



FACULTY OF BUSINESS
BACHELOR OF E-COMMERCE
LEARNING MODULE OUTLINE

Academic Year	2026 / 2027	Semester	1
Module Code	ECOM3120 - 311		
Learning Module	E-Business Applications		
Pre-requisite(s)	Nil		
Medium of Instruction	English		
Credits	3	Contact Hours	45
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MODULE DESCRIPTION

This module outlines the core technologies (digitized SCM, ERP, CRM) to operate an integrated E-Business enterprise and explains their applications in modern businesses. Topics include digitized CRM, ERP, and SCM tools, Business Process Management (BPM), the basics of KM and Social Networking. A commercial software product such as Microsoft Dynamics or Oracle E-Business Suite will be used as students' labs.

MODULE INTENDED LEARNING OUTCOMES (ILOS)

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

M1.	define concepts of core technologies;
M2.	differentiate the technologies and their applications;
M3.	evaluate the strategic opportunities and threats created by technology platform;
M4.	analyze the business processes for both efficiencies and safety;
M5.	recommend the proper level of process record and checking under various conditions.

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

PILOs	M1	M2	M3	M4	M5
P1. demonstrate an understanding of the business processes and operations and the skillful realization of information technologies required to practice electronic commerce,		✓		✓	
P2. apply knowledge in business, mathematics, programming, computing, web development, database, and artificial intelligence to address complex problems in the context of electronic commerce,					



P3. critically analyze the effect of information technology use on organizational performance and develop electronic commerce strategies that fit organizational objectives,	✓		✓		
P4. select and apply tools and technologies, including AI-driven solutions, to effectively implement electronic commerce systems in business intelligence, enterprise resources planning, supply chain management, and customer relationship management,			✓		✓
P5. foster teamwork, manage conflicts, and lead change across multi-disciplinary electronic commerce projects while working effectively with diverse stakeholders,					
P6. communicate and work effectively using written and spoken word, non-verbal language, and electronic tools with fellow professionals and global stakeholders in the electronic commerce industry,					
P7. evaluate electronic commerce through a global lens as evidenced by an understanding of foreign languages, and the unique role of Macau as a bridge between East and West, and cross-border,					
P8. cope with and manage contemporary advancements, including rapid developments in AI, related to electronic commerce development and demonstrate lifelong learning attitudes and abilities,			✓		
P9. conduct research and devise innovative electronic commerce models leveraging emerging technologies to exploit business opportunities, and					
P10. reflect on professional responsibilities and keep up with the latest electronic commerce issues on legal, environmental, ethical, and societal considerations to benefit society comprehensively.					

MODULE SCHEDULE, COVERAGE AND STUDY LOAD

Week	Content Coverage	Contact Hours
1	Chapter 1 Introduction - Overview and project briefing Chapter 2 Introduction to CRM - Kinds and stages of CRM applications	3 hours
2	Chapter 2 - Marketing applications of deep learning - Marketing-specific applications	3 hours
3	Chapter 3 BPM - Nature of organization, value chain and Business Process - Business details in support activities	3 hours
4	Quiz I - 20 % of total assessment Chapter 4 System - understanding the enterprise systems architecture - enterprise architecture and system setup Chapter 5 Accounting	3 hours



	- Its concepts in enterprise system	
5	Chapter 6 Procurement - Procurement flow and purchasing order	3 hours
6	Chapter 6 Procurement - Order processing and verifications	3 hours
7	Chapter 7 Fulfillment - Fulfillment, quotation, sales order, order processing and issue	3 hours
8	Chapter 7 - Process Modeling in Process Discovery, illustrated by Fulfillment Midterm Exam - 25 % of total assessment	3 hours
9	Project Demo - Project audit, comments and corrections	3 hours
10	Chapter 8 Production management - Production, bill of material	3 hours
11	Chapter 8 - work order, order processing and goods issue	3 hours
12	Chapter 9 Knowledge management - KM and its conversion Models	3 hours
13	Chapter 10 Social network - For KM Quiz II - 20 % of total assessment	3 hours
14	Chapter 10 Social network - Applications in enterprise	3 hours
15	Project Presentation	3 hours

TEACHING AND LEARNING ACTIVITIES

Students are required to prepare for and actively participate in lectures. Other than passive listening, they are expected to practice, take notes and ask questions in class. The projects expect students to be creative. Students should apply the module material as well as knowledge from other subjects for their group project. For the examination preparation, they are encouraged to study in group discussions with all sorts of reference materials, including videos. Students are also strongly encouraged to participate in class learning activities. As mature university students, they should demonstrate the efforts to think and answer questions in classes and show active learning attitude. 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: change management theories, concepts, and approaches will be presented using multimedia instructional materials. Q&A: It allows interactions between instructor and students.	✓	✓	✓	✓	✓
T2. Project: 5 to 6 students will be required to work as a group to complete a group project. This group project will be		✓	✓	✓	✓



designed to promote students intellectual, social and presentation skills and help to prepare them for the real world in which teamwork and collaboration are important					
T3. Preparation: Students must read teaching materials before coming to the class. They will be asked to work on problems or respond to key conceptual issues during the class hour. - Midterm exam will be given to students in order to motivate them to review what they have learned.	✓	✓		✓	

ATTENDANCE

Attendance requirements are governed by the Academic Regulations Governing [Doctoral/Master's/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 (%)	ILOs to be Assessed
A1. Project	35	M2 – M5
A2. Midterm	30	M1 – M5
A3. 2 quizzes	35	M1 – 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. Project is not assignment. Students are required of their critical thinking, problem solving skills, collaboration, and various forms of communication. To answer a driving question and create high-quality work, students need to do much more than remember information. They need to use higher-order thinking skills and learn to work as a team. (ref. <https://www.pblworks.org/what-is-pbl>)

MARKING SCHEME

	Assessment Tasks	Criteria	Excellent (A, A-)	Very Good, Good (B+, B, B-)	Satisfactory (C+, C, C-)	Pass (D+, D)	Fail (F)
			88-100	73 - 87	58 - 72	50 - 57	0 – 49
1.	Group Project	Demonstrate the understanding of the subject and the ability to solve problems with	High	Significant	Moderate	Basic	Not even reaching marginal levels



		articulated arguments in <u>well-organized</u> oral presentation and written report					
2.	Mid-term test and Final examination	Demonstrate the ability to identify and apply appropriate concepts, methods and techniques	High	Significant	Moderate	Basic	Not even reaching marginal levels

REQUIRED READINGS

Textbook(s)

1. Simha R. Magal & Jeffrey Word (2020) Integrated Business Processes with ERP Systems WileyPLUS Blackboard Student Package, Wiley, ISBN 978-0470478448.
2. Sarferaz, S. (2024). Embedding Artificial Intelligence into ERP Software. Springer Nature. ISBN 978-3-031-54248-0 or ISBN 978-3-031-54249-7 (eBook)
3. Marlon Dumas, Marcello La Rosa, Jan Mendling & Hajo A. Reijers (2018) Fundamentals of Business Process Management, Springer, ISBN 3662565080.

REFERENCES

1. José Osvaldo De Sordi (2023) Management by Business Process: A Managerial Perspective of People, Process, and Technology, Springer, ISBN 9783031116360
<https://www.barnesandnoble.com/w/management-by-business-process-jos-osvaldo-de-sordi/1141676989>.
2. Yu, B. (2023). Deep Learning Applications for Interactive Marketing in the Contemporary Digital Age. The Palgrave Handbook of Interactive Marketing, 705-728.
https://link.springer.com/chapter/10.1007/978-3-031-14961-0_31
3. Yu, T.W. and To, W.M. (2011) "The Importance of Input control to work performance under the agency theory framework," *International Journal of Human Resource Management*, Vol.22, No.14, pp.2874-91.
4. Nonaka, I., & Toyama, R. (2015). The knowledge-creating theory revisited: knowledge creation as a synthesizing process. In *The essentials of knowledge management* (pp. 95-110). Palgrave Macmillan, London.
5. Sinclair, J. K., & Vogus, C. E. (2011). Adoption of social networking sites: an exploratory adaptive structuration perspective for global organizations. *Information Technology and Management*, 12(4), 293-314.

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/.

Note:

1. The above class schedule is tentative and subject to change depending on the progress of the students.
2. Students are responsible for ALL materials covered in class AND in the textbook.