

MODULE DESCRIPTION

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|---------------|---|
| Module title | Finance 2 (Investment Finance) |
| Module code | BFIN |
| Study program | Finance and Accounting (BFA), Business Administration (BBA) |

Module coordinator/Lecturer

| Type | Lecturer | Email | Office | Office hours |
|--------------------|------------------|-------------------------|-----------------|----------------------|
| Module Coordinator | Dr. Le Minh Hanh | hanh.lm@vgu.edu.vn | Cluster1: R.506 | 9:00am – 4:00pm |
| Lecturer | Dr. Omer Cayirli | omer.cayirli@vgu.edu.vn | Cluster1: R.522 | 13:00 – 16:00 Monday |
| Tutorial | | | | |
| Lab | | | | |
| Other | None | | | |

Classification Compulsory Semi-elective

Semester Winter Semester 2025

Student workload

| | | |
|--------------------------------------|-----|------|
| Credits | 6 | ECTS |
| Teaching periods | 45 | AHs |
| Assignments and independent learning | 135 | AHs |
| Total Working hours | 180 | AHs |

Frequency The module is offered in every winter semester

Prerequisites

- **For students from the 2022 intake and beyond:** students must pass a minimum of 45 credit points from O-modules including OMAT, OSTA
- **For students from the 2021 intake backwards:** students must pass a minimum of 6/8 O-modules including OMAT, OSTA

Applicability for other modules (*This module is linked with other modules of the same program and in which way the module can be used in other modules*)

Intended learning outcomes The objective of this course is to introduce the theory and empirical evidence relevant to investment management. Building on the concepts covered in OFIN, it will discuss the characteristics of various financial securities along with the risks and rewards associated with them. Topics covered include optimal portfolio selection, asset pricing models, market efficiency, behavioral finance, as well as the main derivative markets and instruments.

Students who master the course material will acquire the analytical tools and theoretical concepts necessary for making sound investment decisions and understanding the paradigms by which financial securities are valued.

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This course is mostly quantitative. Students are strongly encouraged to refresh their knowledge of the topics covered in both OSTA and OFIN.

After completing this course, the students should

- acquire basic professional and methodological skills in the field of financial economics.
- be able to name and explain the characteristics and modes of operation of the most important financial instruments and the respective financial markets.
- possess the knowledge to present the most important models for the analysis of financial instruments, their assumptions as well as their limitations and apply the models (CAPM, APT, binomial model and Black-Scholes) to practical examples.
- be capable of presenting, interpreting, and applying simple risk management strategies for securities portfolios.

Contents (*Outline of subject and topics explored*)

| No. | Topic | Teaching hours | Assignments and independent learning hours |
|-----|---|----------------|--|
| 1. | Introduction; The Investment Environment; Asset Classes and Financial Instruments | 3 | 9 |
| 2. | Fixed-Income Securities | 8 | 24 |
| 3. | Portfolio Theory and Practice | 8 | 24 |
| 4. | Asset Pricing Models | 7 | 21 |
| 5. | Market Efficiency, Behavioral Finance and Market Anomalies | 3 | 9 |
| 7. | Futures, Forwards and Swaps | 6 | 18 |
| 8. | Option Markets & Option Valuation | 10 | 30 |

Learning activities This course will utilize lectures, exercises, learning games, a group assignment, and self-study to attain the learning goals. Python and Jupyter Notebook will be used to enhance learning activities. The lectures will adopt an interactive approach. Therefore, students should spend sufficient time on assigned readings/tasks for each lecture before the class.

| Activities | Explanation |
|-------------------------------|---|
| Attendance | Attendance and active class participation are crucial to achieving the learning goals of this course. Students must comply with the University's attendance policy to earn credits toward their degree. |
| Individual Assignments | No |
| Group work | Yes |
| Online Activities | Yes |
| Self-study | Yes |
| Internship | None |
| Lab or Workshop | None |
| Field Work | None |

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Mode of assessment

The mode of assessment for this course is based on the portfolio approach. The portfolio consists of a group assignment, and a final exam (75 minutes). Participation and contribution to the in-class discussions are important parts of the portfolio. No weights are assigned to individual parts of the portfolio. The final grade for this course will be based on the students' progress and overall performance.

Pass requirements:

A student is required to attempt all assessment items to pass the course: **YES**

Students who fail to attempt at least one of the portfolio parts will receive a fail grade (5.0), which will be counted as one of the allowed three attempts. These students will be allowed to take the regular final exam; however, in this case, they must complete the missing portfolio item(s) during the retake exam period.

Retake exam

The portfolio approach will be applicable for the final grade in case a retake exam is needed/offered.

Module materials

Required text(s)

BKM: Bodie, Z., A. Kane and A. Marcus (BKM), Investments, 2021, 12th edition, International Student Edition, McGraw-Hill.

Readings: Required readings for specific lectures, if any, will be provided in the detailed course schedule and/or posted course website on Moodle.

Lecture Slides: Lecture materials will be available for access on GitHub in Jupyter Notebook format (without solutions to exercises before lectures, will be updated with solutions after lectures).

Written/updated by
Dr. Omer CAYIRLI

Approved by

Date 28 / 08 /2025

Date / /2025

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DETAILED COURSE SCHEDULE

Lecture 1 - Introduction

- General introduction to the course, a brief overview of contents, and learning goals.
- The Investment Environment; Asset Classes and Financial Instruments
- **Reading(s): BKM Ch. 1 & 2**

Lecture 2 – Fixed-Income Securities I

- Bond Prices and Yields
- The Term Structure of Interest Rates
- **Reading(s): BKM Ch. 14 &15**

Lecture 3 – Fixed-Income Securities II

- Managing Bond Portfolios
 - ✓ Interest Rate Risk & Convexity
 - ✓ Passive Bond Management
- **Reading(s): BKM Ch. 16**

Lecture 4 – Portfolio Theory and Practice I

- Risk and Return
- Capital Allocation to Risky Assets
- **Reading(s): BKM Ch. 5 & 6**

Lecture 5 – Portfolio Theory and Practice II

- Efficient Diversification
- **Reading(s): BKM Ch. 7**

Lecture 6 – Index Models and The Capital Asset Pricing Model

- The Single-Index Model
- The Capital Asset Pricing Model
- **Reading(s): BKM Ch. 8 & 9**

Lecture 7 – APT and Multifactor Models of Risk and Return

- Multifactor Models
- Arbitrage Pricing Theory
- **Reading(s): BKM Ch. 10**

Lecture 8 – The Efficient Market Hypothesis & Behavioral Finance

- The Efficient Market Hypothesis
- The Behavioral Critique
- Empirical Evidence on Security Returns
- **Reading(s): BKM Ch. 11, 12.1 &13**
- **Group Assignment (Due by 29/12/2024, 4:00 PM)**

Lecture 9 –Derivatives I

- Introduction to Derivatives
- Futures and Forwards
- **Reading(s): BKM Ch. 22**

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Lecture 10 – Derivatives II

- Futures, Swaps, and Risk Management
- **Reading(s): BKM Ch.23**

Lecture 11 – Derivatives III

- Option Markets
- **Reading(s): BKM Ch. 20**

Lecture 12 – Derivatives IV

- Option Valuation
- **Reading(s): BKM Ch. 21**