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

FACULTY OF HEALTH SCIENCES AND SPORTS

BACHELOR OF SCIENCE IN BIOMEDICAL TECHNOLOGY (MEDICAL LABORATORY TECHNOLOGY)

LEARNING MODULE OUTLINE

Academic Year	2024/2025	Semester	2
Module Code	BSTL4102		
Learning Module	Thesis II (專題習作 II)		
Pre-requisite(s)	Nil		
Medium of Instruction	Chinese / English		
Credits	4	Contact Hours	60
Instructor	Meng Li Rong, Grace Lo Veng Meng, Richard **Lei Iun Fan, Miriam** Lam Im Fong, Cristina Ye Qian Hong, Ivy	Email	iflei@mpu.edu.mo (module coordinator)
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MODULE DESCRIPTION

This module requires students to have an in-depth understanding of a specific topic for medical laboratory practice or biomedical laboratory science. Students will critically review relevant research reports and medical literature to understand the core issues. Students must implement a research proposal and perform data collection and analysis accordingly. Students will give a formal presentation of their research findings. Each student must submit a thesis at the end of the module.

MODULE INTENDED LEARNING OUTCOMES (ILOS)

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

M1.	Develop skills in critical thinking.
M2.	Develop sensitivity to contemporary medical laboratory practice or biomedical laboratory science issues.
M3.	Develop skills in using available evidence in reviewing current medical laboratory practice or the latest biomedical laboratory science.
M4.	Develop skills in making action plans for improving medical laboratory practice or developing biomedical laboratory science.
M5.	Develop skills in writing a thesis for research projects in an academic style and at the publishable level.

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

PILOs	M1	M2	M3	M4	M5
P1. To demonstrate understanding of a range of subjects, fields, principles and approaches relevant to medical laboratory technology	✓	✓	✓	✓	✓
P2. To demonstrate understanding of theories, analytical approaches and practices that underpin medical laboratory operations and management	✓			✓	
P3. To demonstrate understanding of major trends and issues related to medical laboratory technology	✓	✓	✓	✓	✓
P4. To apply professional knowledge and skills to analyse, interpret and solve problems, challenges and risks in medical laboratory practice	✓	✓	✓	✓	✓
P5. To critically appraise and interpret scientific and clinical literature and apply evidence-based practice	✓	✓	✓	✓	✓
P6. To acquire and apply research skills in medical laboratory technology	✓	✓	✓	✓	✓
P7. To demonstrate effective communication and teamwork skills	✓	✓	✓	✓	✓
P8. To maintain professional and ethical standards in medical laboratory practice and research	✓	✓	✓	✓	✓

MODULE SCHEDULE, COVERAGE AND STUDY LOAD

Week	Content Coverage	Contact Hours
0-2	Optimization of research plan and preparation for research materials	5
3-11	Collection of research data • Collect data according to the research protocol or proposal • Analyze data according to the research protocol or proposal	35
12-15	Presentation of project findings • Present and defend the project findings • Write the final thesis	20

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	M5
T1. Case Studies	✓	✓	✓	✓	
T2. Literature Reviews Tutorials	✓	✓	✓	✓	
T3. Group Discussions	✓	✓	✓		
T4. Peer Feedback and Review	✓	✓	✓	✓	
T5. Writing Research Report Workshops					✓
T6. Use multimedia resources (videos, podcasts, or online resources) to share research experiences on different field of research.	✓	✓	✓	✓	

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. Group score - Presentation of project findings (graded by thesis evaluation committee, including an external examiner)	50	M1, M2, M3, M4, M5
A2. Individual score 1 - Thesis (graded by group teacher)	40	M1, M2, M3, M4, M5
A3. Individual score 2 - Peer evaluation	10	M4

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

This module does not include a final examination or re-sit examination.

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

High grades will be awarded to work that demonstrates exceptional understanding and mastery of the subject matter and consistently exceeding expectations. The followings are the general assessment criteria for the assessment activities.

Assessment Activities	Assessment Criteria	Mark Ranges				
		88-100	73-87	58-72	50-57	<50
A1. Group score - Presentation of project findings (graded by thesis evaluation committee, including an	• Clarity and coherence of the presentation • Quality and relevance of the data analysis and interpretation	Excellent	Good/ Very Good	Satisfactory	Marginal Pass	Fail; not reaching marginal levels

external examiner)	• Ability to answer questions and defend the project • Use of appropriate visual aids and references					
A2. Individual score 1 - Thesis (graded by group teacher)	• Structure and organization of the thesis • Accuracy and completeness of the literature review • Originality and significance of the research question and hypothesis • Appropriateness and validity of the research design and methods • Quality and relevance of the results and discussion • Conclusions and recommendations	Excellent	Good/ Very Good	Satisfactory	Marginal Pass	Fail; not reaching marginal levels
A3. Individual score 2 - Peer evaluation	• Contribution to the group work and project implementation. • Communication and collaboration skills • Respect and support for other group members					

REQUIRED READINGS

All the teaching and learning materials from the module 'Research Methods (BSRM3102).'

Reading materials will be provided to the students by the instructors of this module.

Students should also actively identify the reading materials based on their chosen research topics under the guidance of their instructor.

REFERENCES

Students should also identify the references based on their chosen research topics under the guidance of their instructor. These references may include research reports, published undergraduate/postgraduate dissertations, research articles, short communications, professional magazines, and more.

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/.