

### 3.4.3.10 Minor in Medical Physics

Host Faculties: Faculty of Science (Physics)

Faculty of Engineering

With an aging society and lifestyle changes one will see an increase in the prevalence of cancers and other diseases which often requires radiation systems and applications for diagnosis and therapy. Hospitals and other parts of the medical sector will therefore need Medical Physicists. The minor in Medical Physics is, to a large extent, based on nuclear physics. This programme enables students to get a solid grounding in many aspects of Medical Physics, e.g. Radiation Oncology, Proton Beam Therapy, Medical Imaging (MRI/CT/PET) and Medical Technology. It will lay the foundations for the enrolment in professional programmes, e.g. a Master of Science in Medical Physics.

The Medical Physics minor is jointly offered by FoS & FoE. It is available for Physics majors (FoS) and other Science and Engineering majors (FoE & FoS) with:

H2 Physics (or its equivalent; e.g. PC1221/PC1221X and PC1222/PC1222X) and H2 Biology (or its equivalent, e.g. LSM1301/LSM1301X General Biology) who have read and passed one of the following:

1. PC1144 Introduction to Modern Physics
2. PC1432/PC1432X Physics IIE
3. PC2232 Physics for Electrical Engineers
4. PC2130B Applied Quantum Physics

Invitations to apply for the Medical Physics minor programme will be published at the beginning of each academic year. Applicants who meet the pre-requisites and have a good academic standing will be invited for an interview.

The Medical Physics minor programme will consist of the following set of common core modules (12 MCs):

1. GEH1032 Modern Technology in Medicine and Health
2. PC3295 Radiation for Imaging and Therapy in Medicine
3. PC3294 Radiation Lab

Students in the Medical Physics minor programme are also required to read at least 12 MCs of modules from the following set of electives:

Module (4 MC each)

1. LSM2212 Human Anatomy

2. LSM1106 Molecular Cell Biology
3. LSM1104 or LSM2231 General Physiology
4. LSM1401 Fundamentals of Biochemistry
5. LSM2103 or LSM2233 Cell Biology
6. LSM4243 Tumour Biology
7. LSM3223 Immunology
8. LSM3243 Molecular Biophysics
9. EE4603 Biomedical Imaging Systems