



FACULTY OF BUSINESS
BACHELOR OF E-COMMERCE
LEARNING MODULE OUTLINE

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|-----------------------|------------------------------------|---------------|--------------------|
| Academic Year | 2024/2025 | Semester | 2 |
| Module Code | ECOM3160-321 | | |
| Learning Module | Research Methodology in E-Commerce | | |
| Pre-requisite(s) | Nil | | |
| Medium of Instruction | English | | |
| Credits | 3 | Contact Hours | 45 |
| Instructor | Prof. Victor Chan | Email | vkychan@mpu.edu.mo |
| Office | Room M5-49, Meng Tak Building | Office Phone | 8599-3322 |

MODULE DESCRIPTION

This course covers background knowledge needed to prepare students to perform research in Graduation Report I and II. Topics include the fundamentals of E-Commerce business study Methodology, basic components of an E-Commerce business and system proposal.

MODULE INTENDED LEARNING OUTCOMES (ILOS)

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

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|-----|---|
| M1. | describe the principles of research process in e-commerce, |
| M2. | analyse research problems in e-commerce, |
| M3. | describe the fundamentals of research in electronic commerce and solve e-commerce business problems with appropriate research skills, and |
| M4. | develop a knowledge base of research tool(s) and program(s). |

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

| PILOs | M1 | M2 | M3 | M4 |
|--|----|----|----|----|
| 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, and database to address complex problems in the context of electronic commerce; | | | | |
| P3. Analyze critically the effect of web technology use on organizational performance and develop electronic commerce strategies that fit organizational objectives; | | ✓ | | |



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| P4. Select and apply tools and technologies to effectively implement electronic commerce systems in business intelligence, enterprise resources planning, supply chain management, and customer relationship management; | | | | |
| P5. Develop relationships, motivate others, manage conflicts, lead changes, and work across differences in multi-disciplinary electronic commerce projects; | | | | |
| P6. Communicate and work effectively using written and spoken word, non-verbal language, and electronic tools with fellow professionals and different stakeholders in the electronic commerce industry; | | | | |
| P7. Demonstrate a global electronic commerce perspective as evidenced by an understanding of foreign languages and the role of Macau as an interface between the East and the West; | | | | |
| P8. Cope with and manage contemporary advancement related to electronic commerce development and demonstrate lifelong learning attitudes and abilities; | ✓ | ✓ | ✓ | |
| P9. Conduct research and devise innovative electronic commerce models 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 | Introduction to e-commerce research The scientific approach and alternative approaches to investigation | 3 |
| 2 | The broad problem area and defining the problem statement The critical literature review | 3 |
| 3 | Theoretical framework and hypothesis development Elements of research design | 3 |
| 4 | Elements of research design Data collection methods | 3 |
| 5 | Data collection methods Experimental designs | 3 |
| 6 | Experimental designs Measurement of variables: operational definition | 3 |
| 7 | Measurement: scaling, reliability, validity | 3 |
| 8 | Sampling | 3 |
| 9 | Quantitative data analysis: an overview Quantitative data analysis: hypothesis testing | 3 |
| 10 | Quantitative data analysis: hypothesis testing Qualitative data analysis | 3 |
| 11 | The research report | 3 |



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|----|--|---|
| 12 | Latest research and their applications in e-commerce | 3 |
| 13 | Project and assignment presentation | 3 |
| 14 | Project and assignment presentation | 3 |
| 15 | Examination | 3 |

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. Lectures | ✓ | ✓ | ✓ | ✓ |
| T2. videos | ✓ | ✓ | ✓ | ✓ |
| T3. case studies | ✓ | ✓ | ✓ | ✓ |
| T4. projects | ✓ | ✓ | ✓ | ✓ |
| T5. group discussion | ✓ | ✓ | ✓ | ✓ |

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 (%) | ILOs to be Assessed |
|-----------------------|---------------|---------------------|
| A1. Assignment(s) | 30% | M3, M4 |
| A2. Project | 30% | M1, M2, M3, M4 |
| A3. Examination | 40% | M1, M2, 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.



MARKING SCHEME

| Assessment Criterion | Level of Comprehensiveness | | | | |
|---|----------------------------|-------------------------------------|--|---|--|
| | 0 (0% - 29%) | 1 (30% - 49%) | 2 (50% - 69%) | 3 (70% - 89%) | 4 (90% - 100%) |
| The broad problem area, the problem statement and the literature review | Not relevantly presented | Vaguely presented and not discussed | Presented but not adequately discussed | Presented and somewhat adequately discussed | Clearly presented and adequately discussed |
| The theoretical framework and the hypotheses | Not relevantly presented | Vaguely presented and not discussed | Presented but not adequately discussed | Presented and somewhat adequately discussed | Clearly presented and adequately discussed |
| The data collection | Not relevantly presented | Vaguely presented and not discussed | Presented but not adequately discussed | Presented and somewhat adequately discussed | Clearly presented and adequately discussed |
| The reliability and validity | Not relevantly presented | Vaguely presented and not discussed | Presented but not adequately discussed | Presented and somewhat adequately discussed | Clearly presented and adequately discussed |
| The hypothesis testing | Not relevantly presented | Vaguely presented and not discussed | Presented but not adequately discussed | Presented and somewhat adequately discussed | Clearly presented and adequately discussed |

REQUIRED READINGS

R. Bougie, U. Sekaran, 2019, Research Methods for Business: A Skill Building Approach, 8th ed., John Wiley & Sons.

A. Dennis, B. H. Wixom and R. M. Roth, 2022, Systems Analysis and Design, 8th ed., Wiley

REFERENCES

<https://www.wiley.com/en-gb/Research+Methods+For+Business%3A+A+Skill+Building+Approach%2C+8th+Edition-p-9781119561248>

S. R. Schach, 2011, Object-Oriented and Classical Software Engineering, 8th 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/.