

# University of Pretoria Yearbook 2022

## Radiochemistry and pharmacology 700 (RCF 700)

**Qualification** Postgraduate

**Faculty** [Faculty of Health Sciences](#)

**Module credits** 20.00

**NQF Level** 08

**Programmes** [BRadHons Nuclear Medicine](#)

**Prerequisites** No prerequisites.

**Contact time** 1 lecture per week, 1 practical per week

**Language of tuition** Module is presented in English

**Department** Radiography

**Period of presentation** Year

### Module content

Definitions, principles, concepts, terminology, notation. Production and purification of radionuclides. Generators: working knowledge, evaluation techniques, quality control. Technegas production. Radiolabelling methods. Characteristics and quality control of radiopharmaceuticals. Biodistribution, pharmacokinetics, metabolism of radiopharmaceuticals. Kit preparation. Diagnostic and therapeutic radiopharmaceuticals, requirements, radiobiological aspects and applications. Hot laboratory: Rules and regulations. Type A, B, C laboratories. Radiopharmacy construction and design. Radiation safety and protection. Relevant instrumentation and equipment hot and cold lab. Handling, storage and waste disposal of radioactive materials. Contamination and decontamination procedures. Radiopharmaceuticals: preparation, dose calculation and measurement. Molecular imaging. Adverse reactions and altered biodistribution.

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