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**DIVISION OF MEDICAL PHYSIOLOGY;**  
**FACULTY OF MEDICINE AND HEALTH SCIENCES**  
**HONOURS IN MEDICAL PHYSIOLOGY**

**I. Course Contents:**

The **BSc Hons in Medical Physiology course (778)** is divided into two modules: (a) **The Theoretical Module (771)**, which consists of *capita selecta* lectures with assessments, and a Literature review project; and (b) **The Practical/Research Module (772)** which consists of the Laboratory Research Project and Laboratory Rotations during the year. You must achieve at least 50% in each Module to pass the course.

Due to involvement of staff members of Biomedical Research and Innovation Platform (Medical Research Council) in our Honours program and accompanying logistical implications, we have therefore structured the program to accommodate all lectures and practical rotations in the first 4 months. Thereafter the bulk of the time will be devoted to the Research Project. A more detailed timetable would be provided.

## II. Theoretical Module: Lectures and Tutorials

### Lectures

The theoretical program consists of lectures that cover discussions on new developments and research directions in physiology. The lectures will not follow the typical textbook-style physiology but should rather be seen as a collection of selected, interesting topics (*“capita selecta”*) presented by departmental and invited lecturers and researchers. You will be assessed on the lectures by the following means: **(i) Two closed book written assessments; and (ii) One open book written assessment.**

### Literature Review Project

This project requires you to prepare a report on your Research Project Topic. You will be allocated to a supervisor (lecturer or researcher) together with whom you will do your Literature Review as well as your Research Project. After you have chosen your research project, it will be your responsibility to research scientific literature on this topic in the library and the Internet. The information must be critically evaluated, and it is expected from you to provide your own perspective and draw your own conclusion. There will be sessions, as arranged with supervisor, during which you can discuss your progress and problems. A **Literature Review report** will to be submitted for evaluation.

## III. Practical Module: Research Project and Lab Rotations

### Laboratory Research Project

Students will choose and work with a supervisor to do the required research project in a specific laboratory. Students must present their research **Project Proposals** to members of the Division within four weeks after receiving their project topic. This will take on the format

of a 15-minute PowerPoint presentation. The aim of these presentations is two-fold: (i) provide students the opportunity to acquire and practice public speaking skills and (ii) allow inputs from other researchers to make suggestions to improve / enhance the projects as early as possible, before work has progressed too far for rectification. Project supervisors and peers will be present at this occasion.

The completed research project will be **Presented** to an open audience where a panel of judges (researchers, academics, and an external examiner) will adjudicate your findings.

It is also expected of each student to submit a **final Report on their Research Project** for evaluation.

### **Laboratory Rotations**

This program consists of demonstrations and do-it-yourself experiments during laboratory rotations throughout the year in, i.e., Reproductive Research Laboratory, Cardiovascular Research Laboratory, and South African Medical Research Council, SAMRC (Biomedical Research and Innovation Platform, BRIP and Non-Communicable Diseases Research Unit, NCDRU). A written report must be handed in after **each** laboratory rotation for evaluation.

**Note:** At the beginning of the course, all Honours students will participate in a general laboratory safety & orientation workshop. Apart from the practical skills that you will acquire during these sessions, you will also gain thorough knowledge on laboratory safety, maintenance and standardization of measuring instruments, and the handling of electronic apparatus. You will be assessed on the knowledge and skills gained during this workshop by means of a competency test, which will count towards your Practical Module mark.

#### **IV. ASSESSMENT AND MARK ALLOCATION:**

##### **THEORETICAL MODULE (771):**

###### **(i) Written assessments:**

- Closed book exam 1	20%
- Closed book exam 2	24%
- Open Book Assessment	18%
- Features of Science module	18%

**(ii) Project Literature Review** 20%

**TOTAL** 100%

##### **The Practical/Research Module (772):**

###### **(i) Year Project:**

- Research project proposal	10%
- Project Report	40%
- Project presentation	35%
- Lab impression (by supervisor)	3%
- Lab competency test	2%

**(ii) Lab Orientation and Lab Rotations** 10%

**TOTAL** 100%

***NB: In order to graduate you need to pass BOTH modules 1 and 2 of the Honours in Medical Physiology with 50%.***



## **V. Divisional Administration:**

### **Head of Division:**

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### **NB:**

1. All honours students must complete an MOU document with their supervisors and provide a signed copy to Dr. Maarman.
2. Honours students may be requested by their supervisors or the Division, to either present their research findings (preliminary or otherwise) to at university meetings or

conferences. They may also be requested to attend training sessions and workshops relevant to their projects.