



BSc (Hons) in MEDGA BSc (Hons) in MEDGA BBC (H

Introduction



Medical laboratory scientists play a vital role in hospitals and diagnostic laboratories in both public and private sectors. They perform diagnostic and health screening tests, which are essential in disease diagnosis, treatment evaluation and medical research.

Our programme is the first full-time Government-funded programme in medical laboratory science (MLS) in Hong Kong. Our graduates are eligible for <u>direct</u> registration (Part II) with the Medical Laboratory Technologists Board of Hong Kong.

Medical laboratory scientists perform diagnostic tests in clinical laboratories in the following key disciplines:

1. Cellular Pathology (細胞病理學)

Preparing tissue or cell samples for microscopic examination to investigate the cause of disease due to cellular alterations.

2. Clinical Chemistry (臨床化學)

Measuring biomarkers in biological fluids and studying clinical toxicology to provide a clear biochemical picture for diagnosis.

3. Haematology and Transfusion Science (血液及輸血科學)

Examining blood cells and coagulation factors for the diagnosis of blood disorders. In transfusion science, scientists perform blood typing and compatibility tests for patients and donors.

- 4. Medical Microbiology and Virology (醫療微生物及病毒學) Studying the causes of infectious diseases by investigating clinincal samples for the presence of bacteria, viruses, fungi and parasites.
- 5. Molecular Diagnostics (分子診斷) Scientists analyse specific genetic sequences in the clinical samples to identify pathogens or genetic mutations associated with diseases.

Professional Recognition

Graduates are eligible for :

- 1. Registration in the Part II register of the Medical Laboratory Technologists Board, Hong Kong
- 2. Application of Licentiate Membership of the Institute of Biomedical Science (IBMS), UK
- Certification examination of the American Society for Clinical Pathology International (ASCPⁱ)



Career Prospects

Career options:

- Medical laboratory science (public and private sectors)
- Medical biotechnology
- Pharmaceutical industry
- Environmental science
- Agricultural and food testing industry
- Research and further study at postgraduate level

Curriculum Overview



The BSc (Hons) in MLS programme requries students to complete 125 academic credits and 10 clinical credits for work-integrated education attachment to graduate. The academic credits include General University Requirement (GUR) subjects, Discipline-Specific Requirement (DSR) subjects, and electives.

	Semester 1	Semester 2	Semester 3 (Summer)
Year 1	 Exploring Medical Laboratory Science Human Anatomy Human Physiology 	 Clinical Laboratory Instrumentation General Chemistry Introduction to Clinical Chemistry Laboratory Techniques & Safety 	
Year 2	 Cells in Health & Disease Human Biochemistry Immunology Introduction to Medical Microbiology Interpretative & Practical Clinical Chemistry Clinical Chemistry: Concepts & Principles 	 Biostatistics Medical Microbiology: Concepts & Principles Interpretative & Practical Medical Microbiology Introduction to Haematology Molecular Biology in Medicine 	Clinical Attachment
Year 3	 Haematology: Concepts & Principles Interpretative & Practical Haematology Introduction to Cellular Pathology Introduction to Clinical Research Pathophysiology 	 Cellular Pathology: Concepts & Principles Interpretative & Practical Cellular Pathology Medical Virology 	Clinical Attachment
Year 4	 Introduction to Interdisciplinary Cancer Research (elective) Human Genetics Molecular Diagnosis of Human Disease Bioinformatics for Molecular Diagnostics 	 Honours Project Legal and Ethical Issues in Healthcare Current topics in Laboratory Medicine (elective) 	

Entrance Requirements

JUPAS - General entrance requirements

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Core subjects	Chinese language	3
	English language	3
	Mathematics	2
	Citizenship and Social Development	Attained
Electives	Elective 1	3
(including M1/M2)	Elective 2	3

Cellular Technology for Biomedical Research (elective)

Normal colour vision is not one of the admission criteria, but applicants should note that normal colour vision may be required for employment in medical laboratory profession.

Contact Information

Department of Health Technology and Informatics The Hong Kong Polytechnic University



Preferred subjects with highest weighting in admission score calculation

- Chinese Language
- English Language
- Mathematics
- Mathematics (M1/M2)
- Biology
- Chemistry
- Combined Science (Biology and Chemistry)