

# **MSc Financial Analysis & Investment Management**

September 2024 – April 2025



**CODE:** Tbc

**Course title:** ETHICAL AND PROFESSIONAL STANDARDS

**TERM :** FALL

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**Teaching hours:** 24 hours

**Number of credits:** 3

**Teaching language:** ☒English ☐French

**Course leader:**

**Speakers:** Elias Demetriades

### ≡ **COURSE DESCRIPTION**

The course explores the ethics, related challenges to ethical behavior, and the role played by ethics in the investment profession. A framework to support ethical decision-making is provided to help guide behavior. The CFA Institute Code of Ethics and Standards of Professional Conduct (Code and Standards) are examined, with attention given to each standard and its application. The course concludes with coverage of the Global Investment Performance Standards.

### ≡ **COURSE OBJECTIVES**

At the end of this course students should be able to:

- Identify challenges to ethical behavior and describe the need for high ethical standards in the investment industry
- Distinguish between ethical and legal standards and describe the structure of the CFA Institute Professional Conduct Program and the process for the enforcement of the Code and Standards
- State the six components of the Code of Ethics and the seven Standards of Professional Conduct and explain the ethical responsibilities required by the Code and Standards, including the sub- sections of each Standard
- Demonstrate the application of the Code of Ethics and Standards of Professional Conduct to situations involving issues of professional integrity
- Distinguish between conduct that conforms to the Code and Standards and conduct that violates the Code and recommend practices and procedures designed to prevent violations of the Code of Ethics and Standards of Professional Conduct.
- Explain why the GIPS standards were created, what parties the GIPS standards apply to, and who is served by the standards and describe the scope of the GIPS standards with respect to an investment firm's definition and historical performance record
- Explain how the GIPS standards are implemented in countries with existing standards for performance reporting and describe the appropriate response when the GIPS standards and local regulations conflict

### ≡ **COMPETENCES VISEES /LEARNING GOALS**

#### **LG01 Analysis**

**LO1** Develop critical thinking skills

#### **LG04 RSO**

**LO11** Discern ethical issues and act on ethical considerations

### ≡ **TACKLED CONCEPTS**

- A. Professional Standards of Practice
- B. Ethical Practices
- C. Asset Manager Code of Professional Conduct
- D. Presentation of Performance Results (GIPS)

### ≡ **LEARNING METHODS**

The pedagogical approach is centered on a step-by-step examination of the principles of the code, analysing scenarios of increasing complexity and developing the skills to identify which principle(s) apply. This approach is enhanced by repetitive practice, both in class and at home and extensive discussion of challenging concepts and scenarios, drawing in the students to engage with the professor as well as each other.

### ≡ **ASSIGNMENTS AND EXPECTED WORK**

Readings: The main readings for the course are materials specifically designed for preparation for the CFA exam. In addition to those, selective readings may be assigned from the bibliography of the course, complemented by published academic papers and articles from the business and financial press.

Exercises: Every lecture is complemented by in-class exercises and short cases. Additional exercises or cases are prepared by students (as homework) and are discussed in the class.

Short Exams: During the course, students will take short exams covering specific material, in order to test their knowledge and assess the need for extra work in areas of weakness.

Final exam: The final exam provides students with the opportunity to demonstrate their understanding of the material covered in the entire course.

### ≡ **BIBLIOGRAPHY – COURSE MATERIAL**

Ethics and Trust in the Investment Profession, by Bidhan L. Parmar, PhD, Dorothy C. Kelly, CFA, and David B. Stevens, CIMC

Code of Ethics and Standards of Professional Conduct Standards of Practice Handbook, Current Edition

Guidance for Standards I–VII Standards of Practice Handbook, Current Edition

### ≡ **EVALUATION METHODS**

Two CC tests at 25% each: 50% of the final course grade

Final Exam : 50% of the final course grade

### ≡ **SESSIONS**

- **SESSION 1:**
  - LECTURE: 02h00
  - Introduction – Professional Ethics
- **SESSION 2:**
  - LECTURE: 02h00
  - Code of Ethics Standard 1
- **SESSION 3:**
  - LECTURE: 02h00
  - Code of Ethics Standard 2

- **SESSION 4:**
  - LECTURE: 02h00
  - Code of Ethics Standard 3
- **SESSION 5:**
  - LECTURE: 02h00
  - Code of Ethics Standard 4
- **SESSION 6:**
  - LECTURE: 02h00
  - Code of Ethics Standard 5
- **SESSION 7:**
  - LECTURE: 02h00
  - Code of Ethics Standard 6
- **SESSION 8:**
  - LECTURE: 02h00
  - Code of Ethics Standard 7
- **SESSION 9:**
  - LECTURE: 02h00
  - Application Cases of multiple Standards
- **SESSION 10:**
  - LECTURE: 02h00
  - Global Investment Performance Standards – Part A
- **SESSION 11:**
  - LECTURE: 02h00
  - Global Investment Performance Standards – Part B
- **SESSION 12:**
  - LECTURE: 02h00
  - Review of main concepts, and applying the Standards and GIPS

**CODE:** Tbc  
**Course title:** QUANTITATIVE METHODS

**Term :** FALL

**Teaching hours:** 24 hours

**Number of credits:** 3

**Teaching language:** ☒English ☐French

**Course leader:**

**Speakers:** Elias Demetriades

## ≡ COURSE DESCRIPTION

The course introduces quantitative concepts and techniques used in financial analysis and investment decision making. The time value of money and discounted cash flow analysis form the basis for cash flow and security valuation. Descriptive statistics used for conveying important data attributes such as central tendency, location, and dispersion are presented. Characteristics of return distributions such as symmetry, skewness, and kurtosis, are also introduced. Finally, all investment forecasts and decisions involve uncertainty: Therefore, probability theory and its application quantifying risk in investment decision making is considered. The course also introduces the common probability distributions used to describe the behaviour of random variables, such as asset prices and returns. How to estimate measures of a population (mean, standard deviation) based on a population sample is shown. A framework for hypothesis testing, used for validating dataset hypotheses, follows, along with techniques to test a hypothesis. The course ends with coverage of technical analysis, a set of tools that uses asset price, trading volume, and other similar data for making investment

## ≡ COURSE OBJECTIVES

At the end of this course students should be able to:

- calculate and interpret the future value (FV) and present value (PV) of a single sum of money, an ordinary annuity, an annuity due, a perpetuity (PV only), and a series of unequal cash flows
- calculate and interpret the net present value (NPV) and the internal rate of return (IRR) of an investment
- calculate and compare the money- weighted and time- weighted rates of return of a portfolio and evaluate the performance of portfolios based on these measures
- distinguish between descriptive statistics and inferential statistics, between a population and a sample, and among the types of measurement scales
- calculate and interpret measures of central tendency, including the population mean, sample mean, arithmetic mean, weighted average or mean, geometric mean, harmonic mean, median, and mode
- calculate and interpret 1) a range and a mean absolute deviation and 2) the variance and standard deviation of a population and of a sample and explain skewness and kurtosis, covariance and correlation
- define a probability distribution and distinguish between discrete and continuous random variables and their probability functions;
- distinguish between a univariate and a multivariate distribution and explain the role of correlation in the multivariate normal distribution
- define the standard normal distribution, explain how to standardize a random variable, and calculate and interpret probabilities using the standard normal distribution
- explain Monte Carlo simulation, describe its applications and limitations and compare it to historical simulation

- distinguish between simple random and stratified random sampling and distinguish between time-series and cross-sectional data
- calculate and interpret a confidence interval for a population mean, given a normal distribution with 1) a known population variance, 2) an unknown population variance, or 3) an unknown population variance and a large sample size
- describe the issues regarding selection of the appropriate sample size, data-mining bias, sample selection bias, survivorship bias, look-ahead bias, and time-period bias.
- define a hypothesis, describe the steps of hypothesis testing, and describe and interpret the choice of the null and alternative hypotheses; explain a test statistic, Type I and Type II errors, a significance level, and how significance levels are used in hypothesis testing
- identify the appropriate test statistic and interpret the results for a hypothesis test concerning the population mean of both large and small samples when the population is normally or approximately normally distributed and the variance is 1) known or 2) unknown
- identify the appropriate test statistic and interpret the results for a hypothesis test concerning 1) the variance of a normally distributed population, and 2) the equality of the variances of two normally distributed populations based on two independent random samples
- distinguish between parametric and nonparametric tests and describe situations in which the use of nonparametric tests may be appropriate.
- describe the construction of different types of technical analysis charts and interpret them
- describe common technical analysis indicators (price-based, momentum oscillators, sentiment, and flow of funds) and describe the key tenets of Elliott Wave Theory and the importance of Fibonacci numbers
- describe intermarket analysis as it relates to technical analysis and asset allocation.

#### ≡ **COMPETENCES VISEES /LEARNING GOALS**

##### **LG01 Analysis**

**LO1** Develop critical thinking skills

##### **LG01 Analysis**

**LO2** Analyze complex situations

#### ≡ **TACKLED CONCEPTS**

- A. The time value of money
- B. Discounted cash flow applications
- C. Statistical concepts and market returns
- D. Probability concepts and common distributions
- E. Sampling and estimation
- F. Hypothesis testing
- G. Technical analysis concepts and techniques

#### ≡ **LEARNING METHODS**

The pedagogical approach is centered on a step-by-step build-up of the techniques involved, analysing scenarios of increasing complexity, calculating appropriate metrics, and applying these metrics to draw optimal decisions. This approach is enhanced by repetitive practice, both in class and at home and extensive discussion of challenging concepts and techniques, drawing in the students to engage with the professor as well as each other.

## ≡ **ASSIGNMENTS AND EXPECTED WORK**

Readings: The main readings for the course are materials specifically designed for preparation for the CFA exam. In addition to those, selective readings may be assigned from the bibliography of the course, complemented by published academic papers and articles from the business and financial press.

Exercises: Every lecture is complemented by in-class exercises. Additional exercises are prepared by students (as homework) and are discussed in the class.

Short Exams: During the course, students will take a short exam covering specific material, in order to test their knowledge and assess the need for extra work in areas of weakness.

Final exam: The final exam provides students with the opportunity to demonstrate their understanding of the material covered in the entire course.

## ≡ **BIBLIOGRAPHY – COURSE MATERIAL**

Quantitative Investment Analysis, by Richard A. DeFusco, PhD, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkle, PhD, Wiley Publishers

## ≡ **EVALUATION METHODS**

Four CC tests at 12.5% each:	50% of the final course grade
Final Exam :	50% of the final course grade

## ≡ **SESSIONS**

- **SESSION 1:**
  - LECTURE: 02h00
  - Introduction and review of time value of money and cash flow calculations
- **SESSION 2:**
  - LECTURE: 02h00
  - Statistical concepts and market returns – Part A
- **SESSION 3:**
  - LECTURE: 02h00
  - Statistical concepts and market returns – Part B
- **SESSION 4:**
  - LECTURE: 02h00
  - Probability concepts and common distributions – Part A
- **SESSION 5:**
  - LECTURE: 02h00
  - Probability concepts and common distributions – Part B
- **SESSION 6:**
  - LECTURE: 02h00
  - Sampling and estimation – Part A
- **SESSION 7:**
  - LECTURE: 02h00
  - Sampling and estimation – Part B
- **SESSION 8:**

- LECTURE: 02h00
- Hypothesis testing – Part A
- **SESSION 9:**
  - LECTURE: 02h00
  - Hypothesis testing – Part B
- **SESSION 10:**
  - LECTURE: 02h00
  - Technical analysis – Part A
- **SESSION 11:**
  - LECTURE: 02h00
  - Technical analysis – Part B
- **SESSION 12:**
  - LECTURE: 02h00
  - Review of main concepts, preparation for the final exam and Q&A session.

**CODE:** Tbc  
**Course title:** ECONOMICS

**Term:** FALL

**Teaching hours:** 24 hours  
**Number of credits:** 3  
**Teaching language:** ☒English ☐French  
**Course leader:**  
**Speakers:** Elias Demetriades

### ≡ COURSE DESCRIPTION

This course builds on the basic economic concepts of 'international economics' but focuses on the effects of economics on business and finance. The course begins by introducing fundamental concepts of demand and supply analysis for individual consumers and firms. Also covered are the various market structures (perfect competition, oligopoly, monopoly) in which firms operate. Key macroeconomic concepts and principles then follow, including aggregate output and income measurement, aggregate demand and supply analysis, and analysis of economic growth factors. The course continues with coverage of the business cycle and its effect on economic activity. In addition, the course studies monetary and fiscal policy, including their use by central banks and governments. Economics in a global context is then reviewed, concluding with an overview of currency market fundamentals.

### ≡ COURSE OBJECTIVES

At the end of this course students should be able to:

- calculate and interpret price, income, and cross- price elasticities of demand and describe factors that affect each measure; compare substitution and income effects; describe the phenomenon of diminishing marginal returns; determine and interpret breakeven and shutdown points of production
- describe characteristics of perfect competition, monopolistic competition, oligopoly, and pure monopoly and explain relationships between price, marginal revenue, marginal cost, economic profit, and the elasticity of demand under each market structure
- compare nominal and real GDP and calculate and interpret the GDP deflator and compare GDP, national income, personal income, and personal disposable income;
- explain the IS and LM curves and how they combine to generate the aggregate demand curve; explain the aggregate supply curve in the short run and long run; explain causes of movements along and shifts in aggregate demand and supply curves;
- describe how fluctuations in aggregate demand and aggregate supply cause short-run changes in the economy and the business cycle; distinguish between the following types of macroeconomic equilibria: long- run full employment, short- run recessionary gap, short- run inflationary gap, and short- run stagflation
- describe theories of the business cycle; describe types of unemployment and compare measures of unemployment; explain inflation, hyperinflation, disinflation, and deflation;
- compare monetary and fiscal policy; explain the relationships between monetary policy and economic growth, inflation, interest, and exchange rates; describe tools of fiscal policy, including their advantages and disadvantages; explain the interaction of monetary and fiscal policy
- compare the Ricardian and Heckscher–Ohlin models of trade and the source(s) of comparative advantage in each model; describe common objectives of capital

restrictions imposed by governments; describe the balance of payments accounts including their components; describe functions and objectives of the international organizations that facilitate trade, including the World Bank, the International Monetary Fund, and the World Trade Organization

- define an exchange rate and distinguish between nominal and real exchange rates and spot and forward exchange rates
- explain the arbitrage relationship between spot rates, forward rates, and interest rates;
- calculate and interpret a forward discount or premium; calculate and interpret the forward rate consistent with the spot rate and the interest rate in each currency; describe exchange rate regimes; explain the effects of exchange rates on countries' international trade and capital flows

### ≡ **COMPETENCES VISEES /LEARNING GOALS**

#### **LG01 Analysis**

**LO1** Develop critical thinking skills

#### **LG01 Analysis**

**LO2** Analyze complex situations

### ≡ **TACKLED CONCEPTS**

- A. Market Forces of Supply and Demand
- B. The Firm and Industry Organization
- C. Business Cycles
- D. Inflation and Deflation
- E. International Trade and Capital Flows
- F. Currency Exchange Rates
- G. Monetary System, Monetary and Fiscal Policy
- H. Economic Growth and Development
- I. Effects of Regulations
- J. Economic Analysis and Setting Capital Market Expectations
- K. Effects of Geopolitics on Economies and Investment Markets
- L. Applications of Economic Indicators in the Investment Process

### ≡ **LEARNING METHODS**

The pedagogical approach is centered on a step-by-step build-up of the techniques involved analysing scenarios of increasing complexity, calculating appropriate metrics, and applying these metrics to draw optimal decisions. This approach is enhanced by repetitive practice, both in class and at home and extensive discussion of challenging concepts and techniques, drawing in the students to engage with the professor as well as each other.

### ≡ **ASSIGNMENTS AND EXPECTED WORK**

Readings: The main readings for the course are materials specifically designed for preparation for the CFA exam. In addition to those, selective readings may be assigned from the bibliography of the course, complemented by published academic papers and articles from the business and financial press.

Exercises: Every lecture is complemented by in-class exercises. Additional exercises are prepared by students (as homework) and are discussed in the class.

Short Exams: During the course, students will take short exams covering specific material, in order to test their knowledge and assess the need for extra work in areas of weakness.

Final exam: The final exam provides students with the opportunity to demonstrate their

understanding of the material covered in the entire course.

### ≡ **BIBLIOGRAPHY – COURSE MATERIAL**

Principles of Economics, by N. Gregory Mankiw, Cengage Learning

International Economics, by Dominick Salvatore, Wiley Publishers

### ≡ **EVALUATION METHODS**

Two CC tests at 25% each: 50% of the final course grade

Final Exam : 50% of the final course grade

### ≡ **SESSIONS**

- **SESSION 1:**
  - LECTURE: 02h00
  - Introduction – Supply and Demand Analysis
- **SESSION 2:**
  - LECTURE: 02h00
  - The Firm and Market Structures Part A
- **SESSION 3:**
  - LECTURE: 02h00
  - The Firm and Market Structures Part B
- **SESSION 4:**
  - LECTURE: 02h00
  - Aggregate Output, Prices, and Economic Growth Part A
- **SESSION 5:**
  - LECTURE: 02h00
  - Aggregate Output, Prices, and Economic Growth Part B
- **SESSION 6:**
  - LECTURE: 02h00
  - Understanding Business Cycles
- **SESSION 7:**
  - LECTURE: 02h00
  - Monetary and Fiscal Policy Part A
- **SESSION 8:**
  - LECTURE: 02h00
  - Monetary and Fiscal Policy Part B
- **SESSION 9:**
  - LECTURE: 02h00
  - International Trade and Capital Flows Part A
- **SESSION 10:**
  - LECTURE: 02h00

- International Trade and Capital Flows Part B
- **SESSION 11:**
  - LECTURE: 02h00
  - Currency Exchange Rates
- **SESSION 12:**
  - LECTURE: 02h00
  - Review of main concepts, preparation for the final exam and Q&A session.

**CODE:** Tbc  
**Course title:** FINANCIAL STATEMENT ANALYSIS  
**Term:** FALL

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**Teaching hours:** 24 hours  
**Number of credits:** 3  
**Teaching language:** ☒English ☐French  
**Course leader:**  
**Speakers:** Eric Maton

### ≡ COURSE DESCRIPTION

This course builds on previously learned skills in financial accounting and financial analysis. It examines financial reporting for specific categories of assets and liabilities. Inventories, long-lived assets, income taxes, and non-current liabilities are examined in greater detail because of their effect on financial statements and reported measures of profitability, liquidity, and solvency. For these items in particular, the analyst should be attentive to chosen accounting treatment, corresponding effect on reported performance, and the potential for financial statement manipulation. This course then introduces the concept of financial reporting quality and the differences that may exist between companies and the means for identifying them. Warning signs of poor or low quality reporting are covered. The application of financial analysis techniques to evaluate a company's past and projected performance, assess credit risk, and screen for potential equity investments follows and indicators of low quality reporting, including quality of earnings, cash flow, and balance sheet are examined.

### ≡ COURSE OBJECTIVES

At the end of this course students should be able to:

- calculate and compare cost of sales, gross profit, and ending inventory using different inventory valuation methods and using perpetual and periodic inventory systems
- describe the different depreciation methods for property, plant, and equipment and calculate depreciation expense
- explain and evaluate how finance leases and operating leases affect financial statements and ratios from the perspective of both the lessor and the lessee
- identify the key provisions of and differences between income tax accounting under International Financial Reporting Standards (IFRS) and US generally accepted accounting principles (GAAP)
- describe the financial statement presentation of and disclosures relating to debt
- analyze conditions that are conducive to issuing low-quality, or even fraudulent, financial reports
- describe the role of financial statement analysis in assessing the credit quality of a potential debt or equity financing
- demonstrate the use of a framework for the analysis of financial statements, given a particular problem, question, or purpose (e.g., valuing equity based on comparables, critiquing a credit rating, obtaining a comprehensive picture of financial leverage, evaluating the perspectives given in management's discussion of financial results)
- analyze and interpret how balance sheet modifications, earnings normalization, and cash flow statement related modifications affect a company's financial statements, financial ratios, and overall financial condition

≡ **COMPETENCES VISEES /LEARNING GOALS**

**LG01 Analysis**

**LO1** Develop critical thinking skills

**LG01 Analysis**

**LO2** Analyze complex situations

≡ **TACKLED CONCEPTS**

- A. Analysis of Financial Statements
- B. Financial Reporting Quality
- C. Analysis of Off-Balance-Sheet Assets and Liabilities
- D. Analysis of Pensions, Stock Compensation, and Other Employee Benefits
- E. Analysis of Inter-Corporate Investments
- F. Analysis of Business Combinations
- G. Analysis of Global Operations
- H. Building a Company Financial Model
- I. Ratio and Financial Analysis
- J. Financial Analysis of Banks and Insurance Companies

≡ **LEARNING METHODS**

The pedagogical approach is centered on a step-by-step build-up of the techniques involved analysing scenarios of increasing complexity, calculating appropriate metrics, and applying these metrics to draw optimal decisions. This approach is enhanced by repetitive practice, both in class and at home and extensive discussion of challenging concepts and techniques, drawing in the students to engage with the professor as well as each other.

≡ **ASSIGNMENTS AND EXPECTED WORK**

Readings: The main readings for the course are materials specifically designed for preparation for the CFA exam. In addition to those, selective readings may be assigned from the bibliography of the course, complemented by published academic papers and articles from the business and financial press.

Exercises: Every lecture is complemented by in-class exercises. Additional exercises are prepared by students (as homework) and are discussed in the class.

Short Exams: During the course, students will take short exams covering specific material, in order to test their knowledge and assess the need for extra work in areas of weakness.

Final exam: The final exam provides students with the opportunity to demonstrate their understanding of the material covered in the entire course.

≡ **BIBLIOGRAPHY – COURSE MATERIAL**

Financial Statement Analysis, 5th Edition: A Practitioner's Guide, by Martin S; Fridson & Fernando Alvarez

Evaluating Quality of Financial Reports by Jack T. Ciesielski, CPA, CFA, Elaine Henry, PhD, CFA, and Thomas I. Selling, PhD, CPA

Integration of Financial Statement Analysis Techniques by Jack T. Ciesielski, CPA, CF

## ≡ **EVALUATION METHODS**

Four CC tests at 12.5% each: 50% of the final course grade  
Final Exam : 50% of the final course grade

## ≡ **SESSIONS**

- **SESSION 1:**
  - LECTURE: 02h00
  - Introduction – Financial reporting of inventories
- **SESSION 2:**
  - LECTURE: 02h00
  - Financial Reporting of Fixed Assets – Part A
- **SESSION 3:**
  - LECTURE: 02h00
  - Financial Reporting of Fixed Assets – Part B
- **SESSION 4:**
  - LECTURE: 02h00
  - Taxation evaluation and tax benefits
- **SESSION 5:**
  - LECTURE: 02h00
  - Reporting of Off-Balance-Sheet Items
- **SESSION 6:**
  - LECTURE: 02h00
  - Reporting of Employee Benefit Items
- **SESSION 7:**
  - LECTURE: 02h00
  - Financial Statements after a Merger or an Acquisition
- **SESSION 8:**
  - LECTURE: 02h00
  - Evaluation of the Quality of Financial Reports – Part A
- **SESSION 9:**
  - LECTURE: 02h00
  - Evaluation of the Quality of Financial Reports – Part B
- **SESSION 10:**
  - LECTURE: 02h00
  - Integration of Financial Statement Techniques – Part A
- **SESSION 11:**
  - LECTURE: 02h00
  - Integration of Financial Statement Techniques – Part B
- **SESSION 12:**
  - LECTURE: 02h00
  - Review of main concepts, preparation for the final exam and Q&A session.

**CODE:** Tbc  
**Course title:** CORPORATE ISSUERS

**Term:** FALL

**Teaching hours:** 24 hours  
**Number of credits:** 3  
**Teaching language:** ☒English ☐French  
**Course leader:**  
**Speakers:** Panagiotis Politsidis

### ≡ COURSE DESCRIPTION

The course provides an introduction to corporate governance and investing and financing decisions. An overview of corporate governance is presented along with a framework for understanding and analysing corporate governance and stakeholder management. The growing impact of environmental and social considerations in investing is also highlighted. The course explores the motivation for and issues behind raising funds through stock offers. Also covered are practical techniques to estimate a company's or project's cost of capital. The course then covers how companies make use of leverage and manage their working capital to meet short- term operational needs. The various types of leverage (operating, financial, total), measures of leverage, and how leverage affects a company's earnings and financial ratios are examined. A discussion then follows on the different types of working capital and the management issues associated with each. The course concludes with techniques for assessing the effectiveness of working capital management.

### ≡ COURSE OBJECTIVES

At the end of this course students should be able to:

- describe corporate governance; describe market and non- market factors that can affect stakeholder relationships and corporate governance; describe how environmental, social, and governance factors may be used in investment analysis
- calculate and interpret the weighted average cost of capital (WACC) of a company; describe how taxes affect the cost of capital from different capital sources; describe the use of target capital structure in estimating WACC and how target capital structure weights may be determined
- calculate and interpret the cost of debt capital using the yield- to- maturity approach and the debt- rating approach; calculate and interpret the beta and cost of capital for a project;
- define and explain leverage, business risk, sales risk, operating risk, and financial risk and classify a risk; calculate and interpret the degree of operating leverage, the degree of financial leverage, and the degree of total leverage; analyze the effect of financial leverage on a company's net income and return on equity
- calculate the breakeven quantity of sales and determine the company's net income at various sales levels; calculate and interpret the operating breakeven quantity of sales
- describe primary and secondary sources of liquidity and factors that influence a company's liquidity position; evaluate working capital effectiveness of a company based on its operating and cash conversion cycles and compare the company's effectiveness with that of peer companies
- describe how different types of cash flows affect a company's net daily cash position; evaluate a company's management of accounts receivable, inventory, and accounts payable over time and compared to peer companies; evaluate the choices of short-term funding available to a company and recommend a financing method

## ≡ COMPETENCES VISEES /LEARNING GOALS

### **LG01 Analysis**

**LO2** Analyze complex situations

### **LG03 Entrepreneurship and Innovation**

**LO07** Identify needs and develop a relevant offer

### **LG04 RSO**

**LO12** Arbitrate one the basis of economic, societal and environmental considerations

## **TACKLED CONCEPTS**

- A. Corporate Structures and Strategies
- B. Corporate Ownership and Governance
- C. Risk Factors (including environmental and social)
- D. Corporate Financing Decisions
- E. Corporate Actions, Combinations, and Restructuring

## ≡ LEARNING METHODS

The pedagogical approach is centered on a step-by-step build-up of the techniques involved analysing scenarios of increasing complexity, calculating appropriate metrics, an applying these metrics to draw optimal decisions. This approach is enhanced by repetitive practice, both in class and at home and extensive discussion of challenging concepts and techniques, drawing in the students to engage with the professor as well as each other.

## ≡ ASSIGNMENTS AND EXPECTED WORK

Readings: The main readings for the course are materials specifically designed for preparation for the CFA exam. In addition to those, selective readings may be assigned from the bibliography of the course, complemented by published academic papers and articles from the business and financial press.

Exercises: Every lecture is complemented by in-class exercises. Additional exercises are prepared by students (as homework) and are discussed in the class.

Short Exams: During the course, students will take short exams covering specific material, in order to test their knowledge and assess the need for extra work in areas of weakness.

Final exam: The final exam provides students with the opportunity to demonstrate their understanding of the material covered in the entire course.

## ≡ BIBLIOGRAPHY – COURSE MATERIAL

Capital Structure and Corporate Financing Decisions: Theory, Evidence, and Practice, by Kent Baker and Gerald S. Martin, Wiley Publishers (Robert W. Kolb Series Book 15)

Corporate Governance Matters, 3<sup>rd</sup> ed., by David Larcker and Brian Tayan, Pearson Publishers

## ≡ EVALUATION METHODS

Four CC tests at 12.5% each: 50% of the final course grade

Final Exam : 50% of the final course grade

## ≡ SESSIONS

- **SESSION 1:**
  - LECTURE: 02h00
  - Introduction to Corporate Finance
- **SESSION 2:**
  - LECTURE: 02h00
  - Corporate Governance and ESG Part A
- **SESSION 3:**
  - LECTURE: 02h00
  - Corporate Governance and ESG Part B
- **SESSION 4:**
  - LECTURE: 02h00
  - Business and environmental risks
- **SESSION 5:**
  - LECTURE: 02h00
  - Cost of Capital Part A
- **SESSION 6:**
  - LECTURE: 02h00
  - Cost of Capital Part B
- **SESSION 7:**
  - LECTURE: 02h00
  - Cost of Debt Part A
- **SESSION 8:**
  - LECTURE: 02h00
  - Cost of Debt Part B
- **SESSION 9:**
  - LECTURE: 02h00
  - Determination and Issues of Dividend Policy
- **SESSION 10:**
  - LECTURE: 02h00
  - Capital structure and restructuring Part A
- **SESSION 11:**
  - LECTURE: 02h00
  - Capital structure and restructuring Part B
- **SESSION 12:**
  - LECTURE: 02h00
  - Review of main concepts, preparation for the final exam and Q&A session.

**CODE:** Tbc  
**Course title:** PORTFOLIO MANAGEMENT  
**Term:** FALL

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**Teaching hours:** 24 hours  
**Number of credits:** 3  
**Teaching language:** ☒English ☐French  
**Course leader:**  
**Speakers:** Michael Rees

### ≡ COURSE DESCRIPTION

The course starts with an introduction to the concept of a portfolio approach to investments. The needs of individual and institutional investors are each examined, along with the range of available investment solutions. The three main steps in the portfolio management process (planning, execution, and feedback) are outlined. Then common measures of portfolio risk and return and the introduction of modern portfolio theory (a quantitative framework for asset pricing and portfolio selection) are discussed. The course continues with an introduction to the portfolio planning and construction process, including the development of an investment policy statement (IPS). A discussion of risk management, including the various types and measures of risk, follows, and a risk management framework is provided. The course concludes with coverage of how financial technology (fintech) is impacting areas within the investment industry, such as investment analysis, automated advice, and risk management.

### ≡ COURSE OBJECTIVES

At the end of this course students should be able to:

- describe the portfolio approach to investing; calculate and interpret major return measures and describe their appropriate uses; describe characteristics of the major asset classes that investors consider in forming portfolios
- calculate and interpret the mean, variance, and covariance (or correlation) of asset returns based on historical data; explain risk aversion and its implications for portfolio selection;
- describe the effect on a portfolio's risk of investing in assets that are less than perfectly correlated; describe and interpret the minimum- variance and efficient frontiers of risky assets and the global minimum- variance portfolio
- explain the selection of an optimal portfolio, given an investor's utility (or risk aversion) and the capital allocation line; describe the implications of combining a risk-free asset with a portfolio of risky assets; explain the capital allocation line (CAL) and the capital market line (CML)
- explain systematic and nonsystematic risk, including why an investor should not expect to receive additional return for bearing nonsystematic risk; calculate and interpret beta
- explain the capital asset pricing model (CAPM), including its assumptions, and the security market line (SML); calculate and interpret the expected return of an asset using the CAPM describe and demonstrate applications of the CAPM and the SML; calculate and interpret the Sharpe ratio, Treynor ratio, M2, and Jensen's alpha.
- describe the reasons for a written investment policy statement (IPS); describe the major components of an IPS; describe risk and return objectives and how they may be developed for a client; distinguish between the willingness and the ability (capacity) to take risk in analyzing an investor's financial risk tolerance
- describe the investment constraints of liquidity, time horizon, tax concerns, legal and regulatory factors, and unique circumstances and their implications for the choice of

portfolio assets; explain the specification of asset classes in relation to asset allocation; describe the principles of portfolio construction and the role of asset allocation in relation to the IPS

- define risk management; describe features of a risk management framework; define risk governance and describe elements of effective risk governance; explain how risk tolerance affects risk management
- describe risk budgeting and its role in risk governance; identify financial and non-financial sources of risk and describe how they may interact; describe methods for measuring and modifying risk exposures and factors to consider in choosing among the methods
- describe “fintech;” describe Big Data, artificial intelligence, and machine learning
- describe fintech applications to investment management; describe financial applications of distributed ledger technology

### ≡ **COMPETENCES VISEES /LEARNING GOALS**

#### **LG01 Analysis**

**LO2** Analyze complex situations

#### **LG02 Action**

**LO04** Be a force of proposal, take initiatives

**LO05** Assess, prevent and manage short, medium and long-term risks

### ≡ **TACKLED CONCEPTS**

- A. The Investment Policy Statement
- B. Modern Portfolio Management Concepts
- C. Investment Vehicles (including ETFs and Mutual Funds)
- D. Market Efficiency and Passive Investing
- E. Market Indexes
- F. Environmental, Social, and Governance (ESG) Investing
- G. Management of Individual/Family Investor Portfolios
- H. Tax Impact of Investment Decisions
- I. Asset Allocation
- J. Portfolio Construction and Revision
- K. Risk Management (including environmental risk)

### ≡ **LEARNING METHODS**

The pedagogical approach is centered on a step-by-step build-up of the techniques involved analysing scenarios of increasing complexity, calculating appropriate metrics, and applying these metrics to draw optimal decisions. This approach is enhanced by repetitive practice, both in class and at home and extensive discussion of challenging concepts and techniques, drawing in the students to engage with the professor as well as each other. A distinguishing feature of this course is the work done in a group project. The project requires each team member to research for both empirical data, as well as review the existing academic and industry literature for models and approaches to constructing a portfolio and establish a risk management framework for it.

### ≡ **ASSIGNMENTS AND EXPECTED WORK**

Readings: The main readings for the course are materials specifically designed for preparation for the CFA exam. In addition to those, selective readings may be assigned from the bibliography of the course, complemented by published academic papers and articles from the business and financial press.

Exercises: Every lecture is complemented by in-class exercises. Additional exercises are prepared by students (as homework) and are discussed in the class.

Research Project: Students will research and select assets for the construction of an imaginary portfolio that achieves risk and return objectives under constraints of asset categories and financial markets. Students will also research the literature, and summarize and explain possible deviations from their stated portfolio performance targets. The deliverables include a report describing the portfolio construction process, as well as potential risk management processes and tools.

Short Exam: During the course, students will take a short exam covering specific material, in order to test their knowledge and assess the need for extra work in areas of weakness.

Final exam: The final exam provides students with the opportunity to demonstrate their understanding of the material covered in the entire course.

## ≡ **BIBLIOGRAPHY – COURSE MATERIAL**

Modern Portfolio Management: Moving Beyond Modern Portfolio Theory, by Todd E; Petzel, Wiley Publishers

Advances in Active Portfolio Management: New Developments in Quantitative Investing, by Richard Grinold and Ronald Kahn, McGraw-Hill Publishers

Global Fintech: Financial Innovation in the Connected World, by David L. Shrier (Editor), Alex Pentland (Editor), MIT Press

## ≡ **EVALUATION METHODS**

One CC test:	20% of the final course grade
One Group Research Project:	30% of the final course grade
Final Exam :	50% of the final course grade

## ≡ **SESSIONS**

- **SESSION 1:**
  - LECTURE: 02h00
  - Overview of portfolio management
- **SESSION 2:**
  - LECTURE: 02h00
  - Portfolio risk and return Part A
- **SESSION 3:**
  - LECTURE: 02h00
  - Portfolio risk and return Part B
- **SESSION 4:**
  - LECTURE: 02h00
  - Portfolio risk and return Part C
- **SESSION 5:**
  - LECTURE: 02h00
  - Portfolio planning and construction Part A – Introduction to the Research Project
- **SESSION 6:**

- LECTURE: 02h00
- Portfolio planning and construction Part B
- **SESSION 7:**
  - LECTURE: 02h00
  - Portfolio planning and construction Part C
- **SESSION 8:**
  - LECTURE: 02h00
  - Risk management Part A
- **SESSION 9:**
  - LECTURE: 02h00
  - Risk management Part B
- **SESSION 10:**
  - LECTURE: 02h00
  - Fintech in investment management Part A
- **SESSION 11:**
  - LECTURE: 02h00
  - Fintech in investment management Part B
- **SESSION 12:**
  - LECTURE: 02h00
  - Review of main concepts, preparation for the final exam and Q&A session.

**CODE:** Tbc  
**Course title:** EQUITY INVESTMENTS

**Term:** FALL

**Teaching hours:** 24 hours  
**Number of credits:** 3  
**Teaching language:** ☒English ☐French  
**Course leader:**  
**Speakers:** Elias Demetriades

### ≡ COURSE DESCRIPTION

The course provides a structural overview of financial equity markets and their operating characteristics. Various asset types, market participants, and how assets trade within these markets and ecosystems are described. The course then turns to the calculation, construction, and use of security market indexes. It continues with a discussion of market efficiency and the degree to which market prices may reflect available information. The course then focuses on the characteristics, analysis, and valuation of equity securities. Various equity types including public and private equities are described. The various industry classification approaches for global equities and useful frameworks for conducting industry and individual company analysis are presented. Coverage of the three main equity valuation approaches (present value, multiplier, and asset based) conclude the course.

### ≡ COURSE OBJECTIVES

At the end of this course students should be able to:

- describe the major types of securities, currencies, contracts, commodities, and real assets that trade in organized markets, including their distinguishing characteristics and major subtypes; describe types of financial intermediaries and services they provide; calculate and interpret the leverage ratio, the rate of return on a margin transaction, and the security price at which the investor would receive a margin call; compare execution, validity, and clearing instructions; compare market orders with limit orders
- calculate and interpret the value, price return, and total return of an index; compare the different weighting methods used in index construction; calculate and analyze the value and return of an index given its weighting method; describe rebalancing and reconstitution of an index
- describe market efficiency and related concepts, including their importance to investment practitioners; contrast weak- form, semi- strong- form, and strong- form market efficiency
- explain the role of equity securities in the financing of a company's assets; distinguish between the market value and book value of equity securities; explain uses of industry analysis and the relation of industry analysis to company analysis
- compare methods by which companies can be grouped, current industry classification
- explain the factors that affect the sensitivity of a company to the business cycle and the uses and limitations of industry and company descriptors such as "growth," "defensive," and "cyclical"
- explain the effects of barriers to entry, industry concentration, industry capacity, and market share stability on pricing power and price competition; describe industry life cycle models, classify an industry as to life cycle stage, and describe limitations of the life- cycle concept in forecasting industry performance

- evaluate whether a security, given its current market price and a value estimate, is overvalued, fairly valued, or undervalued by the market;
- explain the rationale for using present value models to value equity and describe the dividend discount and free- cash- flow- to- equity models; calculate and interpret the intrinsic value of an equity security based on the Gordon (constant) growth dividend discount model or a two- stage dividend discount model, as appropriate
- explain the rationale for using price multiples to value equity, how the price to earnings multiple relates to fundamentals, and the use of multiples based on comparables; calculate and interpret the following multiples: price to earnings, price to an estimate of operating cash flow, price to sales, and price to book value; describe enterprise value multiples and their use in estimating equity value
- describe asset- based valuation models and their use in estimating equity value; explain advantages and disadvantages of each category of valuation model

### ≡ **COMPETENCES VISEES /LEARNING GOALS**

#### **LG01 Analysis**

**LO1** Develop critical thinking skills

#### **LG01 Analysis**

**LO2** Analyze complex situations

#### **LG02 Action**

**LO05** Assess, prevent and manage short, medium and long-term risks

### ≡ **TACKLED CONCEPTS**

- Types of Equity Securities and Markets
- Fundamental Equity Analysis
- Valuation of Individual Equity Securities
- Equity Market Valuation
- Equity Portfolio Management

### ≡ **LEARNING METHODS**

The pedagogical approach is centered on a step-by-step build-up of the techniques involved analysing scenarios of increasing complexity, calculating appropriate metrics, and applying these metrics to draw optimal decisions. This approach is enhanced by repetitive practice, both in class and at home and extensive discussion of challenging concepts and techniques, drawing in the students to engage with the professor as well as each other.

### ≡ **ASSIGNMENTS AND EXPECTED WORK**

Readings: The main readings for the course are materials specifically designed for preparation for the CFA exam. In addition to those, selective readings may be assigned from the bibliography of the course, complemented by published academic papers and articles from the business and financial press.

Exercises: Every lecture is complemented by in-class exercises. Additional exercises are prepared by students (as homework) and are discussed in the class.

Short Exams: During the course, students will take short exams covering specific material, in order to test their knowledge and assess the need for extra work in areas of weakness.

Final exam: The final exam provides students with the opportunity to demonstrate their understanding of the material covered in the entire course.

## ≡ **BIBLIOGRAPHY – COURSE MATERIAL**

Equity Asset Valuation (CFA Institute Investment Series), by Jerald E. Pinto, Wiley Publishers

Investment Valuation, by Aswath Damodaran, Wiley Publisher

## ≡ **EVALUATION METHODS**

Two CC tests at 25% each: 50% of the final course grade  
Final Exam : 50% of the final course grade

## ≡ **SESSIONS**

- **SESSION 1:**
  - LECTURE: 02h00
  - Introduction, types of equity securities and markets
- **SESSION 2:**
  - LECTURE: 02h00
  - Fundamental equity analysis Part A
- **SESSION 3:**
  - LECTURE: 02h00
  - Fundamental equity analysis Part B
- **SESSION 4:**
  - LECTURE: 02h00
  - Fundamental equity analysis Part C
- **SESSION 5:**
  - LECTURE: 02h00
  - Valuation of individual equity securities Part A
- **SESSION 6:**
  - LECTURE: 02h00
  - Valuation of individual equity securities Part B
- **SESSION 7:**
  - LECTURE: 02h00
  - Valuation of individual equity securities Part C
- **SESSION 8:**
  - LECTURE: 02h00
  - Equity market valuation Part A
- **SESSION 9:**
  - LECTURE: 02h00
  - Equity market valuation Part B
- **SESSION 10:**
  - LECTURE: 02h00
  - Equity market valuation Part C

- **SESSION 11:**
  - LECTURE: 02h00
  - Equity portfolio management
- **SESSION 12:**
  - LECTURE: 02h00
  - Review of main concepts, preparation for the final exam and Q&A session.

**CODE:** Tbc  
**Course title:** FIXED INCOME

**Term:** FALL

**Teaching hours:** 24 hours  
**Number of credits:** 3  
**Teaching language:** ☒English ☐French  
**Course leader:**  
**Speakers:** Diego Ronchetti

## ≡ COURSE DESCRIPTION

The course introduces the unique attributes that define fixed-income securities, followed by an overview of global debt markets. Primary issuers, sectors, and bond types are explained. Key concepts for the calculation and interpretation of bond prices, yields, and spreads and coverage of interest rate risk and key related risk measures are presented. Securitization - the creation of fixed- income securities backed by certain (typically less liquid) assets - is discussed including the various types, characteristics, and risks of these investments. The course also examines the fundamental elements underlying bond returns and risks with a specific focus on interest rate and credit risk. Duration, convexity, and other key measures for assessing a bond's sensitivity to interest rate risk are explored. An explanation of credit risk and the use of credit analysis for risky bonds is included.

## ≡ COURSE OBJECTIVES

At the end of this course students should be able to:

- describe basic features of a fixed- income security; compare affirmative and negative covenants and identify examples of each; describe contingency provisions affecting the timing and/or nature of cash flows of fixed- income securities and identify whether such provisions benefit the borrower or the lender
- describe classifications of global fixed- income markets; describe mechanisms available for issuing bonds in primary markets; describe secondary markets for bonds
- calculate a bond's price given a market discount rate; identify the relationships among a bond's price, coupon rate, maturity, and market discount rate (yield- to- maturity); define spot rates and calculate the price of a bond using spot rates
- define and compare the spot curve, yield curve on coupon bonds, par curve, and forward curve; define forward rates and calculate spot rates from forward rates, forward rates from spot rates, and the price of a bond using forward rates; compare, calculate, and interpret yield spread measures
- describe securitization, including the parties involved in the process and the roles they play; describe typical structures of securitizations, including credit tranching and time tranching; describe types and characteristics of residential mortgage loans that are typically securitized;
- describe types and characteristics of residential mortgage- backed securities, including mortgage pass- through securities and collateralized mortgage obligations, and explain the cash flows and risks for each type; describe types and characteristics of non- mortgage asset- backed securities, including the cash flows and risks of each type; describe collateralized debt obligations, including their cash flows and risks
- calculate and interpret the money duration of a bond and price value of a basis point (PVBp); calculate and interpret approximate convexity and distinguish between approximate and effective convexity; estimate the percentage price change of a bond for a specified change in yield, given the bond's approximate duration and convexity

- describe how the term structure of yield volatility affects the interest rate risk of a bond; explain how changes in credit spread and liquidity affect yield- to- maturity of a bond and how duration and convexity can be used to estimate the price effect of the changes
- describe credit risk and credit- related risks affecting corporate bonds; describe default probability and loss severity as components of credit risk; describe seniority rankings of corporate debt and explain the potential violation of the priority of claims in a bankruptcy proceeding
- explain the four Cs (Capacity, Collateral, Covenants, and Character) of traditional credit analysis; calculate and interpret financial ratios used in credit analysis; explain special considerations when evaluating the credit of high yield, sovereign, and non-sovereign government debt issuers and issues

### ≡ **COMPETENCES VISEES /LEARNING GOALS**

#### **LG01 Analysis**

**LO1** Develop critical thinking skills

#### **LG01 Analysis**

**LO2** Analyze complex situations

#### **LG02 Action**

**LO05** Assess, prevent and manage short, medium and long-term risks

### ≡ **TACKLED CONCEPTS**

- Types of Fixed-Income Securities and Markets
- Fundamental Fixed Income Analysis
- Term Structure Determination and Yield Spreads
- Valuation of Individual Fixed Income Securities
- Analysis of Interest Rate Risk
- Analysis of Credit Risk
- Valuing Bonds with Embedded Options
- Structured Products
- Fixed-Income Portfolio Management

### ≡ **LEARNING METHODS**

The pedagogical approach is centered on a step-by-step build-up of the techniques involved analysing scenarios of increasing complexity, calculating appropriate metrics, and applying these metrics to draw optimal decisions. This approach is enhanced by repetitive practice, both in class and at home and extensive discussion of challenging concepts and techniques, drawing in the students to engage with the professor as well as each other.

### ≡ **ASSIGNMENTS AND EXPECTED WORK**

Readings: The main readings for the course are materials specifically designed for preparation for the CFA exam. In addition to those, selective readings may be assigned from the bibliography of the course, complemented by published academic papers and articles from the business and financial press.

Exercises: Every lecture is complemented by in-class exercises. Additional exercises are prepared by students (as homework) and are discussed in the class.

Short Exams: During the course, students will take short exams covering specific material, in order to test their knowledge and assess the need for extra work in areas of weakness.

Final exam: The final exam provides students with the opportunity to demonstrate their

understanding of the material covered in the entire course.

### ≡ **BIBLIOGRAPHY – COURSE MATERIAL**

Fixed Income Securities: Valuation, Risk, and Risk Management, by Pietro Veronesi, Wiley Publishers

### ≡ **EVALUATION METHODS**

Two CC tests at 25% each: 50% of the final course grade  
Final Exam : 50% of the final course grade

### ≡ **SESSIONS**

- **SESSION 1:**
  - LECTURE: 02h00
  - Introduction, Types of Fixed-Income Securities and Markets
- **SESSION 2:**
  - LECTURE: 02h00
  - Fundamental Fixed Income Analysis
- **SESSION 3:**
  - LECTURE: 02h00
  - Term Structure Determination and Yield Spreads
- **SESSION 4:**
  - LECTURE: 02h00
  - Valuation of Individual Fixed Income Securities Part A
- **SESSION 5:**
  - LECTURE: 02h00
  - Valuation of Individual Fixed Income Securities Part B
- **SESSION 6:**
  - LECTURE: 02h00
  - Analysis of Interest Rate Risk
- **SESSION 7:**
  - LECTURE: 02h00
  - Analysis of Credit Risk Part A
- **SESSION 8:**
  - LECTURE: 02h00
  - Analysis of Credit Risk Part B
- **SESSION 9:**
  - LECTURE: 02h00
  - Valuing Bonds with Embedded Options
- **SESSION 10:**
  - LECTURE: 02h00
  - Structured Products

- **SESSION 11:**
  - LECTURE: 02h00
  - Fixed-Income Portfolio Management
- **SESSION 12:**
  - LECTURE: 02h00
  - Review of main concepts, preparation for the final exam and Q&A session.

**CODE:** Tbc

**Course title:** DERIVATIVES AND ALTERNATIVE INVESTMENTS

**Term:** FALL

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**Teaching hours:** 24 hours

**Number of credits:** 3

**Teaching language:** ☒English ☐French

**Course leader:**

**Speakers:** Eric Maton

## ≡ COURSE DESCRIPTION

This course builds the conceptual framework for understanding the basic derivatives and derivative markets. Essential features and valuation concepts for forward commitments such as forwards, futures, and swaps and contingent claims such as options are introduced. In addition the course introduces key valuation concepts and models for forward commitments (forwards, futures, swaps) and contingent claims (options). Option coverage includes the “Greeks,” which measure the effects on value of small changes in underlying asset value, time, volatility, and the risk-free rate. In addition, the use of derivatives to meet the needs of investors is discussed. The course provides an overview of the widely used alternative investments, including hedge funds, private equity, real estate, commodities, and infrastructure investment. Each type of alternative investment is examined with emphasis on their distinguishing characteristics, considerations for valuation, and potential benefits and risks.

## ≡ COURSE OBJECTIVES

At the end of this course students should be able to:

- Identify the various types of derivative products
- Analyze the scenarios the lead to the use of forwards and futures as part of speculation and risk management
- Analyze the scenarios the lead to the use of options as part of speculation and risk management
- Analyze the scenarios the lead to the use of swaps as part of speculation and risk management
- Demonstrate knowledge and understanding of basic models of valuation of various derivative instruments
- Identify the various types of alternative investment products such as real estate, other real assets and commodities
- Analyze the scenarios and issues involved with private equity, private credit, venture capital and hedge funds

## ≡ COMPETENCES VISEES /LEARNING GOALS

### **LG01 Analysis**

**LO2** Analyze complex situations

### **LG02 Action**

**LO5** Assess, prevent and manage short, medium and long-term risks

## ≡ TACKLED CONCEPTS

A. Types of Derivative Instruments and Markets

- B. Valuation of Forwards and Futures Contracts
- C. Valuation of Option Contracts
- D. Valuation of Swap Contracts
- E. Uses of Derivatives in Portfolio Management
- F. Types of Alternative Investments
- G. Real Estate
- H. Real Assets (including Infrastructure, Timber and Farm Land)
- I. Private Capital (including Private Equity, Private Credit and Venture Capital)
- J. Hedge Funds
- K. Commodities

### ≡ **LEARNING METHODS**

The pedagogical approach is centered on a step-by-step build-up of the techniques involved analysing scenarios of increasing complexity, calculating appropriate metrics, and applying these metrics to draw optimal decisions. This approach is enhanced by repetitive practice, both in class and at home and extensive discussion of challenging concepts and techniques, drawing in the students to engage with the professor as well as each other.

### ≡ **ASSIGNMENTS AND EXPECTED WORK**

Readings: The main readings for the course are materials specifically designed for preparation for the CFA exam. In addition to those, selective readings may be assigned from the bibliography of the course, complemented by published academic papers and articles from the business and financial press.

Exercises: Every lecture is complemented by in-class exercises. Additional exercises are prepared by students (as homework) and are discussed in the class.

Short Exams: During the course, students will take short exams covering specific material, in order to test their knowledge and assess the need for extra work in areas of weakness.

Final exam: The final exam provides students with the opportunity to demonstrate their understanding of the material covered in the entire course.

### ≡ **BIBLIOGRAPHY – COURSE MATERIAL**

Options, Futures and Other Derivatives, by John Hull, Pearson Education.

Alternative Investment Operations, by Jason Scharfman, Palgrave Macmillan Publishers

### ≡ **EVALUATION METHODS**

Two CC tests at 25% each: 50% of the final course grade

Final Exam : 50% of the final course grade

### ≡ **SESSIONS**

#### ○ **SESSION 1:**

- LECTURE: 02h00
- General Introduction to Futures, Forwards Options and Swaps

#### ○ **SESSION 2:**

- LECTURE: 02h00
- Uses of Futures and Forwards

#### ○ **SESSION 3:**

- LECTURE: 02h00
- Valuation of Forwards and Futures
- **SESSION 4:**
  - LECTURE: 02h00
  - Uses of Options, speculation and hedging
- **SESSION 5:**
  - LECTURE: 02h00
  - Alternative positions with Options, vanilla calls and puts
- **SESSION 6:**
  - LECTURE: 02h00
  - Valuation of Options and the Greeks
- **SESSION 7:**
  - LECTURE: 02h00
  - Scenarios for and uses of Swaps, Valuation of Swaps
- **SESSION 8:**
  - LECTURE: 02h00
  - Valuation of Swaps – Credit Default Swaps
- **SESSION 9:**
  - LECTURE: 02h00
  - Real Estate, other Real Assets and Commodities as alternative investments within a portfolio
- **SESSION 10:**
  - LECTURE: 02h00
  - Analysis of private equity structures and issues
- **SESSION 11:**
  - LECTURE: 02h00
  - Description, calculation, and interpretation of the management and incentive fees and net- of- fees returns to hedge funds
- **SESSION 12:**
  - LECTURE: 02h00
  - Review of main concepts, preparation for the final exam and Q&A session.

**CODE:** Tbc

**Course title:** CORPORATE ISSUERS & PORTFOLIO MANAGEMENT II

**Term:** SPRING

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**Teaching hours:** 24 hours

**Number of credits:** 3

**Teaching language:** ☒English ☐French

**Course leader:**

**Speakers:** Michael Rees

### ≡ COURSE DESCRIPTION

The first part of this course addresses advanced topics in the issuance of securities for financing. It explores in detail mergers and acquisitions, including reverse takeovers, leveraged buyouts (LBOs), divestitures, and defensive tactics in hostile takeovers. The course concludes with the examination of specific investment banking topics, such as IPOs and SEOs. The second part of the course starts with a review of the major theories of portfolio structure and then explores in more detail their management, in the context of both individual and institutional investors, extending to pension plans and employee benefit funds. The course brings more detail on the asset allocation, portfolio construction and revision processes and then covers specific strategies for the management of fixed income, equity, and alternative investment portfolios. The course concludes with exploring the risk management and construction of performance metrics of diverse portfolios.

### ≡ COURSE OBJECTIVES

At the end of this course students should be able to:

- discuss the issues involved with corporate restructurings, including financing choices for such
- explain the processes involved with initial public offerings and seasoned equity offerings
- describe the main models for understanding the construction and performance of diverse portfolios
- understand the asset allocation, portfolio construction and revision processes.
- calculate specific metrics that assess the performance of portfolios of a variety of assets, both conventional and alternative
- use multiple approaches and techniques for measuring and managing the risk of diverse portfolios

### ≡ COMPETENCES VISEES /LEARNING GOALS

#### **LG01 Analysis**

**LO1** Develop critical thinking skills

#### **LG01 Analysis**

**LO2** Analyze complex situations

#### **LG02 Action**

**LO05** Assess, prevent and manage short, medium and long-term risks

### ≡ TACKLED CONCEPTS

- A. Mergers and Acquisitions and Corporate Restructuring
- B. Valuation Implications of Corporate Finance
- C. Introduction to Investment Banking
- D. Portfolio Concepts from Capital Theory
- E. Asset Allocation and Portfolio Construction and Revision
- F. Management Strategies for Diverse Portfolios
- G. Portfolio Risk Management
- H. Portfolio Performance Measurement, Attribution and Appraisal

### ≡ **LEARNING METHODS**

The pedagogical approach is centered on a step-by-step build-up of the techniques involved analysing scenarios of increasing complexity, calculating appropriate metrics, and applying these metrics to draw optimal decisions. This approach is enhanced by repetitive practice, both in class and at home and extensive discussion of challenging concepts and techniques, drawing in the students to engage with the professor as well as each other.

### ≡ **ASSIGNMENTS AND EXPECTED WORK**

Readings: The main readings for the course are materials specifically designed for preparation for the CFA exam. In addition to those, selective readings may be assigned from the bibliography of the course, complemented by published academic papers and articles from the business and financial press.

Exercises: Every lecture is complemented by in-class exercises. Additional exercises are prepared by students (as homework) and are discussed in the class.

Short Exams: During the course, students will take short exams covering specific material, in order to test their knowledge and assess the need for extra work in areas of weakness.

Final exam: The final exam provides students with the opportunity to demonstrate their understanding of the material covered in the entire course.

### ≡ **BIBLIOGRAPHY – COURSE MATERIAL**

Capital Structure and Corporate Financing Decisions: Theory, Evidence, and Practice, by Kent Baker and Gerald S. Martin, Wiley Publishers (Robert W. Kolb Series Book 15)

Modern Portfolio Management: Moving Beyond Modern Portfolio Theory, by Todd E. Petzel, Wiley Publishers

Advances in Active Portfolio Management: New Developments in Quantitative Investing, by Richard Grinold and Ronald Kahn, McGraw-Hill Publishers

### ≡ **EVALUATION METHODS**

Two CC tests at 25% each: 50% of the final course grade  
Final Exam : 50% of the final course grade

### ≡ **SESSIONS**

#### ○ **SESSION 1:**

- LECTURE: 02h00
- Mergers and Acquisitions and Corporate Restructuring Part A

#### ○ **SESSION 2:**

- LECTURE: 02h00

- Mergers and Acquisitions and Corporate Restructuring Part B
- **SESSION 3:**
  - LECTURE: 02h00
  - Introduction to Investment Banking
- **SESSION 4:**
  - LECTURE: 02h00
  - Portfolio Concepts from Capital Theory
- **SESSION 5:**
  - LECTURE: 02h00
  - Asset Allocation and Portfolio Construction and Revision Part A
- **SESSION 6:**
  - LECTURE: 02h00
  - Asset Allocation and Portfolio Construction and Revision Part B
- **SESSION 7:**
  - LECTURE: 02h00
  - Management Strategies for Equity Portfolios
- **SESSION 8:**
  - LECTURE: 02h00
  - Management Strategies for Fixed Income Portfolios
- **SESSION 9:**
  - LECTURE: 02h00
  - Management Strategies for Alternative Investment Portfolios
- **SESSION 10:**
  - LECTURE: 02h00
  - Portfolio Risk Management
- **SESSION 11:**
  - LECTURE: 02h00
  - Portfolio Performance Measurement, Attribution and Appraisal
- **SESSION 12:**
  - LECTURE: 02h00
  - Review of main concepts, preparation for the final exam and Q&A session.

**CODE:** Tbc

**Course title:** EQUITIES & ALTERNATIVE INVESTMENTS II

**Term:** SPRING

**Teaching hours:** 24 hours

**Number of credits:** 3

**Teaching language:** ☒English ☐French

**Course leader:**

**Speakers:** Michael Reese

### ≡ COURSE DESCRIPTION

This course examines advanced concepts for the valuation of equity securities, with details in the calculations involved in their application. Equity valuation is practiced in the context of global portfolios which, in addition to equities, may include alternative investments, such as real estate or commodities. The course concludes with an examination of real estate investment trusts (REITS), exchange traded funds (ETFs) and private equity.

### ≡ COURSE OBJECTIVES

At the end of this course students should be able to:

- describe the properties of various stock market indicator series, investments in developing markets and global sector indices
- demonstrate a high level of competency in performing economy, industry and company analysis with the objective of valuing the equity securities of a company
- perform a company valuation using multiple approaches and select the best approach(es), given company and industry constraints
- analyze various alternative investments and evaluate the tax consequences of each individually or as parts of a portfolio

### ≡ COMPETENCES VISEES /LEARNING GOALS

#### **LG01 Analysis**

**LO2** Analyze complex situations

#### **LG02 Action**

**LO05** Assess, prevent and manage short, medium and long-term risks

#### **LG04 RSO**

**LO12** Arbitrate one the basis of economic, societal and environmental considerations

### ≡ TACKLED CONCEPTS

- A. Equity Market Valuation and Return Analysis
- B. Fundamental Analysis (Sector, Industry, Company) and the Valuation of Individual Equity Securities
- C. Sustainable multiples; Graham and Dodd Liquidation Model; Critical evaluation of alternative equity valuation approaches
- D. Special Applications of Fundamental Analysis

- E. Aggregation vehicles (e.g., limited partnership, open and closed end commingled funds, separate accounts, and real estate investment trusts (REITS))
- F. Characteristics of Exchange Traded Funds
- G. Private Equity
- H. Venture Capital
- I. Hedge Funds
- J. Energy futures

### ≡ **LEARNING METHODS**

The pedagogical approach is centered on a step-by-step build-up of the techniques involved analysing scenarios of increasing complexity, calculating appropriate metrics, and applying these metrics to draw optimal decisions. This approach is enhanced by repetitive practice, both in class and at home and extensive discussion of challenging concepts and techniques, drawing in the students to engage with the professor as well as each other.

### ≡ **ASSIGNMENTS AND EXPECTED WORK**

Readings: The main readings for the course are materials specifically designed for preparation for the CFA exam. In addition to those, selective readings may be assigned from the bibliography of the course, complemented by published academic papers and articles from the business and financial press.

Exercises: Every lecture is complemented by in-class exercises. Additional exercises are prepared by students (as homework) and are discussed in the class.

Short Exams: During the course, students will take short exams covering specific material, in order to test their knowledge and assess the need for extra work in areas of weakness.

Final exam: The final exam provides students with the opportunity to demonstrate their understanding of the material covered in the entire course.

### ≡ **BIBLIOGRAPHY – COURSE MATERIAL**

Alternative Investment Operations, by Jason Scharfman, Palgrave Macmillan Publishers

Equity Asset Valuation (CFA Institute Investment Series), by Jerald E. Pinto, Wiley Publisher

### ≡ **EVALUATION METHODS**

Two CC tests at 25% each: 50% of the final course grade

Final Exam : 50% of the final course grade

### ≡ **SESSIONS**

#### ○ **SESSION 1:**

- LECTURE: 02h00
- Introduction - Equity Market Valuation and Return Analysis

#### ○ **SESSION 2:**

- LECTURE: 02h00
- Fundamental Analysis (Sector, Industry, Company) and Valuation

#### ○ **SESSION 3:**

- LECTURE: 02h00
- Critical evaluation of alternative equity valuation approaches

- **SESSION 4:**
  - LECTURE: 02h00
  - Special Applications of Fundamental Analysis
- **SESSION 5:**
  - LECTURE: 02h00
  - Aggregation vehicles
- **SESSION 6:**
  - LECTURE: 02h00
  - Return and Risk of Exchange Traded Funds
- **SESSION 7:**
  - LECTURE: 02h00
  - Private Equity structures and issues – Part A
- **SESSION 8:**
  - LECTURE: 02h00
  - Private Equity structures and issues – Part B
- **SESSION 9:**
  - LECTURE: 02h00
  - Venture Capital and its processes
- **SESSION 10:**
  - LECTURE: 02h00
  - Hedge Funds return and risk
- **SESSION 11:**
  - LECTURE: 02h00
  - Energy futures
- **SESSION 12:**
  - LECTURE: 02h00
  - Review of main concepts, preparation for the final exam and Q&A session.

**CODE:** Tbc  
**Course title:** FIXED INCOME & DERIVATIVES II  
**Term:** SPRING

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**Teaching hours:** 24 hours  
**Number of credits:** 3  
**Teaching language:** ☒English ☐French  
**Course leader:**  
**Speakers:** Diego Ronchetti

### ≡ COURSE DESCRIPTION

This course has two parts. In the first part, the course builds on the basics of fixed income securities and markets and explores in more detail the analysis of interest rate risk and bond risk. This part further examines the valuation of bonds with embedded options as well as the valuation of structured products. The second part of the course develops the work on derivatives but first describing the properties and applications of multiple futures and options securities and diverse strategies for their trading. This part also examines advanced interest rate models and exotic options and concludes with an exploration of various swap instruments.

### ≡ COURSE OBJECTIVES

At the end of this course students should be able to:

- Explain the various sources of interest rate risk and how that is reflected on the risk of bond prices and yields
- Describe in detail the characteristics of bonds with embedded options and calculate the effect of these optionalities on the prices of bonds
- Calculate the value of an option using multiple closed-ended or numerical techniques, such as binomial trees
- Describe some of the basic option trading strategies and the risks and returns associated with them
- Compare and contrast multiple interest rate models, such as the Vasicek model, the Cox-Ingersoll-Ross model, the Black-Derman-Toy model and others
- Describe the properties of multiple exotic options and swaps, and demonstrate a good understanding of their valuation

### ≡ COMPETENCES VISEES /LEARNING GOALS

#### **LG01 Analysis**

**LO1** Develop critical thinking skills

#### **LG02 Action**

**LO05** Assess, prevent and manage short, medium and long-term risks

### ≡ TACKLED CONCEPTS

- A. Fixed Income Markets: Characteristics, Institutions, and Benchmarks
- B. Fixed Income Valuation and Return Analysis
- C. Term Structure Determination and Yield Spreads
- D. Analysis of Interest Rate Risk
- E. Analysis of Bond Risk
- F. Valuing Bonds with Embedded Options

- G. Valuing Structured Products
- H. Macroeconomic Effects on Fixed Income Yields
- I. Trading Strategies and Their Assessment
- J. Margin and Marking to Market
- K. Influence of Equity Market Changes on Bond Pricing
- L. Futures Markets and Instruments
- M. Options Markets and Instruments
- N. Solving the Option Pricing Problem
- O. Option Trading Strategies
- P. Term Structure Modelling and Interest Rate Option Pricing
- Q. Exotic Options
- R. Swaps Markets and Instruments
- S. Valuing Swaps
- T. Credit Derivatives Markets and Instruments and their Valuation

### ≡ **LEARNING METHODS**

The pedagogical approach is centered on a step-by-step build-up of the techniques involved analysing scenarios of increasing complexity, calculating appropriate metrics, and applying these metrics to draw optimal decisions. This approach is enhanced by repetitive practice, both in class and at home and extensive discussion of challenging concepts and techniques, drawing in the students to engage with the professor as well as each other.

### ≡ **ASSIGNMENTS AND EXPECTED WORK**

Readings: The main readings for the course are materials specifically designed for preparation for the CFA exam. In addition to those, selective readings may be assigned from the bibliography of the course, complemented by published academic papers and articles from the business and financial press.

Exercises: Every lecture is complemented by in-class exercises. Additional exercises are prepared by students (as homework) and are discussed in the class.

Short Exams: During the course, students will take short exams covering specific material, in order to test their knowledge and assess the need for extra work in areas of weakness.

Final exam: The final exam provides students with the opportunity to demonstrate their understanding of the material covered in the entire course.

### ≡ **BIBLIOGRAPHY – COURSE MATERIAL**

Fixed Income Securities: Valuation, Risk, and Risk Management, by Pietro Veronesi, Wiley Publishers

Options, Futures and Other Derivatives, by John Hull, Pearson Education.

The Mathematics of Financial Derivatives: A Student Introduction, by Wilmott, Paul, Sam Howison, and Jeff Dewynne, Cambridge University Press.

### ≡ **EVALUATION METHODS**

Two CC tests at 25% each: 50% of the final course grade  
 Final Exam : 50% of the final course grade

### ≡ **SESSIONS**

#### ○ **SESSION 1:**

- LECTURE: 02h00
- Introduction – Bond valuation and interest rate risk
- **SESSION 2:**
  - LECTURE: 02h00
  - Bonds with embedded options and structured products
- **SESSION 3:**
  - LECTURE: 02h00
  - Trading strategies, margins and marking to market
- **SESSION 4:**
  - LECTURE: 02h00
  - Review of futures and options markets and instruments
- **SESSION 5:**
  - LECTURE: 02h00
  - Option valuation models and techniques
- **SESSION 6:**
  - LECTURE: 02h00
  - Option trading strategies
- **SESSION 7:**
  - LECTURE: 02h00
  - Term Structure Modeling and Interest Rate Option Pricing
- **SESSION 8:**
  - LECTURE: 02h00
  - Exotic options – types and valuation
- **SESSION 9:**
  - LECTURE: 02h00
  - Swaps - markets and instruments
- **SESSION 10:**
  - LECTURE: 02h00
  - Valuation of Swaps
- **SESSION 11:**
  - LECTURE: 02h00
  - Markets and valuation of credit derivatives
- **SESSION 12:**
  - LECTURE: 02h00
  - Review of main concepts, preparation for the final exam and Q&A session.

**CODE:** Tbc

**Course title:** PROFESSIONAL STANDARDS & QUANTITATIVE METHODS II

**Term:** SPRING

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**Teaching hours:** 24 hours

**Number of credits:** 3

**Teaching language:** ☒English ☐French

**Course leader:**

**Speakers:** Michael Rees

### ≡ COURSE DESCRIPTION

This course has two parts. Its first part explores relatively challenging scenarios in industry settings that question the ethics or professional behaviors involved. This examination is on the basis of the CFA Code of Ethics and the Global Investment Performance Standards. The second part of the course explores and applies more advanced quantitative concepts and techniques used by investment professionals, such as heteroscedasticity, multicollinearity, and the analysis of time series.

### ≡ COURSE OBJECTIVES

At the end of this course students should be able to:

- demonstrate the proper analysis of ethical scenarios and application of the standards to be held by investments professionals
- apply a diverse array of techniques for assessing the statistical properties of diverse populations
- recognize the proper sampling techniques for representing the properties of statistical populations
- frame and use the correct hypothesis for assessing the statistical properties of populations on an individual as well as comparative basis
- demonstrate the correct application for the analysis of time series exhibiting diverse properties

### ≡ COMPETENCES VISEES /LEARNING GOALS

#### **LG01 Analysis**

**LO1** Develop critical thinking skills

#### **LG01 Analysis**

**LO2** Analyze complex situations

#### **LG04 RSO**

**LO11** Discern ethical issues and act on ethical considerations

### ≡ TACKLED CONCEPTS

- A. Professional Standards of Practice
- B. Ethical Practices and Guidelines
- C. Sampling and Estimation
- D. Hypothesis Testing
- E. Correlation Analysis and Regression
- F. Multiple Linear Regression
- G. Using Dummy Variables in Regressions

- H. Heteroskedasticity
- I. Multicollinearity
- J. Time Series Analysis
- K. Random Walks and Unit Roots
- L. Simulation Analysis
- M. Scenario Analysis
- N. Sensitivity Analysis
- O. Technical Analysis

## ≡ **LEARNING METHODS**

The pedagogical approach is centered on a step-by-step build-up of the techniques involved, analysing scenarios of increasing complexity, calculating appropriate metrics, and applying these metrics to draw optimal decisions. This approach is enhanced by repetitive practice, both in class and at home and extensive discussion of challenging concepts and techniques, drawing in the students to engage with the professor as well as each other.

## ≡ **ASSIGNMENTS AND EXPECTED WORK**

Readings: The main readings for the course are materials specifically designed for preparation for the CFA exam. In addition to those, selective readings may be assigned from the bibliography of the course, complemented by published academic papers and articles from the business and financial press.

Exercises: Every lecture is complemented by in-class exercises. Additional exercises are prepared by students (as homework) and are discussed in the class.

Short Exams: During the course, students will take a short exam covering specific material, in order to test their knowledge and assess the need for extra work in areas of weakness.

Final exam: The final exam provides students with the opportunity to demonstrate their understanding of the material covered in the entire course.

## ≡ **BIBLIOGRAPHY – COURSE MATERIAL**

Code of Ethics and Standards of Professional Conduct Standards of Practice Handbook, Current Edition

Guidance for Standards I–VII Standards of Practice Handbook, Current Edition

Quantitative Investment Analysis, by Richard A. DeFusco, PhD, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkle, PhD, Wiley Publishers

## ≡ **EVALUATION METHODS**

Two CC tests at 25% each: 50% of the final course grade  
Final Exam : 50% of the final course grade

## ≡ **SESSIONS**

### ○ **SESSION 1:**

- LECTURE: 02h00
- Introduction - Professional Standards of Practice

### ○ **SESSION 2:**

- LECTURE: 02h00
- Ethical Practices and Guidelines

- **SESSION 3:**
  - LECTURE: 02h00
  - Sampling and Estimation
- **SESSION 4:**
  - LECTURE: 02h00
  - Hypothesis Testing Part A
- **SESSION 5:**
  - LECTURE: 02h00
  - Hypothesis Testing Part B
- **SESSION 6:**
  - LECTURE: 02h00
  - Correlation Analysis and Regression
- **SESSION 7:**
  - LECTURE: 02h00
  - Multiple Linear Regression
- **SESSION 8:**
  - LECTURE: 02h00
  - Using Dummy Variables in Regressions
- **SESSION 9:**
  - LECTURE: 02h00
  - Heteroskedasticity and Multicollinearity
- **SESSION 10:**
  - LECTURE: 02h00
  - Time Series Analysis and Random Walks
- **SESSION 11:**
  - LECTURE: 02h00
  - Scenario, Sensitivity, and Technical Analysis
- **SESSION 12:**
  - LECTURE: 02h00
  - Review of main concepts, preparation for the final exam and Q&A session.

**CODE:****Course title: ECONOMICS & FINANCIAL STATEMENT ANALYSIS II****Term: SPRING****Teaching hours:** 24 hours**Number of credits:** 3**Teaching language:** ☒English ☐French**Course leader:****Speakers:** Eric Maton**≡ COURSE DESCRIPTION**

This course has two parts. The first part addresses advanced economics topics. The focus is on economic growth and development, including physical and human capital and the institutional environment. It further explores government regulation, including antitrust policies. This part of the course concludes with coverage of recent economic history and the impact of changes in aggregate domestic economies on valuations in global security markets. The second part of the course delves in specific topics of financial reporting and analysis. Extraordinary items on the financial statements, amortization or impairment of non-tangible assets and taxation issues are examined in detail. Extra work focuses on Off-Balance-Sheet assets and liabilities, and the treatment of stock compensation and pension plans. This part concludes with a deeper examination of business combinations and reporting of international investments and operations.

**≡ COURSE OBJECTIVES**

At the end of this course students should be able to:

- utilize the fundamentals of macro and microeconomics in explaining issues arising during the development of an economy
- explain how government regulation can support the ethical and effective functioning of financial markets and economies
- identify some of the mechanisms through which aggregate economic variables affect the valuation of securities in a global context
- demonstrate the reporting treatment of non-tangible assets and the effect of tax-related choices on the long-term performance of a company
- identify off-balance-sheet items and the motivations behind not including them in the balance sheet
- analyze the effect of pension plans and non-cash employee benefits on the performance and valuation of a company
- understand the rules for reporting for multinational companies, in the context of company competitiveness and diverse economies

**≡ COMPETENCES VISEES /LEARNING GOALS****LG01 Analysis****LO1** Develop critical thinking skills**LG01 Analysis****LO2** Analyze complex situations**≡ TACKLED CONCEPTS**

- A. Economic Growth and Development
- B. Government Regulation
- C. Relationship of Economic Activity to the Investment Process
- D. Analysis of Long-Lived Assets
- E. Analysis of Taxes
- F. Analysis of Debt
- G. Analysis of Off-Balance-Sheet Assets and Liabilities
- H. Analysis of Pensions, Stock Compensation, and Other Employee Benefits
- I. Analysis of Inter-Corporate Investments
- J. Analysis of Business Combinations
- K. Analysis of Global Operations
- L. Analysis of Financial Instruments, Derivatives and Hedging Activities
- M. Financial Reporting in Specialized Industries and Economic Environments

### ≡ **LEARNING METHODS**

The pedagogical approach is centered on a step-by-step build-up of the techniques involved analysing scenarios of increasing complexity, calculating appropriate metrics, and applying these metrics to draw optimal decisions. This approach is enhanced by repetitive practice, both in class and at home and extensive discussion of challenging concepts and techniques, drawing in the students to engage with the professor as well as each other.

### ≡ **ASSIGNMENTS AND EXPECTED WORK**

Readings: The main readings for the course are materials specifically designed for preparation for the CFA exam. In addition to those, selective readings may be assigned from the bibliography of the course, complemented by published academic papers and articles from the business and financial press.

Exercises: Every lecture is complemented by in-class exercises. Additional exercises are prepared by students (as homework) and are discussed in the class.

Short Exams: During the course, students will take short exams covering specific material, in order to test their knowledge and assess the need for extra work in areas of weakness.

Final exam: The final exam provides students with the opportunity to demonstrate their understanding of the material covered in the entire course.

### ≡ **BIBLIOGRAPHY – COURSE MATERIAL**

International Economics, by Dominick Salvatore, Wiley Publishers

Financial Statement Analysis, 5th Edition: A Practitioner's Guide, by Martin S; Fridson & Fernando Alvarez

Evaluating Quality of Financial Reports by Jack T. Ciesielski, CPA, CFA, Elaine Henry, PhD, CFA, and Thomas I. Selling, PhD, CPA

Integration of Financial Statement Analysis Techniques by Jack T. Ciesielski, CPA, CFA

### ≡ **EVALUATION METHODS**

Two CC tests at 25% each: 50% of the final course grade

Final Exam : 50% of the final course grade

### ≡ **SESSIONS**

#### ○ **SESSION 1:**

- LECTURE: 02h00
- Introduction to economic growth and development
- **SESSION 2:**
  - LECTURE: 02h00
  - Economic growth and government regulation
- **SESSION 3:**
  - LECTURE: 02h00
  - Analysis of Long-Lived Assets
- **SESSION 4:**
  - LECTURE: 02h00
  - Analysis of Taxes
- **SESSION 5:**
  - LECTURE: 02h00
  - Analysis of Debt
- **SESSION 6:**
  - LECTURE: 02h00
  - Analysis of Off-Balance-Sheet Assets and Liabilities
- **SESSION 7:**
  - LECTURE: 02h00
  - Analysis of Pensions, Stock Compensation, and Other Employee Benefits
- **SESSION 8:**
  - LECTURE: 02h00
  - Analysis of inter-corporate investments and Business Combinations
- **SESSION 9:**
  - LECTURE: 02h00
  - Analysis of Global Operations
- **SESSION 10:**
  - LECTURE: 02h00
  - Analysis of Financial Instruments, Derivatives and Hedging Activities
- **SESSION 11:**
  - LECTURE: 02h00
  - Financial Reporting in Specialized Industries and Economic Environments
- **SESSION 12:**
  - LECTURE: 02h00
  - Review of main concepts, preparation for the final exam and Q&A session

## ELECTIVES

**Course title: GREEN ENERGY FINANCE**

**Teaching hours:** 24 hours

**Number of credits:** 3

**Teaching language:** ☒English

### COURSE DESCRIPTION

The Paris Agreement aims at “making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development” (Article 2 c of the Paris Agreement). This ambition requires a significant increase in funding – with new instruments and approaches required to mobilize a broad range of investors and to achieve scalability in financing climate action. Through this course, students will explore the fundamentals of renewable energy (RE) and energy efficiency (EE) financing dimensions.

**Course title: Increase your learning potential with applied neurosciences**

**Teaching hours:** 24 hours

**Number of credits:** 3

**Teaching language:** ☒English

### COURSE DESCRIPTION

The main focus of this course is to give you insights on your brain and body functioning in relation to learning. This in-depth understanding of your global functioning in a learning situation aims to give you a set of keys for improvement.

This course, using an experiential approach, builds on recent contributions from neuroscience research into brain functioning, intelligence types, learning styles, and learning strategies. It aims to better understand the role of senses and movement in cognition and learning, as shown by recent research in neurobiology, with applications for example in cognitive psychology, sports...