澳門理工大學
Universidade Politécnica de Macau
Macao Polytechnic University

FACULTY OF APPLIED SCIENCES

BACHELOR OF SCIENCE IN COMPUTING

LEARNING MODULE OUTLINE

Academic Year	2023/2024	Semester	2
Module Code	Information System Implementation		
Learning Module	COMP321		
Pre-requisite(s)	COMP112 Programming I, COMP211 Database Design		
Medium of Instruction	English		
Credits	3	Contact Hours	45 hrs
Instructor	Andrew Siu, Calana Chan, Philip Lei	Email	kmsiu@mpu.edu.mo calanachan@mpu.edu.mo philiplei@mpu.edu.mo
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MODULE DESCRIPTION

This module aims to develop students' abilities to apply their information systems development skills and to work in a group to develop an application project and produce written reports. The students should focus on demonstrating sound skills in integrating systems analysis, systems design, problem solving, implementation and testing to complete the process of information system implementation. The module also prepares the students for taking the Final Year Project.

MODULE INTENDED LEARNING OUTCOMES (ILOS)

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

M1.	Apply and integrate their knowledge and skills in design, problem solving, decision making, and investigative activities to solve real world problems; (SM3p, EA1p, EA4p, D1p, D3p, D5p, EP7p, EP8p)
M2.	Demonstrate their knowledge of programming language and database system to implement an information system; (EA1p, D5p)
M3.	Demonstrate creative thinking skills and collaboration skills; (EA1p, ET3p, EP9p)
M4.	Write formal project documents and conduct demonstration. (EP4p, D2p, D6p)

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

PILOs		**M1**	**M2**	**M3**	**M4**
P1.	Select and apply proven methods, tools and techniques to the effective and efficient implementation of information systems;	✓	✓	✓	

P2.	Evaluate computer systems in a local area network, and understand the additional requirements for connection to other networks through wide area networks;				
P3.	Be competent in system development in the Internet and the web platform;	✓			
P4.	Work independently to design and implement a relational database, with an emphasis on how to organise, maintain and retrieve information from a DBMS;	✓	✓		
P5.	Acquire essential knowledge in specific fields of computing disciplines including multimedia, security and artificial intelligence;	✓			
P6.	Acquire the perceptive skills needed to understand information presented in the form of UML diagram, flow chart or other industry standard formats;	✓			✓
P7.	Understand the need for and use of the necessary mathematical techniques;	✓			
P8.	Work independently to develop an understanding of, and the knowledge and skills associated with the general support of computer systems and networks;	✓			
P9.	Work as an effective member of a team in the analysis, design and development of software systems;			✓	✓
P10.	Use project planning and management techniques in systems development;	✓	`		✓
P11.	Understand the fundamental and operational issues of computer systems in business environments;	✓			
P12.	Equip with adequate written, oral communication and interpersonal skills;				✓
P13.	Build the capacity and desire for lifelong learning and to learn advanced and emerging technologies on one's own;				
P14.	(For Enterprise Information Systems specialization) Gain an in-depth understanding of the information technology related to enterprise information systems, with an emphasis on development of such systems to support business processes;	✓	✓		
P15.	(For Gaming Technology specialization) Acquire the general and advanced knowledge of current technologies and operating environment in the gaming industry;				
P16.	(For Computer Education specialization) Acquire the general and practical knowledge of computer education and its practicing environment in secondary education.				

TEACHING AND LEARNING ACTIVITIES

Each project group is guided by a project supervisor, who monitors the project progress and gives advices on various activities of project implementation. For more details, please refer to the Instruction Guide for COMP321.

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**
T1. Guided project	✓	✓	✓	✓

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 (%)	AHEP3 LOs	ILOs to be Assessed
A1. Self-motivation, project management, group work	24%	ET3p, EP9p	M1, M4
A2. Project report	66%	SM3p, EA1p, EA4p, D1p, D2p, D3p, D5p, EP4p, EP7p, Ep8p	M1, M2, M3, M4
A3. Presentation and demonstration	10%	D6p	M3, M4

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.

No re-sit examination is provided for this module. Please note that if you fail this module, you have to retake it in the other academic year.

REQUIRED READINGS

There is no official text for this module. Module notes are distributed in the class.

REFERENCES

1. Connolly, T., & Begg, C. (2015). DATABASE SYSTEMS: A Practical Approach to Design, Implementation and Management (6th Edition). Pearson.
2. Ian Sommerville (2015). Software Engineering (10th Edition). Addison Wesley.
3. Kenneth E. Kendall (2013). Systems Analysis and Design (9th Edition). Prentice Hall

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/.