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

FACULTY OF APPLIED SCIENCES

BACHELOR OF SCIENCE IN ARTIFICIAL INTELLIGENCE

LEARNING MODULE OUTLINE

Academic Year	2025/2026	Semester	2
Module Code	CSAI3124		
Learning Module	Artificial Intelligence Application Project		
Pre-requisite(s)	COMP1122 Introduction to Programming CSAI2122 Introduction to Artificial Intelligence		
Medium of Instruction	English		
Credits	3	Contact Hours	45 hrs
Instructor	Andrew Siu, Chester Wong, Philip Lei	Email	kmsiu@mpu.edu.mo chesterwong@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; (C3, C5, C6)
M2.	Demonstrate their knowledge of programming language and database system to implement an information system; (C3, C5)
M3.	Recognize and appreciate the diversity of team members, fostering effective collaboration to achieve project goals; (C11, C15, C16)
M4.	Write formal project documents and conduct demonstration. (C17)

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 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

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 CSAI3124.

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
T1. Project groupwork	✓		✓	
T2. System design and implementation	✓	✓		
T3. Report writing				✓
T4. Presentation				✓

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. Self-motivation, project management	19%	C15	M1, M2, M3
A2. Group work	5%	C11, C16	M3
A3. Project report	66%	C3, C5, C6, C17	M1, M2
A4. Presentation and demonstration	10%	C16, C17	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 will be arranged for this module.

REQUIRED READINGS

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

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/.