R. Charles Moyer (Author), James R. McGuigan (Author), Ramesh P. Rao (Author)

ISBN-13: 978-1337090582

ISBN-10: 1337090581

Basic Finance: An Introduction to Financial Institutions, Investments, and Management 12th Edition

Herbert B. Mayo (Author)

ISBN-13: 978-1337691017

ISBN-10: 1337691011

Accounting, 27th Edition

Carl Warren | James M. Reeve | Jonathan Duchac

ISBN-10: 1337272094

ISBN-13: 9781337272094 2018

Textbook readings are expected to be completed prior to the relevant class meeting period in order to make the most efficient use of class time.

The accounting portion will also make use of an online course such as that conducted by the Association of Chartered Certified Accountants or similar.

A selection of articles will be provided for individual lectures/classes to provide context and perspective. These are considered supplemental unless otherwise specified. Reading these will contribute to a greater understanding and hence increased contribution and effectiveness.

Topics Covered

Element 1:	Concepts/Topics Covered	Timing
Principles of Financial Accounting	Revenues, Expenses Matching Principle Debits, Credits Chart of Accounts Financial Statements Bookkeeping Budgeting	Weeks 1 and 2 Will be covered in class in first two weeks. Online self-study is expected to take approximately 40 hours to complete and may be covered before or during class.

Element 2:	Concepts/Topics Covered	Timing
Capital Markets	Securities Concepts Financial Markets Bonds and Bond Pricing Equity and Pricing	Weeks 3 and 4

ENVIRON 790.20: Financial Foundations for Environmental Managers

	Valuation Approaches PE Ratios Dividend Discount	
--	--	--

Element 3:	Concepts/Topics Covered	Timing
Investing	Portfolio Theory Diversification CAPM Performance Measurement Asset Classes and Allocations	Weeks 5 and 6

Element 4:	Concepts/Topics Covered	Timing
Managerial Accounting	Commercial Strategy Profit Cost Accounting Break Even Marginal Analysis Business Strategy	Weeks 7 and 8

Element 5:	Concepts/Topics Covered	Timing
Corporate Finance	Financial Decisions Cost of Capital Capital Budgeting Liquidity	Weeks 9 and 10

Element 6:	Concepts/Topics Covered	Timing
Project Finance	Time Value of Money (review) Discount Rates Discounted Cash Flow Excel Basics Model Inputs/Outputs Decision Making	Weeks 11 and 12 Asset

Element 7:	Concepts/Topics Covered	Timing
Personal Finance	Planning: Wants and Needs Personal Budget Savings Investments Insurance Retirement Planning, Vehicles Buying a House	Week 13

ENVIRON 790.20: Financial Foundations for Environmental Managers

	Taxes	
--	-------	--

Lecture Schedule

Class	Day	Date	Theme	Lecture Topics	Assignment	Quiz
1	M	26-Aug	Introduction	Course Overview; Relationship to Economics and Management.; Time Value of Money - an introduction to Project Finance	1	
2	W	28-Aug	Financial Accounting	Accounting Principles; Bookkeeping I	2	1
3	M	2-Sep	Financial Accounting	Bookkeeping II; General Ledger	3	
4	W	4-Sep	Financial Accounting	Financial Statements I	4	2
5	M	9-Sep	Financial Accounting	Financial Statements II	5	
6	W	11-Sep	Capital Markets	Financial Institutions and Markets	6	3
7	M	16-Sep	Capital Markets	Debt	7	
8	W	18-Sep	Capital Markets	Equity	8	4
9	M	23-Sep	Capital Markets	Enterprise Valuation Approaches	9	
10	W	25-Sep	Investing	Investments; Performance Measurement	10	5
11	M	30-Sep	Investing	Portfolio Theory; CAPM	11	
12	W	2-Oct	Investing	Asset Classes and Allocations	12	6
**	M	7-Oct	Investing	Option Theory, Investment Thinking	13	
13	W	9-Oct	FALL BREAK - - NO CLASS			7
14	M	14-Oct	Managerial Accounting	Creating Value	14	
15	W	16-Oct	Managerial Accounting	Cost Accounting	15	8

ENVIRON 790.20: Financial Foundations for Environmental Managers

16	M	21-Oct	Managerial Accounting	Inventory	16	
17	W	23-Oct	Managerial Accounting	Business Strategy and Management: Budgeting	17	9
18	M	28-Oct	Corporate Finance	The Firm: 3 Financial Decisions: Invest; Distribute; Buy-back	18	
19	W	30-Oct	Corporate Finance	Cost of Capital; Financial Structure	19	10
20	M	4-Nov	Corporate Finance	Capital Budgeting	20	
21	W	6-Nov	Corporate Finance	Financial Performance: Liquidity; Profitability;	21	
22	M	11-Nov	Project Finance	Discounted Cash Flow Analysis	22	
23	W	13-Nov	Project Finance	Discount Rates	23	12
24	M	18-Nov	Project Finance	Financial Modeling	24	
25	W	20-Nov	Personal Finance	Saving and Budgeting	25	
26	M	25-Nov	Personal Finance	Retirement,	26	