

6.00 credits

30.0 h + 15.0 h

Q2

Teacher(s)	Thewissen James ;
Language :	English
Place of the course	Louvain-la-Neuve
Main themes	<p>In the first part of the course, students will be introduced to the major aspects of the financial environment; market actors, negotiated financial assets and market organisation, the role of public investment funds and asset management companies. The second part is focused on the modern theory of portfolio management: - modelling investors' attitude in the face of risk and optimum allocation of wealth between the various financial assets, primarily the CAPM - practical aspects of the use of the CAPM using the market model (or Sharpe one-factor model) and multi-factorial models (only those based on macroeconomic data), - the determination of the risk premium required by investors in a balanced market is analysed in the third part. The Capital Asset Pricing Model (CAPM) and Arbitrage Pricing Theory (APT) are also introduced, - discussion of market efficiency and investor behaviour. New developments in the theory incorporating the dimension of investor behaviour are presented. The fourth part focuses on the evaluation of basic financial assets in company financing; shares and bonds. The maximization principle (the value of a financial asset is equal to the hope of future cash flows set against the return expected by the investor) is applied to bonds and ordinary shares. The fifth part is devoted to active portfolio management and the evaluation of portfolio performance. A distinction is made between the performance measure leading to a portfolio classification and the performance attribution which involves management control and which aims to identify the operating decisions which make it possible to carry out an excess return in relation to a benchmark. The sixth and last part of this course introduces derivative financial instruments and their use in the management of investor-incurred risk. The organisation of these markets, the valuation of these instruments and the development of complex strategy are dealt with in advanced courses given in the third and fourth year.</p>
Learning outcomes	
Evaluation methods	<p><u>Homework – June Session</u></p> <ul style="list-style-type: none"> • Students will form groups of five. • The homework deadline will be communicated at the start of the course. • Homework counts for 60% of the final grade. • The homework presentation is part of the overall examination. Failure to present or to provide a presentation will result in a grade of zero for this component. • Attendance at coaching sessions is tracked. The final grade is adjusted according to attendance. <ul style="list-style-type: none"> • Example: if you attend 10% of the sessions, your individual grade will be 10% of the overall homework grade. • <i>Note: the homework presentation is not part of the coaching sessions.</i> <p><u>Examination – June Session</u></p> <ul style="list-style-type: none"> • The written exam contains: <ul style="list-style-type: none"> A multiple-choice section & Exercises to solve. • More information on the type of questions will be provided in class. • The written exam counts for 40% of the final grade. <p><u>August Session</u></p> <ul style="list-style-type: none"> • Students retaking the course in August must submit an individual homework, following the same guidelines as in June. • They must also take a written exam consisting of multiple-choice questions; open questions may also be included. • Grade weighting for the August session: <ul style="list-style-type: none"> Written exam: 80% & Homework: 20%

<p>Teaching methods</p>	<p>1. <u>Schedule and Format</u> The detailed schedule and format (online or in person) will be communicated at the beginning of the course.</p> <p>2. <u>Teaching Method</u> The teaching method consists of:</p> <ol style="list-style-type: none"> 1. In-class interactions introducing financial markets and trading. 2. Practical case studies to familiarize students with trading on financial markets (supported by coaching sessions). 3. Guest interactions with experts in the field (e.g., financial regulators) to discuss the overall evolution of financial markets. <p>Coaching and practice sessions will support both the resolution of exercises related to Part I (theoretical foundations) and the group work (trading strategy project).</p> <p>3. <u>Group Work</u> Students will choose, implement, and analyze a trading strategy in a live market environment using professional trading tools and virtual money. Deliverables include a written report and an oral presentation.</p>
<p>Content</p>	<p><u>Part I – Theoretical Foundations</u> The first part of the course introduces the fundamental principles of portfolio theory. Students will learn the risk–return trade-off and how diversification reduces risk exposure. We cover the mechanics of mean–variance optimization, leading to the concept of the efficient frontier and optimal portfolio selection. The module also examines asset pricing models, beginning with the Capital Asset Pricing Model (CAPM) and extending to multifactor frameworks such as the Arbitrage Pricing Theory (APT) and the Fama–French factor models. Finally, we discuss the efficiency of financial markets and introduce key methods for evaluating portfolio performance, including ratios and alpha measures.</p> <p><u>Part II – Trading on the Market</u> The second part of the course shifts to practice through a trading project. Students are introduced to paper trading, i.e., simulated trading in real market conditions where no actual money is used. They will work with a range of technical tools, including candlestick charts, moving averages, support and resistance levels, and common indicators such as RSI and MACD. Based on the theories and examples covered in class, students will design, implement, and test a trading strategy. The project emphasizes not only technical execution but also critical reflection: students will compare their results with the academic literature and analyze their own decision-making process and emotional responses to trading. Each group will then compare their performance during class presentations.</p>
<p>Inline resources</p>	<p>All useful resources will be provided at the beginning of the year. We will also take time in class to present and discuss the videos and other materials that will support the learning process.</p>
<p>Bibliography</p>	<p>Support : Ouvrage de référence utilisé pour mieux aider à comprendre le contenu : (BKM): Bodie, Kane and Marcus, Investments, 5th ed, McGraw-Hill, 2002 (ISBN 0-07-112305-9)</p>
<p>Other infos</p>	<p>Students must acknowledge the use of artificial intelligence (AI) in the text for the parts where they have used it. They must clearly cite the paragraphs/parts where AI has been used. A failure to acknowledge the use of AI is considered fraud if detected by the similarity detection tools used by the instructor.</p> <p>The group members are all jointly responsible for the work that they hand in on Moodle and are informed that any piece of work is part of the formal examination of the course.</p>
<p>Faculty or entity in charge</p>	<p>ESPO</p>

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Additionnal module in Management	APPGEST	5		