

University of Pretoria Yearbook 2021

Soil mechanics 311 (SGM 311)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	16.00
NQF Level	07
Programmes	BEng Civil Engineering BEng Civil Engineering ENGAGE BSc Engineering and Environmental Geology BSc Geology
Service modules	Faculty of Natural and Agricultural Sciences
Prerequisites	(SWK 210)
Contact time	1 practical per week, 2 tutorials per week, 3 lectures per week
Language of tuition	Module is presented in English
Department	Civil Engineering
Period of presentation	Semester 1

Module content

Introduction to soil mechanics. Introduction to clay mineralogy. Mass, volume relationships and phases of soil. Groundwater flow and permeability. Effective stress principles. Suction pressures in saturated as well as partially saturated soil. The Mohr circle and stresses at a point. The Mohr-Coulomb strength theory and the stress-strain properties of soil. The Boussinesq theory. Consolidation theory and soil settlement.

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