



# University of Pretoria Yearbook 2023

## Industrial waste engineering 780 (WAI 780)

**Qualification** Postgraduate

**Faculty** [Faculty of Engineering, Built Environment and Information Technology](#)

**Module credits** 32.00

**NQF Level** 08

**Programmes** [BEngHons \(Environmental Engineering\)](#)

[BEngHons \(Water Resources Engineering\)](#)

[BEngHons \(Water Utilisation Engineering\)](#)

**Prerequisites** Admission to relevant programme.

**Contact time** 32 contact hours per semester

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

**Department** Chemical Engineering

**Period of presentation** Semester 1 or Semester 2

### Module content

Identification of source materials, physical and chemical properties of waste. Release and transport mechanisms from source to air, groundwater, soil. Primary pathways of contaminants including sorption, volatilisation, biotic and abiotic transformations. Toxicology: absorption, distribution, biochemical transformation, and secretion of chemicals. Acute and chronic toxicity quantification and evaluation of risk. Hazard identification, exposure assessment, toxicity assessment and risk characterisation. Minimum requirements for the handling, classification and disposal of hazardous waste. Minimum requirements for waste disposal by landfill. Minimum requirements for water monitoring at waste management facilities. Recycling and resource management. Waste prevention, minimisation and optimisation.

### 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.