

University of Pretoria Yearbook 2023

Radiation therapy and nuclear medicine 284 (RAW 284)

Qualification	Undergraduate
Faculty	Faculty of Health Sciences
Module credits	10.00
NQF Level	06
Prerequisites	RAN 100,RFI 110,FSG 161,FSG 162,RAW 180,RAW 182,MTL 180
Contact time	1 discussion class per week, 1 lecture per week
Language of tuition	Module is presented in English
Department	Radiography
Period of presentation	Quarter 4

Module content

- (a) Radiobiology: Cell survival curves and target theories, radiation effects on tissue, tissue and organ radio sensitivity. Radiation pathology, acute and chronic effects, late effects of radiation. Clinical radiobiology: Radiation therapy, tumour radiobiology, fractionation, iso-effect formulae.
- (b) Introduction to radiation therapy: Origin and incidence of cancer, diagnoses and staging, treatment and modalities. Treatment methods in radiation therapy. Preparation for external beam irradiation. Dosage. Biological principles of radiation. Effects of radiation on normal tissue.
- (c) Introduction to nuclear medicine: Principles of nuclear physics and nuclear medicine, nuclear instrumentation, radio chemical pharmacology. Basic approach to clinical nuclear medicine and relevant techniques.

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.