



### Programme Specification 課程規範

Awarding Body/Institution 頒授機構	Macao Polytechnic Institute
Teaching Unit 教學單位	Macao Polytechnic Institute
Endorsement in the Official Gazette 政府公報批示	122/2011
Name of Final Award and Programme Title 最終學位及課程名稱	Bachelor of Science in Biomedical Technology (Medical Laboratory
Name of Interim Award(s) 過渡學位名稱	n/a
Duration of Study/Period of Registration 學習期限/註冊期限	4 years
MPI Programme Code 理工課程編號	4LBMADCI
FHEQ Level of Award FHEQ 學歷水準	Level 6
Programme Accredited by 專業認可機構	Health Bureau, Macao Government
Responsible School 負責學校	School of Health Sciences

Schools which will also be involved in teaching part of the programme 課程教學涉及的其他學校

Five other schools in MPI, MPI-Bell Centre of English

Institution(s) other than Macao Polytechnic that will provide some teaching for the programme  
為課程提供教學除理工以外的其他機構

Health Bureau & IACM, Macao Government; Kiang Wu Hospital; Independent Medical Laboratory

Programme Outline 課程簡介

Objectives: The Bachelor of Science in Biomedical Technology (Medical Laboratory Technology) programme aims to prepare graduates to be qualified medical laboratory technicians, and technicians capable of conducting scientific and clinical researches;

Duration: 4 years;

Teaching Language: Chinese and English;

Mode: Day programme;

Career Prospects: Medical laboratory technician career in hospital laboratory, government laboratory, private laboratory, educational and research institutes.

Objectives of the Programme 課程目標

The Bachelor of Science in Biomedical Technology (Medical Laboratory Technology) programme aims to prepare graduates to be qualified medical laboratory technicians, and technicians capable of conducting scientific and clinical researches.

## What Will You be Expected to Achieve 期望達到的成效

The Bachelor of Science in Biomedical Technology (Medical Laboratory Technology) programme aims to prepare graduates to be qualified medical laboratory technicians, and technicians capable of conducting scientific and clinical researches, with knowledge, expertise and global vision.

## Academic Content 學術內容

A1	Knowledge and awareness of a range of subjects, fields, theories and approaches applicable to medical laboratory technology
A2	Knowledge and understanding of analytical tools used to analyse and interpret issues in medical laboratory technology, challenges and risks in a changing context.
A3	Develop a critical understanding of the growing scientific and clinical literature which affect modern medical laboratory technology in practice.

## Disciplinary Skills- able to 學科技能

B1	Develop an understanding of the theories, analytical approaches, methodologies and practices that underpin medical laboratory management in modern society.
B2	Evaluate, extrapolate and synthesize relevant literature and empirical data and competently apply these to different medical laboratory technology situations.
B3	Develop students' ability to apply medical laboratory technology expertise to the analysis of a broad range of problems in the area.

## Attributes 特徵

C1	To learn continuously within academia and industry and beyond and to employ relevant information and knowledge in understanding different contexts.
C2	To acquire research skills and values which can provide different approaches to the problem solving and decision making in medical laboratory technology area.
C3	To develop knowledge and analytical skills that are transferable to medical laboratory technology in practice.

## How Will You learn? 如何學習

The programme promotes active learning within a context of clear learning objectives. Students are encouraged to take responsibility for their own learning. Most modules have a weekly course element and in some this will require collaborative work. We expect informal work groups to emerge particularly in the more numerically based subjects. Clear guidance on basic and supplementary reading is given. Since we aim to train qualified medical laboratory technicians, there is a strong emphasis in internship. As specified by legal requirements, a formal 1-year (1000 working hours) is practised in Year 4 in the programme. Besides this formal training, other extra-curricular training opportunities are included, such as voluntary summer 3-week internship in Macao, voluntary summer 6-week internship in Taichung, Taiwan, and overseas 15-week placement in Braganca, Portugal.

## How Will You Be Assessed? 如何評核

The School schedules an annual examination board which considers all student academic profiles and agrees classification and progression routes. Modules are assessed by a combination of coursework, presentations, projects, laboratory reports, tutorials, mid-term tests, and final examinations. Clear guidance on all assessment methods are given, emphasising in how to avoid plagiarism, together with the rules and procedures. Examinations are typically of a two hour paper undertaken in the May diet of exams. Examination papers will be reviewed by Examination Board, and then by External Examiners. All examination papers go through a moderation marking procedure. All first class and fail scripts together with a representative sample of intermediate scripts are sent to the External Examiners for quality control. Undergraduates have two opportunities to re-sit failed modules.

## Academic Year of Study 1 第1學年

Course Title 科目名稱	Course Code 科目編號	Credits 學分	Course Selection Status 選科種類	Academic Year of Study 學習之學年	Semester 學期
Complete 1 subject from elective group A	see below	2	elective	1	2
Anatomy and Physiology	BSAP1101	4	compulsory	1	1
Biochemistry	BSBC1102	4	compulsory	1	2
Cell Biology	BSCB1101	3	compulsory	1	1
General Biology	BSGB1101	3	compulsory	1	1
General Chemistry	BSGC1101	3	compulsory	1	2
Immunology	BSIM1102	3	compulsory	1	2
Introduction to Laboratory Science Profession	BSLP1101	1	compulsory	1	1
Basic Laboratory Techniques I	BSLT1101	4	compulsory	1	1
Basic Laboratory Techniques II	BSLT1102	4	compulsory	1	2
Microbiology	BSMB1102	4	compulsory	1	2
Organic Chemistry	BSOC1102	3	compulsory	1	2
Pathophysiology	BSPP1102	4	compulsory	1	2
Information Technology Fundamentals	COMP1101	2	compulsory	1	1
Advanced Computer Applications	COMP1102	2	compulsory	1	2
English I	ENGL1101	3	compulsory	1	1
English II	ENGL1102	3	compulsory	1	2
Physical Education	PEDU1100	2	compulsory	1	1

## Academic Year of Study 2 第2學年

Course Title 科目名稱	Course Code 科目編號	Credits 學分	Course Selection Status 選科種類	Academic Year of Study 學習之學年	Semester 學期
Complete 1 subject from elective group A	See below	2	elective	2	1
Complete 1 subject from elective group A	See below	2	elective	2	2
Analytical Chemistry	BSAC2101	3	compulsory	2	1
Clinical Chemistry	BSCC2101	6	compulsory	2	1
Clinical Immunology	BSCI2102	4	compulsory	2	2
Clinical Microbiology	BSCM2101	6	compulsory	2	1

Clinical Microscopy	BSCM2102	3	compulsory	2	2
Clinical Hematology	BSHM2102	6	compulsory	2	2
Parasitology	BSPA2102	2	compulsory	2	2
Virology	BSVR2101	2	compulsory	2	1
College Chinese I	CHIN2121	2	compulsory	2	1
College Chinese II	CHIN2122	2	compulsory	2	2
English III	ENGL2101	3	compulsory	2	1
English IV	ENGL2102	3	compulsory	2	2

#### Academic Year of Study 3 第3 學年

Course Title 科目名稱	Course Code 科目編號	Credits 學分	Course Selection Status 選科種類	Academic Year of Study 學習之學年	Semester 學期
Complete 1 subject from elective group A	see below	2	elective	3	1
Immunohematology (Blood Bank)	BSBB3102	2	compulsory	3	2
Health Education and Promotion	BSHE3102	3	compulsory	3	2
Histopathology	BSHP3101	5	compulsory	3	1
Laboratory Management	BSLM3102	3	compulsory	3	2
Molecular Biology	BSMB3101	6	compulsory	3	1
Molecular Diagnostics	BSMD3102	4	compulsory	3	2
Public Health Analysis (Chemistry)	BSPH3101	3	compulsory	3	1
Public Health Analysis (Microbiology)	BSPH3102	4	compulsory	3	2
Research Methods	BSRM3102	4	compulsory	3	2
Biostatistics	BSST3101	3	compulsory	3	1
English V	ENGL3101	2	compulsory	3	1
English VI	ENGL3102	2	compulsory	3	2

#### Academic Year of Study 4 第4學年

Course Title 科目名稱	Course Code 科目編號	Credits 學分	Course Selection Status 選科種類	Academic Year of Study 學習之學年	Semester 學期
Internship I	BSIL4101	5	compulsory	4	1
Internship II	BSIL4102	5	compulsory	4	2
Thesis I	BSTL4101	2	compulsory	4	1
Thesis II	BSTL4102	4	compulsory	4	2
English VII	ENGL4101	2	compulsory	4	1
English VIII	ENGL4102	2	compulsory	4	2

#### Elective Subjects - Group A

Course Title 科目名稱	Course Code 科目編號	Credits 學分	Course Selection Status 選科種類	Academic Year of Study 學習之學年	Semester 學期
Introduction to Chinese Culture	CHIN2100	2	elective		
History and Culture of Macao	HIST1111	2	elective		
Cultural Heritage	HIST1112	2	elective		

Music / Film Appreciation	MUS1100	2	elective		
Philosophy	PHIL2100	2	elective		
Introduction to Sociology	SOCI2100	2	elective		

#### Elective Subjects - Group B

Course Title 科目名稱	Course Code 科目編號	Credits 學分	Course Selection Status 選科種類	Academic Year of Study 學習之學年	Semester 學期
Clinical Nutrition	BSPE1101	2	elective		
Food Safety	BSPE2101	2	elective		
Public Health and Preventive Medicine	BSPE2102	2	elective		
Introduction to Psychology	PSYC1100	2	elective		

#### What Are the Entry Requirements? 入學條件

1. Secondary School Graduates(Form 6), or According to article 28 of the Higher Education Law of RAEM, article nº 9, applicants of age 25 or above and with special ability conditions, need not comply with the above mentioned point 1. Upon successful completion of the entrance examination, the applicant will be eligible to further his/her studies in a higher diploma programme offered by MPI. All those who complete 25 years of age before September 1st will also be eligible to participate in the entrance examination.  
(Note: According to article 4 of Decree-Law 26/2003, the participants who have completed their secondary studies out of Macao, need the recognition of MPI's Academic Qualification Recognition Committee before they are eligible to register.)
2. Have passed the medical examination.

#### How Do We Listen and Act on Your Feedback? 如何聽取及回應學生的回饋

Students feedback is formally collected at four different levels, i.e., class level, school level, institute level, and informal meeting. At class level, each class is assigned with a class teachers. The meeting between class teacher and students is hold at least once per month. At school level, there are at least 2 dialogues between students and director, programme coordinators, and assistant programme coordinators per year. At institute level, there are at least 2 dialogues between student and senior management board per year. At informal meetings, teachers, assistant programme coordinators and programme coordinators will receive informal feedback from individual students under different occasions, such as corridor, canteen, and etc. Any abnormalities will be reported during monthly staff meeting within our programme.

#### Academic Support 教學支援

Each class is assigned with a class teacher to have support for students. The virtual learning environment has information on the different modules and supervisory advice for dissertations. Students are also advised on the support services available in the Language and Learning Unit. Students are assigned with a dedicated thesis supervisor for their thesis I and thesis II modules.

#### Programme-specific Rules and Facts 課程特定的規則及內容

N/A

### Specific Support for Disabled Students 對於殘障學生的特殊支援

Macao Polytechnic Institute has in place an institution-wide policy to ensure that all student needs are taken care of and a supportive and accessible learning environment is maintained. When cases of special needs are notified or identified, special arrangements are made on a case-by-case basis with the joint effort of the programme and several student support services of the Institute, such as the Registry, the Student Affairs Office, the Computer Services Centre, etc. to provide the necessary support.

### Links With Employers, Internship Opportunities and Transferable Skills

與僱主關係、實習機會及可轉移技能

Since we aim to train qualified medical laboratory technicians, there is a strong emphasis in internship. As specified by legal requirements, a formal 1-year (1000 working hours) is practised in Year 4 in the programme. Besides this formal training, other extra-curricular training opportunities are included, such as voluntary summer 3-week internship in Macao, voluntary summer 6-week internship in Taichung, Taiwan, and overseas 15-week placement in Braganca, Portugal.