



**FACULTY OF APPLIED SCIENCES**  
**BACHELOR OF SCIENCE IN ARTIFICIAL INTELLIGENCE**  
**LEARNING MODULE OUTLINE**

Academic Year	2025/2026	Semester	2
Module Code	MSEL 3103		
Learning Module	Introduction to Economics and Finance		
Pre-requisite(s)	Nil		
Medium of Instruction	English		
Credits	3	Contact Hours	45 hrs
Instructor	Jovy Wong	Email	T1582@mpu.edu.mo
Office	--	Office Phone	--

**MODULE DESCRIPTION**

This module aims at providing a fundamental knowledge of Economics to students who never study it in a tertiary level. Students should demonstrate a sound understanding in both microeconomics and macroeconomics. Students become familiar with some important microeconomics topics, such as the economic problem, how markets work in terms of demand and supply, households' choice and market failure and government. Other macroeconomics topic, such as the macroeconomic policy and the economy in the short and long run will be investigated. Besides, this module will also look into the advantages given by the present resource of Macau economic environment. This module will also let the students understand the fundamental theories and applications of economics in both micro and macro perspectives.

**MODULE INTENDED LEARNING OUTCOMES (ILOS)**

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

M1.	Understand and explain the fundamental knowledge and principles of both microeconomics and macroeconomics; (C8)
M2.	Analyse economic problems and apply relevant theories to evaluate the current Macau economic environment and its development trends; (C8, C15)
M3.	Apply microeconomic and macroeconomic theories to analyse current economic issues and devise solutions for the local Macao economy; (C15)
M4.	Work collaboratively in a team to research, discuss, and present reasoned comments on economic phenomena; (C15)
M5.	Identify and analyse ethical concerns and societal responsibilities in economic decision-making and policy; (C8)

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

PILOs	M1	M2	M3	M4	M5
P1. Select and apply proven methods, tools and techniques to the effective and efficient implementation of					



	information systems on common platforms, including the Internet platform;					
P2.	Acquire essential knowledge in specific fields of artificial intelligence, including machine learning, computer vision and natural language processing;					
P3.	Apply necessary mathematical techniques to model, analyse and devise solutions to complex problems;		✓	✓		
P4.	Work independently to develop an understanding of, and the knowledge and skills associated with the general support and mitigation of security risks of computer systems and networks;					
P5.	Design and implement both relational and non-relational data stores, with an emphasis on how to organise, maintain, retrieve and analyse information;					
P6.	Distinguish the fundamental and operational issues of computer systems and artificial intelligence applications, with considerations of user, business, ethical, societal and environmental needs;	✓	✓			✓
P7.	Evaluate, prepare and communicate effectively on technical information to both technical and non-technical audience;		✓	✓	✓	
P8.	Work as an effective member of a team in the analysis, design and development of software systems, with recognition of requirement to support equality, diversity and inclusion;				✓	
P9.	Use project planning, risk management and quality management techniques in solutions to complex problems;					
P10.	Build the capacity and desire for lifelong learning and to learn advanced and emerging technologies on one's own.					

#### MODULE SCHEDULE, COVERAGE AND STUDY LOAD

Week	Content Coverage	Contact Hours
1-2	1. Ten Principles of Economics	6
	1.1 How People Make Decisions	
	1.2 How People Interact	
	1.3 How the Economy as a whole Works	
3	2. Thinking like an Economist	3
	2.1 The Economist as Scientist	
	2.2 The Economist as Policy Advisor	
	2.3 Why Economists Disagree	
4-5	3. Interdependence and the Gains from Trade	6



	3.1 A Parable for the Modern Economy	
	3.2 Comparative Advantage: The Driving Force of Specialization	
	3.3 Applications of Comparative Advantage	
6-7	4. How markets work	6
	4.1 Markets and Competition	
	4.2 Demand	
	4.3 Supply	
	4.4 Supply and Demand Together	
	4.5 How Prices Allocate Resources	
8-9	5. Elasticity and Its Application	6
	5.1 The Elasticity of Demand	
	5.2 The Elasticity of Supply	
	5.3 Applications of Supply, Demand, and Elasticity	
10	6. Supply, Demand, and Government Policies	3
	6.1 Controls on Prices	
	6.2 Taxes	
11-12	7. Markets and Welfare	6
	7.1 Consumer Surplus	
	7.2 Producer Surplus	
	7.3 Market Efficiency	
	7.4 Market Efficiency and Market Failure	
13	8. Application: The Costs of Taxation	3
	8.1 The Deadweight Loss of Taxation	
	8.2 The Determinants of the Deadweight Loss	
	8.3 Deadweight Loss and Tax Revenue as Taxes Vary	
14	9. Application: International Trade	3
	9.1 The Determinants of Trade	
	9.2 The Winners and Losers from Trade	
	9.3 The Arguments for Restricting	



15	10. The Data of Macroeconomics	3
	10.1 The Economy's Income and Expenditure	
	10.2 The Measurement of GDP	

### 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
T1. Lectures	✓	✓	✓		✓
T2. In-class exercises	✓	✓	✓	✓	✓
T3. Assignments, test and examination	✓	✓	✓		✓

### ATTENDANCE

Attendance requirements are governed by the Academic Regulations Governing Bachelor's Degree Programmes of the Macao Polytechnic University. Students who do not meet the attendance requirements for the learning module shall be awarded an 'F' grade.

### ASSESSMENT

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

Assessment Activities	Weighting (%)	AHEP4 LOs	ILOs to be Assessed
A1. Assignments	40	C8, C15	M1, M2, M3, M4, M5
A2. Test	20	C8, C15	M1, M2, M3
A3. Examination	40	C8, C15	M1, M2, M3

The assessment will be conducted following the University's Assessment Strategy (see [www.mpu.edu.mo/teaching\\_learning/en/assessment\\_strategy.php](http://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.

Students with an overall score of less than 35 in the coursework must take the re-sit examination even if the overall score for the module is 50 or above.

Students with a score of less than 35 in the final examination must take the re-sit examination even if the overall score for the module is 50 or above.

Students with an overall final grade of less than 35 are NOT allowed to take the re-sit examination.



## REQUIRED READINGS

N. Gregory Mankiw, “Principles of Economics”, 10th Edition, Cengage Learning, ISBN978-0-357-72284-8

## REFERENCES

1. Niall Kishtainy, “The Economics Book: Big Ideas Simply Explained”, 1st Edition, DK Publishers, 2012. ISBN-13: 978-0756698270.
2. Yves Hilpisch, “Python for Finance: Mastering Data-Driven Finance”, 2nd Edition, O’Reilly Media, 2018 ISBN-13: 978-1492024330.
3. Quentin Batista, Thomas Sargent and Jesse Perla, “QuantEcon DataScience: Introduction to Economic Modeling and Data Science”, Center for Innovative Data in Economics, Vancouver School of Economics, UBC, 2020.
4. Steven A. Greenlaw, David Shapiro, “**Principles of Economics**”, 2nd Edition, Rice University - OpenStax, 2020. ISBN-13: 978-1947172371

## 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/](http://www.mpu.edu.mo/student_handbook/).