

**Macao Polytechnic Institute**  
**School of Applied Sciences**  
**Bachelor of Science in Computing**  
**Module Outline**  
**Academic Year 2021/2022 Semester 1**

<b>Learning Module</b>	Project Management			<b>Class Code</b>	COMP313-311/312
<b>Pre-requisite(s)</b>	Nil				
<b>Medium of Instruction</b>	English			<b>Credit</b>	3
<b>Lecture Hours</b>	45 hrs	<b>Lab/Practice Hours</b>	0 hrs	<b>Total Hours</b>	45 hrs
<b>Instructor</b>	Andrew Siu			<b>E-mail</b>	kmsiu@ipm.edu.mo
<b>Office</b>	A319, Chi-Un Building, Main Campus			<b>Telephone</b>	8599-6451

### **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, motivation theory and team building.

### **Learning Outcomes**

After completing the learning module, students will be able to:

1. Specify what project management is and its knowledge areas; (D2p, D5p, ET3p)
2. Develop project management processes using the following terminologies:
  - The triple constraint of project management
  - Project management knowledge areas and process groups

(SM3p, D1p, D2p, D5p, ET5p, EP5p EP7p)
3. Develop project management methods using the following tools and techniques:
  - Work breakdown structures
  - Network diagrams, critical path analysis
  - Cost estimates

(SM3p, D2p, D5p, EP9p)

4. Choose proper project management techniques in systems development;

(D1p, D5p, ET3p, EP9p)

5. Devise risk management plans for projects.

(D2p, ET6p)

## **Content**

1. Introduction to Project Management (4.5 hours)
  - 1.1 Overview of Project Management
  - 1.2 Project Management Knowledge Areas
  - 1.3 Project Management Tools and Techniques
  - 1.4 The Project Management Profession
  - 1.5 Project Management Process Groups and the Project Life Cycle
2. Organizational Structure and Agile Approach (4.5 hours)
  - 2.1 Project Organizational Structures
  - 2.2 Project Organizational Culture
  - 2.3 Project Infrastructure
  - 2.4 Software Engineering vs. Project Management
  - 2.5 Agile Approach
  - 2.6 SCRUM
3. Project Integration Management (6 hours)
  - 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
4. Project Scope Management (4.5 hours)
  - 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
5. Project Schedule Management (4.5 hours)
  - 5.1 Activity Definition and Sequencing
  - 5.2 Activity Resource/Duration Estimating
  - 5.3 Schedule Development
6. Project Cost Management (4.5 hours)

- 6.1 Cost Estimating
- 6.2 Cost Budgeting
- 6.3 Cost Control
- 7. Project Quality Management (4.5 hours)
  - 7.1 Quality Planning
  - 7.2 Perform Quality Assurance
  - 7.3 Perform Quality Control
- 8. Project Human Resources Management (3 hours)
  - 8.1 Human Resource Planning
  - 8.2 Team Building
  - 8.3 Manage Project Team
- 9. Project Communication Management (3 hours)
  - 9.1 Communication Planning
  - 9.2 Information Distribution
  - 9.3 Performance Reporting
  - 9.4 Stakeholders Analysis and Conflict Management
- 10. Project Risk Management (6 hours)
  - 10.1 Risk Identification
  - 10.2 Qualitative Risk Analysis
  - 10.3 Quantitative Risk Analysis
  - 10.4 Risk Response Planning
  - 10.5 Risk Monitoring and Control

### **Teaching Method**

Lectures, group discussion, and case studies.

### **Attendance**

Attendance requirements are governed by the “Academic Regulations Governing Bachelor’s Degree Programmes of Macao Polytechnic Institute”. Students who do not meet the attendance requirements for the course will not be permitted to sit the final or re-sit examination and shall be awarded an ‘F’ grade.

### **Assessment**

This learning module is graded on a 100 point scale, with 100 being the highest possible score and 50 being the passing score.

	<b>Item</b>	<b>Description</b>	<b>AHEP3 LO</b>	<b>Percentage</b>
1.	Project	Home-based team project	EP7p,EP5p,ET3p, ET5p,ET6p,SM3p	25%
2.	2 class exercises	Knowledge assessment	D1p, D5p, EP7p,EP9p,ET3p, SM3p	5%

3.	Test	Knowledge assessment	D1p, D2p,D5p, EP7p,EP9p,ET3p, SM3p	30%
4.	Examination	3-hour written examination	EP7p,EP9p,ET3p, SM3p	40%
<b>Total Percentage:</b>				<hr/> 100 %

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 course 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 course is 50 or above.

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

### **Teaching Material**

#### **Textbook(s)**

1. Schwalbe, Kathy. (2014). *Information Technology Project Management* (7<sup>th</sup> edition). Course Technology.

### **Reference**

#### **Reference book(s)**

1. Wysocki, Robert K. (2006). *Effective Software Project Management*. John Wiley & Sons.