



Master of Science in Regenerative Medicine

Basic Information

- 1. Department:** Human Genetics Unit, Faculty of Medicine
- 2. Course Organizer:** Dr. Hemali Goonasekera
+94 112 695 300 ext. 119
- 3. Learning Outcomes:**

By the end of this course students must have the requisite knowledge, skills and attitudes that would enable them to have a working knowledge of,

- The biology of stem cells and their differentiation potentials.
- Clinical applications done world over and the strategies that are being formulated.
- Therapeutic applications of stem cells and an in-depth analysis of clinical trials
- Hands on practical skills in deriving, maintaining, characterizing and differentiation of stem cell lines.
- Molecular technologies including polymerase chain reaction, real time PCR, conventional and next generation sequencing, and array-based technologies.
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- Quality assurance, assay validation, ethics, regulatory issues, professionalism, and lab administration.

4. SLQF Level:

5. Credit Hours:

6. Duration in Months: 2 years / 24 months

7. Course Delivery: full time based

8. Entry Criteria:

- Students will be selected to follow the course from applicants based on their performance at a selection examination which has a written component and an interview.
- The written component will contribute 75% and the interview will contribute 25% to the total mark.
- Students who obtain an overall mark of 50% or more will qualify for selection.
- The date of the selection examination would be notified after the close of applications.



9. Teaching/ Learning Method(s):

- Classroom teaching
- Laboratory work
- Research project.
- video conferencing classes & face to face sessions with MIRM staff

10. Assessment Method(s):

- The examinations in semester 1, 2 and 3 shall consist of mid semester continuous assessments and end of semester written and/or practical examinations for each subject conducted during the semester.
- 80% attendance at designated teaching sessions is required for a student to be eligible to sit end of semester 1, 2 and 3 examinations.

11. External/Internal Collaborator(s): The Manipal, Institute of Regenerative Medicine (MIRM),
Manipal University, Bangalore, India

12. Tuition Fees: Rs. 2,000,000

13. Other Fees:

- Application Fee: Rs 5,000
- Registration Fee: Rs. 25,000
- Library Fee: Rs. 2,500

Core course contents of Modules

1st Semester

- Stem Cell Biology
- Cell Biology
- Developmental Biology I
- Biochemistry
- Molecular Biology I

2nd Semester

- Adult Stem Cell Biology
- Development biology II
- Molecular Biology II
- Immunology
- Discussion on research applications to an ethics committee
- Basic principles of animal welfare
- Animal welfare and protection organizations



3rd Semester

- Stem Cells & Diseases
- Applications of stem cells
- Clinical Research & regulatory affairs Biostatistics& Bioinformatics

4th Semester

- Dissertation thesis project