

University of Pretoria Yearbook 2023

Radiotherapeutic dosage planning 700 (RDB 700)

Qualification	Postgraduate
Faculty	Faculty of Health Sciences
Module credits	35.00
NQF Level	08
Programmes	BRadHons (Radiation Therapy)
Prerequisites	No prerequisites.
Contact time	1 discussion class per week, 1 lecture per week, 1 practical per week
Language of tuition	Module is presented in English
Department	Radiography
Period of presentation	Year

Module content

Part 1

Target volumes determination, treatment field localisation and treatment prescription. Treatment localisation equipment and principles of image geometry. Patient positioning, marking fields, and immobilisation in radiotherapy. Use of mechanical and mathematical radiation beam modification in treatment planning and delivery. Principles of 2-Dimensional and 3-Dimensional external beam photon radiation dose planning and dose calculation. Application of standard 2-Dimensional and 3-Dimensional external radiotherapy treatment planning. Principles of electron beam planning. Treatment planning quality assurance.

Part 2

Brachytherapy. ICRU level-3 Radiation dose planning. Stereotactic radio-surgery and stereotactic radiotherapy. Image-based and image-guided radiotherapy. Large field irradiation with photons. Current trends in Electron Therapy, proton therapy, heavy particle therapy and neutron therapy treatment planning and delivery.

Regulations and rules

The regulations and rules for the degrees published here are subject to change and may be amended after the publication of this information.

The [General Academic Regulations \(G Regulations\)](#) and [General Student Rules](#) apply to all faculties and registered students of the University, as well as all prospective students who have accepted an offer of a place at the University of Pretoria. On registering for a programme, the student bears the responsibility of ensuring that they familiarise themselves with the General Academic Regulations applicable to their registration, as well as the relevant faculty-specific and programme-specific

regulations and information as stipulated in the relevant yearbook. Ignorance concerning these regulations will not be accepted as an excuse for any transgression, or basis for an exception to any of the aforementioned regulations.

University of Pretoria Programme Qualification Mix (PQM) verification project

The higher education sector has undergone an extensive alignment to the Higher Education Qualification Sub-Framework (HEQF) across all institutions in South Africa. In order to comply with the HEQSF, all institutions are legally required to participate in a national initiative led by regulatory bodies such as the Department of Higher Education and Training (DHET), the Council on Higher Education (CHE), and the South African Qualifications Authority (SAQA). The University of Pretoria is presently engaged in an ongoing effort to align its qualifications and programmes with the HEQSF criteria. Current and prospective students should take note that changes to UP qualification and programme names, may occur as a result of the HEQSF initiative. Students are advised to contact their faculties if they have any questions.