

## INTRODUCTION TO FINANCE

---

Professor: Ioanid Rosu  
rosu@hec.fr  
Bldg. W2, Rm. # 22  
Ext. 7159

Assistant: Isabelle Viard-Chauveau  
viardchauveau@hec.fr  
Bldg. W2, Rm. # 17bis  
Ext. 9636

### PRESENTATION - PRÉSENTATION

---

This is a core class that offers the basic concepts and tools necessary to understand how financial markets work, and how financial instruments are used for sound investment decisions. Topics covered include the following: models of risk and return; time value of money and net present value; market efficiency, anomalies, and behavioral finance; asset allocation and modern portfolio theory; bonds and interest rates, forwards and futures, options; the structure and performance of the money management industry: pension funds, mutual funds, hedge funds. Effort will be made to relate the course material to current financial issues and problems relevant to practitioners.

### INTENDED LEARNING OBJECTIVES - OBJECTIFS PÉDAGOGIQUES

---

When you complete this course, you should be able to understand:

- The basic tradeoff between risk and (expected) return, and how it applies to various types of financial instruments: stocks, bonds, futures, options.
- The time value of money (TVM) and net present value (NPV), and their connection to the discount rate (cost of capital), and the risk premium of a financial asset.
- The two main models of asset pricing: the Capital Asset Pricing Model (CAPM) and Arbitrage Pricing Theory (APT). How do we compute the cost of capital/risk premium?
- Market efficiency and arbitrage. Are markets efficient, or are they dominated by irrational investors? Are prices predictable?
- Diversification: how to select a portfolio of securities that maximizes return while minimizing risk. How does diversification work in practice?
- Financial instruments: bonds, stocks, currencies, and derivatives (futures, options, swaps). How are these related to interest rates, risk hedging, speculation, or volatility?
- The money management industry and its key players: pension funds, mutual funds, and hedge funds. Do they have any superior investment skills?

### KEY TOPICS - THÈMES PRINCIPAUX

---

Part 1: Finance Fundamentals

- Risk and Return
- Time Value of Money and Net Present Value
- Asset Pricing Models: CAPM and APT
- Market Efficiency and Arbitrage
- Modern Portfolio Theory and Diversification

## Part 2: Applications to Financial Markets

- Practical Asset Allocation
- Bonds and Interest Rates
- Derivatives: Futures and Options
- Money Management Industry: Structure and Performance

## TEACHING METHODS - MÉTHODES PÉDAGOGIQUES

### COURSE MATERIALS - MATÉRIEL PÉDAGOGIQUE

---

We combine lectures, classroom discussions, readings, and cases, to strengthen your understanding of basic topics, and to sharpen your analytic and problem-solving skills. The course presents a thorough conceptual framework for understanding financial markets, yet at the same time offers much practical knowledge. The course is therefore challenging and requires a significant amount of work outside of class in order to get most out of it.

#### Textbook

Bodie, Zvi, Alex Kane, and Alan Marcus (2018). Investments. McGraw-Hill/Irwin, 11th Edition.

#### Additional Book

Malkiel, Burton (2019). A Random Walk Down Wall Street. Norton, 12th Edition.

#### Lecture Notes, Assignments, Cases, and Other Materials

Course materials can be downloaded from Blackboard. The most important are the lecture notes, which are posted on Blackboard before each class.

## INDIVIDUAL WORK - TRAVAIL PERSONNEL

---

Students will need to complete five assignments throughout the course. The assignments are completed in groups, which enhances learning.

Students will need to pass a final exam, which is to be completed individually.

## GRADING - ÉVALUATION

---

Grades are based on assignments (40%) and the final exam (60%):

Assignments (Team)	40%
Final Exam (Individual)	60%

The assignments should be submitted on Blackboard before the scheduled date. No late submissions are accepted. The assignments may be discussed only with the members of your group. Only one solution per group should be handed in.

The final exam is closed-book and closed-notes, with more details to be given later.

**Exam Re-grading Policy:** You may request a re-grade on the final exam. The re-grade request must be accompanied by a concise written explanation of the request (e-mail is preferable). The request should be submitted to me within one week after the exams are distributed. The whole exam may be re-graded, so your score can either increase or decrease as a result. For the re-grade request, you should do the following: 1. Choose at most 3 questions from the exam (e.g., 1b, 2a, 4c) for which you think that you deserve more points than were given by the grader; 2. Scan the part of the graded exam in which you answered those questions, and attach the images to the email (or to the written request); 3. Explain briefly why you think the questions were graded unfairly, and why you deserve to get more points; 4. Send the request by e-mail (see the address at the beginning of the syllabus).

## SCHEDULE - DÉROULÉ

<u>Class</u>	<u>Topic</u>	<u>Assignments</u>
Tue, Sep 15 8:00-11:00	1: The Financial System; Risk and Return	
Thu, Sep 17 8:00-11:00	2: Time Value of Money; Net Present Value	
Tue, Sep 22 8:00-11:00	3: Capital Asset Pricing Model; Arbitrage Pricing Theory	
Thu, Sep 24 8:00-11:00	4: Market Efficiency and Arbitrage - Part 1: Predictability, Event Studies, Anomalies	<b>Assignment #1 Due: Sat, Sep 26, 8:00</b>
Tue, Sep 29 8:00-11:00 Fri, Oct 2 14:40-16:10	4: Market Efficiency and Arbitrage - Part 2: Limits of Arbitrage, Behavioral Finance	
Fri, Oct 2 16:10-17:40 Tue, Oct 6 8:00-11:00	5: Modern Portfolio Theory; Practical Asset Allocation	<b>Assignment #2 Due: Mon, Oct 5, 8:00</b>
Fri, Oct 9 14:40-16:10	6: Bonds and Interest Rates	
Fri, Oct 9 16:10-17:40	7: Derivatives: Forwards and Futures	<b>Assignment #3 Due: Mon, Oct 12, 8:00</b>
Tue, Oct 13 8:00-11:00	8: Derivatives: Options	
Tue, Oct 20 8:00-11:00	9: Money Management Industry	<b>Assignment #4 Due: Sat, Oct 24, 8:00</b>
<b>Final Exam (Topics 1-9): Mon, Oct 26, 9:30-11:00</b>		