



FACULTY OF BUSINESS
MASTER OF SCIENCE IN FINANCE WITH DATA ANALYTICS

LEARNING MODULE OUTLINE

Academic Year	2024 / 2025	Semester	II
Module Code	FIDA6123-121/ 122		
Learning Module	Investment Analysis and Portfolio Management		
Pre-requisite(s)	N/A		
Medium of Instruction	English		
Credits	3	Contact Hours	45hrs.
Instructor	XIN XIANG	Email	xxiang@mpu.edu.mo
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MODULE DESCRIPTION

This module introduces the fundamental principles of investment analysis and the theories and techniques of portfolio management and covers the major issues currently of interest to investors. The first part covers investment environment, risk and return trade-off, portfolio diversification, modern portfolio theory, and market efficiency. The second part covers basic analytical tools used in analyzing fixed income securities including interest rates and yield curve mathematics, duration and convexity. Portfolio performance evaluation is also covered.

MODULE INTENDED LEARNING OUTCOMES (ILOS)

On completion of this learning module, students will be able to:

M1.	Estimate the risk and return
M2.	Explain the theories related to capital allocation
M3.	Explain the theories related to diversification and portfolio
M4.	Explain the pricing theories
M5.	Explain the efficient market hypothesis and behavioral finance

These ILOs aims to enable students to attain the following Programme Intended Learning Outcomes (PILOs):

Knowledge and Understanding On completion of this programme, students will be able to:					
PILOs	M1	M2	M3	M4	M5



PI	Master critical knowledge of financial theories, financial models and data analytics in finance and apply it to a wide range of complex financial issues.	√	√	√	√	√
PI	Expand knowledge of finance and data analytics through critically evaluating current issues informed by leading edge research and practice in the industry.	√	√	√	√	√
Skills and Attributes On completion of this programme, students will be able to:						
PI	Conduct applied research, particularly using data analytics, into financial issues through a rigorous and systematic approach.	√	√	√	√	√
PI	Communicate effectively, written and orally, to both professional and non-professional audiences on local and global financial issues.	√	√	√	√	√
PI	Demonstrate skills in time management, teamwork, leadership and independent study so that tasks can be planned and implemented at a professional level.					
PI	Identify and address ethical dilemmas and social responsibility issues to uphold high standards of integrity, professionalism and ethical behaviour.					

MODULE SCHEDULE, COVERAGE AND STUDY LOAD

Week	Content Coverage	Contact Hours
1	Introduction to Investment	3 hrs.
2	Risk, Return, and the Historical Record	3 hrs.
3	Capital Allocation to Risky Assets	3 hrs.
4	Capital Allocation to Risky Assets and Efficient Diversification	3 hrs.



5	Efficient Diversification	3 hrs.
6	Index Models	3 hrs.
7	Midterm Exam	3 hrs.
8	The Capital Asset Pricing Model	3 hrs.
9	Arbitrage Pricing Theory and Multifactor Models of Risk and Return	3 hrs.
10	The Efficient Market Hypothesis	3 hrs.
11	Behavioral Finance and Technical Analysis	3 hrs.
12	Bond Prices and Yields	3 hrs.
13	The Term Structure of Interest Rates	3 hrs.
14	Macroeconomic and Industry Analysis	3 hrs.
15	Final Exam	3 hrs.
	Total	45 hrs.

TEACHING AND LEARNING ACTIVITIES

In this learning module, students will work towards attaining the ILOs through the following teaching and learning activities:

Teaching and Learning Activities	M1	M2	M3	M4	M5
<i>Interactive lectures</i> <ul style="list-style-type: none"> Lectures: in-depth coverage of principles of accounting is presented with PowerPoint slides and other supplementary materials if necessary Q & As: time is allowed to raise questions from both sides (instructor and students) 	✓	✓	✓	✓	✓
<i>In-class Exercises and quizzes</i> <ul style="list-style-type: none"> In-class exercises will be discussed at the end of each lecture to ensure student understanding of the issues. Quizzes: students will take some quizzes to motivate them to review what they have learned 	✓	✓	✓	✓	✓
<i>Assignments</i> <ul style="list-style-type: none"> Students are required to complete assigned questions and problems. No late submission will be accepted. 	✓	✓	✓	✓	✓



ATTENDANCE

Attendance requirements are governed by the “Academic Regulations Governing Master’s Degree Programmes of Macao Polytechnic University”. Students who have less than the required attendance for the enrolled subject are not eligible to attend the final and re-sit examinations and will be given an “F” as their final grade.

ASSESSMENT

In this learning module, students are required to complete the following assessment activities:

Assessment Activities	Weighting (%)	ILOs to be Assessed
Q&A / Participation	5%	M1-M5
Assignments	20%	M1-M5
Mid-term test	25%	M1-M3
Final Exam	50%	M1-M5
Total:	100%	M1-M5

The assessment will be conducted following the University’s Assessment Strategy (see www.mpu.edu.mo/teaching_learning/en/assessment_strategy.php). Passing this learning module indicates that students will have attained the ILOs of this learning module and thus acquired its credits.

MARKING SCHEME

	Assessment Task	Criterion	Excellent (A, A-)	Very Good, Good (B+, B, B-)	Satisfactory (C+, C, C-)	Pass (D+, D)	Fail (F)
1.	Class Learning Activities (including participation, Q&A, quizzes)	Demonstrate the understanding of the subjects covered in classes and show active learning attitude	High	Significant	Moderate	Basic	Not even reaching marginal levels
2.	Assignments	Demonstrate the ability to answer questions on topics covered in the outline	High	Significant	Moderate	Basic	Not even reaching marginal levels
3.	Mid-term test and Final examination	Demonstrate the ability to identify and apply appropriate concepts, methods and techniques	High	Significant	Moderate	Basic	Not even reaching marginal levels



REQUIRED READINGS

Module textbook:

Z. Bodie, A. Kane,& A. Marcus (2024), *Investments-13th edition*.

REFERENCES

Z. Bodie, A. Kane,& A. Marcus (2022), *Essentials of investments: 12th edition*.

Journal(s)

1. Journal of Finance
2. Review of Financial Studies
3. Journal of Financial Economics
4. Journal of Corporate Finance
5. Journal of Banking and Finance
6. Journal of Financial and Quantitative Analysis

STUDENT FEEDBACK

At the end of every semester, students are invited to provide feedback on the learning module and the teaching arrangement through questionnaires. Your feedback is valuable for instructors to enhance the module and its delivery for future students. The instructor and programme coordinators will consider all feedback and respond with actions formally in the annual programme review.

ACADEMIC INTEGRITY

The Macao Polytechnic University requires students to have full commitment to academic integrity when engaging in research and academic activities. Violations of academic integrity, which include but are not limited to plagiarism, collusion, fabrication or falsification, repeated use of assignments and cheating in examinations, are considered as serious academic offenses and may lead to disciplinary actions. Students should read the relevant regulations and guidelines in the Student Handbook which is distributed upon the admission into the University, a copy of which can also be found at www.mpu.edu.mo/student_handbook/.