



FACULTY OF APPLIED SCIENCES
BACHELOR OF SCIENCE IN COMPUTING
LEARNING MODULE OUTLINE

Academic Year	2025/2026	Semester	1
Module Code	COMP3112		
Learning Module	Project Management		
Pre-requisite(s)	Nil		
Medium of Instruction	English		
Credits	3	Contact Hours	45 hrs
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MODULE DESCRIPTION

The objective of this module is to study the concepts and issues related with management of information technology projects. Topics include introduction to projects and their management, project planning and development processes, project selection methods, work breakdown structures, network diagrams & critical path analysis, resource estimation, and project control, project organization structures, and various project management models.

MODULE INTENDED LEARNING OUTCOMES (ILOS)

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

M1.	Specify what project management is and its knowledge areas; (C1)
M2.	Specify the overall framework of project management, its lifecycle, workflows and processes. (C1, C6, C7, C14)
M3.	Manage an IT project in various areas using a variety of tools and techniques, such as Work breakdown structures, Network diagrams, Critical path analysis, Cost estimates etc.; (C6, C7, C17)
M4.	Devise risk management plans for projects; (C9)
M5.	Evaluate various project management models. (C6)

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 computing disciplines including networking, artificial intelligence and security;					



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 relational database, with an emphasis on how to organise, maintain, retrieve and analyse information;					
P6.	Distinguish the fundamental and operational issues of computer systems, 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;					✓
P11.	(For Business Intelligence specialization) Gain an in-depth knowledge of technologies related to data analysis and management of information to support business processes in enterprises;					
P12.	(For Gaming Technology specialization) Acquire the general and advanced knowledge of current technologies and operating environment for the development of the gaming and tourism industry;					
P13.	(For Computer Education specialization) Acquire general and practical knowledge of computer education and its practicing environment in secondary education;					

MODULE SCHEDULE, COVERAGE AND STUDY LOAD

Week	Content Coverage	Contact Hours
1,2	1. Introduction to Project Management	4.5
	1.1 Overview of Project Management	
	1.2 Software Engineering vs. Project Management	
	1.3 Project Management Knowledge Areas	
	1.4 Project Management Tools and Techniques	
	1.5 The Project Management Profession	
	1.6 Project Management Process Groups and the Project Life Cycle	
2,3	2. Organizational Structure and Project Influences	3
	2.1 Project Organizational Structures	



	2.2 Project Organizational Culture	
	2.3 Project Infrastructure	
3,4	3. Project Integration Management	4.5
	3.1 Developing Project Charter	
	3.2 Developing Project Management Plan	
	3.3 Monitor and Control Project Work	
	3.4 Integrated Change Control	
	3.5 Close Projects	
5,6	4. Project Scope Management	4.5
	4.1 Scope Planning	
	4.2 Scope Definition	
	4.3 Create Work Breakdown Structure	
	4.4 Scope and Requirements Management	
	4.5 Scope Verification and Control	
6,7	5. Project Schedule Management	4.5
	5.1 Activity Definition and Sequencing	
	5.2 Activity Resource/Duration Estimating	
	5.3 Schedule Development	
8,9	6. Project Cost Management	4.5
	6.1 Cost Estimating	
	6.2 Cost Budgeting	
	6.3 Cost Control	
9,10	7. Project Quality Management	4.5
	7.1 Quality Planning	
	7.2 Perform Quality Assurance	
	7.3 Perform Quality Control	
11	8. Project Resources Management	3
	8.1 Resource Planning	
	8.2 Estimate Activity Resources	



	8.3 Acquire Resources	
	8.4 Manage Project Team	
12,13	9. Project Risk Management	4.5
	9.1 Risk Identification	
	9.2 Qualitative Risk Analysis	
	9.3 Quantitative Risk Analysis	
	9.4 Risk Response Planning	
	9.5 Risk Monitoring and Control	
13,14	10. Project Procurement Management	3
	10.1 Procurements Planning	
	10.2 Conduct Procurements	
	10.3 Administer Procurements	
14,15	11. Project Development Approaches for Software Development	4.5
	11.1 Systems Development Approaches and their Models	
	11.2 Agile Methodology	
	11.3 SCRUM framework	
	11.4 Introduction to PMBOK v7	

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	✓	✓	✓	✓	✓

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. Project	28%	C6, C7, C9, C17	M2, M3, M4
A2. Test	27%	C1, C6, C7, C14	M1, M2, M3, M4, M5
A3. Examination	45%	C1, C6, C7, C14	M1, M2, M3, M4, 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.

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

1. Schwalbe, Kathy. (2014). Information Technology Project Management (7th edition). Course Technology.

REFERENCES

1. PMI. (202). A Guide to the Project Management Body of Knowledge – PMBOK Guide, 7 ed., PMI.
2. Joseph Phillips. (2006). Project Management Professional Study Guide, 7 ed., McGraw Hill.

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/.