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UNIVERSITY OF COLOMBO



**POSTGRADUATE INSTITUTE
OF MEDICINE OF SRI LANKA**

MICROBIOLOGY

Regulations and Guidelines

Diploma in Medical Microbiology

Diploma in Clinical Microbiology

MD Microbiology

MD Parasitology

MD Virology

**Board Certification in
Microbiology / Parasitology /
Virology**

11

2009

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In accordance with the decision of the Board of Study in Microbiology, and the approval of the Board of Management of the PGIM, this Prospectus, curriculum and training programme in Microbiology became effective from 2009.

BOARD OF STUDY IN MICROBIOLOGY POSTGRADUATE TRAINING PROGRAMME

1. PROGRAMMES OF STUDY

The programmes of study are divided into three stages.

Stage 1: Training leading to the Postgraduate Diploma in Medical Microbiology or the Postgraduate Diploma in Clinical Microbiology

Stage 2: In-service training leading to the MD (Microbiology), MD (Parasitology) and MD (Virology) degrees

Stage 3: Two years leading to Board Certification as a Specialist in Medical Microbiology (with sub-specialization in Mycology), Medical Parasitology or Medical Virology

2. REGULATIONS

2.1 Eligibility Criteria to sit Selection Examinations

- Entry to the Diploma level training programmes is through the selection examinations.
- Applicants must fulfill the criteria specified in the current PGIM General Regulations and Guidelines with regard to eligibility for screening / selection / Part I examinations conducted by the PGIM.
- Graduates in dentistry and veterinary sciences with two years post-qualification experience will also be considered for the Diploma in Medical Microbiology only, depending on service needs. In the case of this category of candidates, the Head of the Institution should make the request. **This category of candidate will not be eligible to proceed to the MD programmes.**

2.2 Eligibility for admission to the Diploma courses

Applicants must reach the required level of performance in the examinations conducted by the PGIM for selection to enter the relevant training programme. Where the number of qualifying candidates exceeds the total number of placements for training that are available, selection for training will be carried out in the order of merit. The remaining would be placed in a reserve list and selected in the order of merit if there are dropouts.

2.3 Eligibility to sit the Diploma examinations

Trainees must have a minimum of 80% attendance in each segment of the relevant course (as stipulated in the PGIM General Regulations and Guidelines) together with proof of satisfactory participation and performance in all items enumerated under learning assignments. It is the trainee's responsibility to maintain a record book with certified records of completion of all learning assignments.

2.4 Eligibility for admission to the MD courses

MD courses are open only to medical graduates registrable with the Sri Lanka Medical Council and who have passed the Diploma in Medical Microbiology examination or the Diploma in Clinical Microbiology conducted by the PGIM.

2.5 Eligibility to sit MD examination

- Trainees must have a minimum of 80% attendance in each segment of the relevant course (as stipulated in the PGIM General Regulations and Guidelines) together with proof of satisfactory participation and performance in all items enumerated under learning assignments. It is the trainee's responsibility to maintain a record book certifying completion of all learning assignments.
- Acceptance of dissertation.

3. DIPLOMA IN MEDICAL MICROBIOLOGY

A Diploma holder is entitled to work in a Medical Microbiological laboratory only under the supervision of a Consultant Microbiologist. The acquisition of this Diploma does not entitle the holder to Specialist status.

3.1 Intended Learning Outcomes

At the end of the training, the holder of the Diploma in Medical Microbiology should:

1. have the basic knowledge of the aetiology, pathogenesis, epidemiology and prevention of infectious diseases occurring in Sri Lanka
2. be able to perform and interpret routine microbiological investigations in a clinical diagnostic laboratory, with attention to quality assurance and laboratory safety.
3. be able to carry out basic sterilization procedures and laboratory investigations with regard to checking sterility.
4. be able to perform and interpret basic routine investigations for the diagnosis of common fungal diseases.
5. be able to perform and interpret basic routine investigations for the diagnosis of common parasitic diseases.
6. be able to interpret the results of laboratory investigations carried out for the diagnosis of common viral diseases.

3.2 Programme components

- The training will consist of laboratory and practical work and will include lectures, seminars, tutorials and assignments.
- Trainees will be attached to centres recognized for training by the PGIM. Placements for training will be made by the Board of Study.
- The period of training under approved supervision will cover Bacteriology, Virology, Mycology, Parasitology, Immunology, Molecular Biology and allied subjects approved by the Board of Study.

3.3 Assessment of Trainees

3.3.1 In-course assessment

- Trainers will be required to send progress reports on the trainees. Unsatisfactory reports will result in candidates being discontinued from the training programme.

- Satisfactory participation at lecture / demonstrations, tutorials and seminars.

3.3.2 The Diploma in Medical Microbiology examination will consist of the following

- A written examination with a Multiple Choice Question paper and an essay paper
- A practical examination
- An oral examination

An overall average of 50% will be required for a pass.

3.4 Award of Diploma in Medical Microbiology

Candidates who reach the standard required for a pass will be awarded the Postgraduate Diploma in Medical Microbiology of the University of Colombo.

3.5 Award of Tissa Vitarana Gold Medal

The Tissa Vitarana Gold Medal is awarded to the candidate who fulfils the stipulated criteria for this award.

4. DIPLOMA IN CLINICAL MICROBIOLOGY

A Diploma holder is entitled to work in a Medical Microbiological laboratory only under the supervision of a Consultant Microbiologist. The acquisition of this Diploma does not entitle the holder to Specialist status.

4.1 Intended Learning Outcomes

At the end of the training programme, a holder of the Diploma in Clinical Microbiology should be able to

1. manage the microbiological laboratory services and the work environment of a microbiology laboratory in a basic hospital.
2. supervise the infection control activities of the hospital and advise on infection control procedures
3. advise on antimicrobial and microbiological management of patients with infections, by liaising with an identified Consultant Microbiologist (Link Consultant) when handling a difficult laboratory or clinical query.

4.2 Programme components

- The training programme will consist of two components: a taught course followed by hospital-based in-service training.
- Trainees will be attached to centres recognized for training by the PGIM. Placements for training will be made by the Board of Study.
- The taught course will cover Bacteriology, Virology, Mycology, Parasitology, Immunology and allied subjects approved by the Board of Study.

4.3 Assessment of trainees

4.3.1 In-course assessment

- Trainers will be required to send progress reports on the trainees. Unsatisfactory reports will result in candidates being discontinued from the training programme.
- Satisfactory participation at lecture / demonstrations, tutorials and seminars.

4.3.2 The Diploma in Clinical Microbiology examination will consist of two parts.

- Part I will be conducted on completion of the hospital-based in-service training. It will consist of a written examination and a practical examination.
- On completion of the Part I examination, trainees will be posted, for at least 2 years, to stations selected by the Ministry of Health, where they will serve in a Microbiology laboratory in liaison with an identified Consultant Microbiologist. During this period, trainees will be required to attend monthly Continuing Medical Education sessions conducted by the Sri Lanka College of Microbiologists, and maintain a log book.
- The Part II examination will be conducted on completion of 2 years of service as specified above. It will also consist of a written examination and a practical examination.

- Parts I and II shall carry equal weight in the final computation of marks.
- An overall average of 50% will be required for a pass.

4.4 Award of Diploma in Clinical Microbiology

Candidates who reach the standard required for a pass will be awarded the Postgraduate Diploma in Clinical Microbiology of the University of Colombo. Diploma holders will be entitled to enter the MD (Microbiology) training programme.

5. MD (MICROBIOLOGY), MD (PARASITOLOGY) AND MD (VIROLOGY)

(Stage 2 of training programme)

5.1 Intended Learning Outcomes

5.1.1 Microbiology

A Board Certified Specialist in Medical Microbiology should

- Be capable of organizing, managing and directing a laboratory for diagnostic service.
- Have professional knowledge, diagnostic and technical skills and aptitude for providing routine diagnostic laboratory services in clinical microbiology, including parasitology, infection control, antibiotic therapy, quality assurance, and quality control of laboratory tests.
- Be competent in planning, undertaking and evaluating medical and clinical research in the field of microbiology
- Be conversant with modern developments in the field of microbiology
- Have knowledge of health and safety requirements in the laboratory environment.
- Be able to teach Medical Microbiology to undergraduates, postgraduates, and paramedical personnel.

5.1.2 Parasitology

A Board Certified Specialist in Medical Parasitology should be

- Able to organize, manage and direct a diagnostic laboratory for medical parasitology.
- Able to provide clinicians with advice regarding diagnosis and treatment of parasitic infections, when requested.
- Able to plan, carry out, and evaluate research in the field of medical parasitology.
- Conversant with modern developments in the field of medical parasitology.
- Able to undertake teaching in medical parasitology for undergraduates, postgraduates and para-medical personnel.

5.1.3 Virology

A Board Certified Specialist in Medical Virology should be

- Able to organize, manage and direct a diagnostic medical virology laboratory.
- Able to carry out surveillance activities related to viral infections of public health importance, and investigate and manage outbreaks of viral diseases.
- Able to plan and execute viral infection control activities in health care institutions.
- Able to provide clinicians with advice regarding diagnosis and treatment of viral infections, when requested.
- Able to plan, carry out and evaluate research in the field of medical virology.
- Conversant with modern developments in the field of medical virology.
- Able to undertake teaching in medical virology for undergraduates, post-graduates and paramedical personnel.

5.1.4 Mycology

A Board Certified Specialist in Medical Microbiology, with sub-specialization in Mycology, will:

- Be able to organize, manage and supervise a diagnostic medical mycology laboratory
- Be able to provide clinicians with advice regarding diagnosis and treatment of fungal infections when requested
- Be able to plan, carry out and evaluate research in the field of medical mycology
- Be conversant with modern developments in the field of medical mycology
- Be able to undertake teaching in medical mycology for undergraduates, postgraduates and paramedical personnel.

5.2 Programme components

All programmes of study will include a period of in-service training and a research project.

5.2.1 In-service training in Microbiology and Mycology

This will consist of a three year in-service training at an advanced level in Clinical Microbiology and allied subjects. This training will be clinically oriented and more student-centred than at Diploma level. The training will include specified periods in hospital laboratories under the supervision of a Consultant Microbiologist.

5.2.2 In-service training in Parasitology

Three years in-service training in Medical Parasitology, Protozoology, Helminthology and Entomology as well as Epidemiology and Statistics and other allied subjects. During this period, the trainee will be rotated between the main Parasitology laboratories that have service, teaching, and research commitments.

5.2.3 In-service training in Virology

The MD training programme will consist of three years in-service training in Virology, as well as Microbiology, Immunology, Epidemiology, Molecular Biology, Laboratory Management and other allied subjects, locally and overseas, if possible (for up to 6 months). During the local training in Virology, trainees will be rotated between the main Virology laboratories that have service, teaching and research commitments. Where applicable, the period of overseas training should be in an institution of excellence engaged in viral disease surveillance and control, with prior approval of the Board of Study.

5.2.4 Research project

A research project approved by the Board of Study must be carried out by each trainee during the period of in-service training, under a designated supervisor. The research project must be within the relevant speciality (Microbiology / Parasitology / Virology / Mycology), but may be on a topic of the trainee's choice.

5.3 Assessment of trainees

5.3.1 In-course assessment

- Trainers will be required to send progress reports on the trainees. Unsatisfactory reports will result in candidates being discontinued from the training programme.
- Verification of bench work as certified by supervisor.
- Satisfactory participation at lectures / demonstrations, tutorials and seminars.

5.3.2 Dissertation

The report on the research project must be submitted in the form of a dissertation at least six months before the MD examination. The dissertation must conform to the format given in the guidelines to MD trainees. The trainee will be questioned on the dissertation at the viva voce examination.

5.3.3 Final assessment

The MD examination will include:

- A written examination with two papers
- A practical examination
- A viva voce examination

An overall average of 50% will be required for a pass.

5.4 Award of MD degree

On successful completion of the MD examination, the candidate will be awarded the degree of MD (Microbiology), MD (Parasitology) or MD (Virology).

6. BOARD CERTIFICATION AS A SPECIALIST

(Stage 3 of training programme)

6.1 Post-MD training in Microbiology

This will consist of 12 months of training locally as a Senior Registrar, and 12 months of training at a recognized centre overseas, approved by the PGIM.

The 12 months of local training can be done en bloc or in 2 parts before or after the period of overseas training.

6.2 Post-MD training in Parasitology

This will consist of 12 months of training locally as a Senior Registrar, and 12 months of training at a recognized centre overseas, approved by the PGIM. The 12 months of local training can be done en bloc or in 2 parts before or after the period of overseas training.

If the overseas training institution requires payment of a bench fee, the trainee may seek approval of the Board of Study to reduce the overseas training period to 9 months, and request the PGIM to pay the bench fee. In such cases, the stipulated period of local training will be increased from 12 to 15 months.

6.3 Post-MD training in Virology

This will consist of 12 months of training locally as a Senior Registrar and 12 months of training at a recognised centre overseas, approved by the PGIM. The 12 months of local training can be done en bloc or in 2 parts before or after the period of overseas training.

If the trainee has undergone any overseas training before the MD examination (during MD training), the required period of overseas training post-MD will be reduced commensurately, and this period added on to the period of local training.

6.4 Post-MD training in Mycology

This will consist of 12 months of training locally as a Senior Registrar in the Department of Mycology, Medical Research Institute, and 12 months of training at a recognized centre overseas, approved by the PGIM. Both local and overseas training must be under the supervision of a specialist in Mycology.

6.5 Board Certification

During the training period, progress reports will have to be submitted as specified by the PGIM. Certification of satisfactory completion of local and overseas training should be forwarded to the Director, PGIM by the respective supervisors. On successful completion of stage 3, and after return to Sri Lanka, the trainee will be Board Certified as a Specialist in Medical Microbiology, Medical Parasitology, Medical Virology or as a Specialist in Medical Microbiology, sub-specializing in Mycology, as the case may be.