



Master of Sciences in Clinical Genetics

MSc. In Clinical Genetics program aims to develop knowledge, skills, and attitudes required by medical graduates to deliver clinical genetic services. It includes training in diagnosing genetic diseases using clinical evaluation and genetic testing and choosing appropriate genetic investigations and interpreting results. It also includes formulating effective research proposals based on medical genetics and perform effective researches.

Basic Information

1. **Department:** Human Genetics Unit, Department of Anatomy

2. **Course Organizer:** Dr. Nirmala Sirisena,
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3. **Learning Outcomes:**

By the end of this course students must have the requisite knowledge, skills and attitudes to,

- Obtain the medical history and carry out clinical examination as it relates to genetic diseases.
- Record and analyse family history data.
- Diagnose genetic diseases using clinical evaluation and genetic testing, choose appropriate investigations and interpret results.
- Provide accurate information and effective genetic counselling to individuals and families.
- Write clear summaries of genetic clinic consultations in post-clinic letters to colleagues and patients.
- Formulate management plans for genetic aspects of genetic/hereditary disorders.
- Perform risk calculations.
- Conduct literature searches and use medical genetic databases.
- Work effectively in a team with other colleagues providing genetic services.
- Liaise appropriately with colleagues from other specialties.
- Make use of lay organizations to support patients and families with genetic diseases.
- Communicate and explain genetic issues to colleagues and the lay public.
- Work effectively with colleagues in other disciplines.
- Formulate effective research proposals based on medical genetics and perform effective researches.
- Document and publish rare genetics findings and research outcomes.



- Demonstrate self-direction and originality in managing problems.

4. **SLQF Level:** 10
5. **Credit Hours:** 60
6. **Duration in Months:** 24 months (2years)
7. **Course Delivery:**
 - full time / part time
 - weekdays / week end
 - online / class room

8. Entry Criteria:

Applicants should have a MBBS or equivalent degree registered with the Sri Lanka Medical Council.

Foreign applicants should have a MBBS or equivalent degree registered with the Medical Council of the country of residence of the applicant.

9. Selection Method:

Students are selected based on their performance at a selection examination which has a written component and an interview. The written component contributes 75% and the interview contributes 25% to the total mark. Students who obtain an overall mark of 50% or more will qualify for selection.

10. No. of Students per Batch: 5 - 10

11. Teaching/ Learning Method(s):

- Lectures
- Online learning
- Clinical rotations
- Laboratory work
- Self-learning
- Formative assessment
- Research project

12. Assessment Method(s):

Evaluation is by written and practical examinations for each module at the end of the first and second semesters. The students are required to write a dissertation based on the research



project. This will be examined by two examiners and defended by the student at a viva voce examination.

13. Lecture Panel:

Academic staff of the Human Genetics Unit/Department of Anatomy, Faculty of Medicine, University of Colombo and other extended Faculty

14. Tuition Fees:

- Local Student: Rs. 500,000
- Foreign Students: USD 2,920

15. Other Fees:

- Registration fee: Rs. 25,000
- Library fee: Rs. 2,500

Core Course Contents of Modules

1. Semester 1: Core Modules

- **Module 1:** Cytogenetics
- **Module 2:** Molecular Genetics
- **Module 3:** Special Topics
- **Module 4:** Introduction to Research Methods

2. Semester 2: Clinical Genetics Modules

- **Module 5A:** Clinical Genetics
- **Module 6A:** Genetic Counselling
- **Module 7A:** Hands on experience attached to a genetics clinic including hospital rotations

3. Semester 3 and 4: Research

- **Module 8:** Research project, dissertation writing, and defense of the dissertation