

MASTER OF PATHOLOGY PROGRAMME

INTRODUCTION

The Master of Pathology is a 4 year post-graduate programme with the primary objective of producing a competent specialist who will lead the laboratory and provide the diagnostic and consultation services to the clinicians. The programme is comprised of stage 1 of one year duration and stage 2 of three years duration. The training centres include public universities' teaching hospitals and the accredited hospital of Ministry of Health.

VISION

The Master of Pathology strives to be the academic programme for local and international students, providing the highest standard of pathology education and training to produce a competent pathologist.

MISSION

- To meet the requirements of the nation in the field of pathology.
- To create an environment that is conducive for achieving academic, service and research excellence in pathology.
- To produce competent pathologists who will provide quality clinical services and laboratory management.
- To consolidate and improve training programme for the development of quality human resources in the field of pathology.
- To promote internationalisation of academic, research and service activities related to pathology.

ENTRY REQUIREMENTS

Candidates who wish to pursue Master of Pathology need to

- have a valid medical Degree from a university recognized by Malaysian Medical Council (MMC).
- be registered with the MMC.
- complete at least 3 years of medical service.
- pass the entrance examination and/or
- pass an interview.

All candidates must pass the entrance examination before he or she can be eligible for the interview for selection into the programme.

For foreign candidates, requirements as above are applied, with additional of

- Possess a Temporary Practising Certificate issued by the MMC before starting practice.
- Undergo clinical or laboratory attachment at a minimum of 3 months before joining the programme with satisfactory supervisor report.
- Proof of proficiency in the English language. Candidates must obtain a minimum score of 6.0 in IELTS or 550 in TOEFL (obtained within 2 years prior to date of enrolment)

INTAKE SCHEDULE

Once a year usually in June.

STAGES OF THE PROGRAMME

The 4-year course will be divided into two Stages 1 and 2.

The Stage 1 course is of one year duration of General Pathology in four major disciplines of pathology i.e. Anatomic Pathology, Haematology, Medical Microbiology and Chemical Pathology with some input from immunology, genetic and forensic pathology.

Stage 1 training is only done in universities. At the end of the Stage 1 course the candidate will sit for an examination in General Pathology (Part 1 examination) and must pass this examination in order to proceed to the Stage 2 course.

The Stage 2 course is of three years duration. The candidate can opt for one of the following disciplines: Anatomic Pathology, Haematology, Medical Microbiology, Forensic Pathology, Chemical Pathology, Immunology and Medical Genetics. During the Stage 2 course the candidate shall undertake a research project and submit a research project report. At the end of the Stage 2 course the candidate must sit and pass an examination (Part 2 examination) in order to be awarded the degree of Master of Pathology. Stage 2 training may be undertaken in the universities or in accredited training centres under Ministry of Health or public hospitals.

DURATION

The maximum duration permitted to complete the course is seven years. The maximum duration permitted to complete the Stage 1 course is two years and the maximum duration permitted to complete the Stage 2 course is five years.

ELECTIVE POSTINGS

Elective postings can be undertaken when deemed necessary by the individual discipline. Where the posting is essential in order for the candidate to acquire necessary skills, the posting should be considered a compulsory posting even if it is done outside the primary centre of training. Overseas postings may be considered if it is consistent with the individual university's regulations.

STAGE 1 MASTER OF PATHOLOGY PROGRAMME

OBJECTIVES

- Primary objective
The primary objective of the Stage 1 course is for the candidate to attain basic knowledge and practical competence in Pathology.

- Specific objectives
 - i. To acquire basic theoretical knowledge in Pathology.
 - ii. To acquire basic practical competence in the performance and interpretation of common laboratory tests including autopsies.
 - iii. To acquire basic knowledge in laboratory management including laboratory organization, quality control and laboratory safety.

COURSE STRUCTURE

The candidate shall undergo a rotation posting in the 4 major disciplines of 10 weeks duration each. An orientation course will be held at the beginning of the academic year and an intensive course during the academic year. Both courses will be conducted in the universities. During the postings, the candidate shall maintain a log book and perform to the supervisor's satisfaction a list of procedures.

STAGE 2

ANATOMIC PATHOLOGY MODULE

INTRODUCTION

This is a 3-year training programme. The first 2 years are held in teaching and / or public hospitals, while the final year is in-campus. The focus is on advanced understanding and application of general and systemic pathology in greater detail. The competency technical requirement at exit is generally at level 5.

LEARNING OUTCOMES

At the end of the 3-year program in Stage 2 the students shall be able to:

- Acquire and apply diagnostic skills in anatomic pathology.
- Develop critical thinking and apply scientific approach in anatomic pathology data interpretation.
- Participate in external quality assurance program
- Acquire knowledge on research methodology and conduct research ethically.
- Acquire communication skills and be responsible in patient care.
- Acculturate ethical value and professionalism.
- Develop laboratory management skills

LEARNING OBJECTIVES

- General objective
 - i. To understand anatomic pathology in greater detail from basic to systemic pathology including autopsy with technical requirement of level 5 in most tasks.
 - ii. To behave as a competent anatomic pathologist in training; in diagnosis and clinical pathology consultations.
- Specific objectives
 - i. To attain level 5 competence in macroscopic and microscopic pathology (histopathology).
 - ii. To attain level 5 in cytopathology.
 - iii. To attain level 5 in clinical and at least level 4 medico-legal autopsy.
 - iv. To attain level 5 in frozen sections and specialized pathology (level 4 to 5) (eg; renal pathology, neuromuscular pathology, perinatal pathology).
 - v. To acquire level 4 competence in the management and organization of the diagnostic anatomic pathology laboratory services.
 - vi. To acquire level 4 competence in the planning, conduct and write-up of a simple research project.

HAEMATOLOGY MODULE

INTRODUCTION

Stage 2 course is a three (3) year programme involving an in-service training programme in which candidates are expected to be responsible for their own learning. Stage 2 training is done in universities' teaching hospitals and in accredited Ministry of Health hospital. The candidates are expected to acquire a range of skills during the period of training involving laboratory management, quality assurance, general and special haematology services, transfusion medicine, relevant genetic testing. For each specific skill the level

of competence expected will be determined. The candidate shall undertake a research project and submit a research dissertation. At the end of the Stage 2 course, the candidate must pass Part 2 examination in order to be awarded the degree of Master of Pathology (Haematology).

LEARNING OBJECTIVE

- General objective
 - i. To acquire competent skills and knowledge of routine and special laboratory tests and services, laboratory management and quality assurance programme relevant to haematology and blood transfusion.
- Specific objectives:
 - i. To acquire practical skills and interpret routine and special haematological tests.
 - ii. To gain knowledge in the management of a hospital haematology laboratory and blood transfusion services.
 - iii. To be able to provide specialist advice as relevant to patient care.
 - iv. To identify cases which require further consultation and take appropriate action.
 - v. To conduct and write-up a scientific research project competently.

MEDICAL MICROBIOLOGY MODULE

INTRODUCTION

Guided self-learning is a major component of the medical microbiology module. The need for the self-learning experience are provided in the form of seminar/journal club presentations, validating laboratory results, clinical consultations and ward visits. Bench-working provides an avenue for acquiring competency in conducting laboratory works and understanding procedures of specimen handling and processing, as well as enabling students to be critical of laboratory processes especially in cases of non-conformities. Throughout the module, students are also encouraged to participate in quality management system, hospital/community infection control activities, continuous medical education activities and undergraduate teachings. By the end of the stage 2 training, all-rounded specialists in clinical microbiology are produced that are confident in their knowledge and skills which enable them to function effectively in a clinical management team.

LEARNING OBJECTIVE

- General objective
 - i. To acquire knowledge and skill in laboratory diagnosis and management of infectious diseases

- Specific objectives
 - i. To evaluate the quality of specimen and to perform specimen reception/rejection for microbiological diagnosis
 - ii. To acquire knowledge and skill in quality assessment of culture media, cell culture and reagents
 - iii. To acquire knowledge and skill in performing and interpreting the laboratory diagnosis in bacteriology, virology, mycology, parasitology and immunology
 - iv. To acquire knowledge and skill in performing and interpreting antimicrobial susceptibility tests (AST) and managing drug resistant pathogens
 - v. To acquire knowledge and skill in performing and interpreting molecular diagnosis for infectious diseases
 - vi. To acquire knowledge and skill in infection control and outbreak management
 - vii. To acquire knowledge and skill in the laboratory management system
 - viii. To acquire skill in performing research in clinical microbiology

CHEMICAL PATHOLOGY MODULE

INTRODUCTION

In stage 2, the candidates will be trained based on in depth the knowledge in clinical, analytical biochemistry, molecular genetics, therapeutic drug monitoring and toxicology and laboratory management. They will acquire in-depth knowledge of the common clinical disorders and the role of laboratory utilisation in the diagnosis and management of disease. They will also be taught on setting the standard of patient care through the diagnostic and monitoring services of their laboratory and practicing effective laboratory utilisation. They will be exposed to critical appraisal, management, budgetary and administrative skills and knowledge of automation, electronic data processing, laboratory information systems and acquire knowledge in accreditation throughout their training.

LEARNING OBJECTIVE

- General objectives
 - i. To acquire knowledge in basic and specialized Chemical Pathology testing
 - ii. To apply the knowledge on clinical aspects and management of patient
 - iii. To apply knowledge and be competent in techniques or methodologies and instrumentation
 - iv. To apply knowledge and skill in the management of the laboratory

- Specific objectives
 - i. To acquire consultant level skill in interpretation of laboratory tests results and provision of authoritative advice
 - ii. To critically analyse and competent in techniques/methodology and instrumentation, conversant with the performance and limitations of various methods adopted in chemical pathology for patient care.
 - iii. To organise the service planning and resource management, financial control and monitoring of service delivery.
 - iv. To apply total quality management system, laboratory accreditation and laboratory safety.
 - v. To formulate planning and conduct of research and development in chemical pathology
 - vi. To acquire competence in the planning and conduct of research and development in chemical pathology

ACADEMIC FEE:

<https://ipsis.uitm.edu.my/v2/images/pdf/fees-29mac2019.pdf>