

University of Pretoria Yearbook 2023

Detailed design 420 (SDO 420)

Qualification Undergraduate

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

Module credits 24.00

NQF Level 08

Programmes [BEng \(Civil Engineering\)](#)

[BEng \(Civil Engineering\) ENGAGE](#)

Prerequisites (SHC 410), (SIN 411), (SIN 413), (SGM 323), (SVC 412)

Contact time 1 practical per week, 1 tutorial per week, 5 lectures per week

Language of tuition Module is presented in English

Department Civil Engineering

Period of presentation Semester 2

Module content

The module focuses on design applications. The aim is to extend and consolidate knowledge of basic engineering disciplines and apply this in an integrated and synthesised way on classic design applications. The student is exposed to all the applications of the classic disciplines of structures, geotechnical, hydraulics and transportation and compiles a preliminary design. The various discipline specialists select relevant application examples in each discipline for detail designs such as:

- Structures: Multi storey buildings with reinforced concrete frames and slabs; bridge across a river or road.
- Hydraulics: Pump stations and rising main; hydrological analysis and flood line study.
- Geotechnical: Slimes dams; high embankments.
- Transportation: Traffic impact studies, pavement design and analysis.

The applications selected for each discipline may vary from year to year.

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.