BACCALAUREUS TECHNOLOGIAE: ENGINEERING: CIVIL: ENVIRONMENTAL ENGINEERING

Qualification code: BTOI02 - NQF Level 7

Campus where offered: Pretoria Campus (block-mode classes)
Last year of new intake: July 2019
Teach-out (phase-out) date: 30 June 2023

Students registered for this qualification should complete their studies according to the teach-out date prescribed for the qualification, subject to the stipulations of Regulation 3.1.11 and 3.1.13 in the Students' Rules and Regulations.

Information on phased-out programmes can be obtained from the TUT website, www.tut.ac.za.

CURRICULUM

Consult the 2019 Faculty Prospectus for the full contents of the qualification.

Please note:
Students must obtain one credit. The Department strongly advises students who wish to register with the Engineering Council of South Africa (ECSA) to pass all the prescribed subjects indicated in this field of specialisation. Subjects are offered as determined by the Head of the Department. The total credits of the Level IV subjects may not be less than 0,500.

Students who register for the subject Construction Materials Technology IV are not permitted to register for Asphalt Technology IV or Concrete Technology IV.

ATTENDANCE

CODE	SUBJECT	CREDIT
FIRST SEMESTER (2022)		
ENN401T	Environmental Management for Engineers: Civil IV	(0,125)
WAT401T	Water Resource Management: Civil IV	(0,125)
SECOND SEMESTER (2022)		
SOI401T	Soil and Ground Water Pollution: Civil IV	(0,125)
SWM401T	Solid Waste Management IV	(0,125)
FIRST SEMESTER (2023)		
SIA401T	Social Environmental Studies: Civil IV	(0,250)
SECOND SEMESTER (2023)		
ENR401T	Environmental Engineering: Civil IV	(0,250)
TOTAL CREDITS FOR THE QUALIFICATION:		**1,000**

SUBJECT INFORMATION (OVERVIEW OF SYLLABUS)

The syllabus content is subject to change to accommodate industry changes. Please note that a more detailed syllabus is available at the Department or in the study guide that is applicable to a particular subject. At time of publication, the syllabus content was defined as follows:

E

ENVIRONMENTAL ENGINEERING: CIVIL IV (ENR401T) **2 X 3-HOUR PAPERS**
(Subject custodian: Department of Civil Engineering)
Environmental chemistry, environmental microbiology, ecology, environmental engineering and a project. (Total tuition time: ± 32 hours)

ENVIRONMENTAL MANAGEMENT FOR ENGINEERS: CIVIL IV (ENN401T) **1 X 3-HOUR PAPER**
(Subject custodian: Department of Civil Engineering)
ISO 14000, environmental impact assessment, integrated environmental management, environmental audits, case studies and project. (Total tuition time: ± 32 hours)

S

SOCIAL ENVIRONMENTAL STUDIES: CIVIL IV (SIA401T) **2 X 3-HOUR PAPERS**
(Subject custodian: Department of Civil Engineering)
Social theory: culture, social groups, urbanisation, wealth and poverty, politics, values. Environmental issues: historical development of environmentalism, terrestrial issues, aquatic issues, global atmospheric changes, population issues, development vs. conservation, north vs. south. Environmental economics: basic economic models, economic perspectives on environmental issues, environmental costing, sustainable development. Environmental policy and law: basic principles of law, South African environmental legislation, international environmental law and treaties, environmental agencies, environmental policy, public health. Development studies: review of social dynamics, urban development, rural development, sustainable development, development agencies. Environmental ethics: history of environmental ethics, critique of the Cartesian paradigm, contemporary perspectives on environmental issues, value conflicts, codes of ethics. Project. (Total tuition time: ± 32 hours)

SOIL AND GROUND WATER POLLUTION: CIVIL IV (SOI401T) **1 X 3-HOUR PAPER**
(Subject custodian: Department of Civil Engineering)
Sources of pollution, fluid flow and the transport of solute in porous media, remediation of contaminated groundwater, sanitation of polluted soils. Project. (Total tuition time: ± 32 hours)

SOLID WASTE MANAGEMENT IV (SWM401T) **1 X 3-HOUR PAPER**
(Subject custodian: Department of Civil Engineering)
Characteristics of waste, solid waste disposal methods. Design, operation and management of landfill sites. Operation of solid waste removal management systems, third-world applications, waste recycling, emergency waste management, legal aspects. (Total tuition time: ± 32 hours)

W

WATER RESOURCE MANAGEMENT: CIVIL IV (WAT401T) **1 X 3-HOUR PAPER (OPEN BOOK)**
(Subject custodian: Department of Civil Engineering)
Water resources, river engineering, limnological aspects, estuaries aspects, water quality modelling, catchment management and project. (Total tuition time: ± 32 hours)