BACCALAUREUS TECHNOLOGIAE: WATER CARE
Qualification code: BTWC10 - NQF Level 7

Campus where offered: Arcadia Campus (block-mode classes)
Last year of new intake: 2019
Teach-out (phase-out) date: 31 December 2021

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.

Key to asterisks:
* Information does not correspond to information in Report 151.
(Deviation approved by the Senate in May 2009.)

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

SUBJECTS PRINTED IN BOLD ARE NOT FOR REGISTRATION PURPOSES.

FIRST YEAR

CODE	SUBJECT	CREDIT
FIRST SEMESTER		
RMN201T	**Research Methodology: Natural Sciences***	
RMN20XT	Research Methodology: Natural Sciences: Water Care*	(0,050)
WQM401T	Water Quality Management IV	(0,100)*
WUM201T	Water Utility Management II	(0,150)*
TOTAL CREDITS FOR THE SEMESTER:		0,300
SECOND SEMESTER		
BWT401T	Biological Water Treatment IV	(0,175)*
ICM401T	Integrated Catchment Management IV	(0,100)*
PMN401T	Practice of Management IV	(0,100)*
TOTAL CREDITS FOR THE SEMESTER:		0,375

SECOND YEAR

CODE	SUBJECT	CREDIT
FIRST SEMESTER		
CWT401T	Chemical/Physical Water Treatment IV	(0,175)*
RMN201T	**Research Methodology: Natural Sciences***	
RMN20YT	Research Methodology: Natural Sciences: Statistics*	(0,050)
WTO401T	Water Treatment: Project IV	(0,100)*
TOTAL CREDITS FOR THE SEMESTER:		0,325
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:

B

BIOLOGICAL WATER TREATMENT IV (BWT401T) **1 X 3-HOUR PAPER**
(Subject custodian: Department of Environmental, Water and Earth Sciences)
degradation of organic compounds. Models of ideal biochemical reactors. Kinetics and the design of nutrient removal processes. Small wastewater treatment systems. (Total tuition time: ± 64 hours)

C

CHEMICAL/PHYSICAL WATER TREATMENT IV (CWT401T) **1 X 3-HOUR PAPER**
(Subject custodian: Department of Environmental, Water and Earth Sciences)
Reaction kinetics, coagulation, flocculation, sedimentation, flotation, filtration, gas transfer, ion exchange, adsorption, membrane technology, chemical phosphate removal. Fundamentals of colloidal systems. Electro-dialysis. Reverse osmosis. (Total tuition time: ± 120 hours)

I

INTEGRATED CATCHMENT MANAGEMENT IV (ICM401T) **1 X 3-HOUR PAPER**
(Subject custodian: Department of Environmental, Water and Earth Sciences)
Diffuse pollution. Catchment management studies. Institutional arrangements. Mining waste management. (Total tuition time: ± 24 hours)

P

PRACTICE OF MANAGEMENT IV (PMN401T) **1 X 3-HOUR PAPER**
(Subject custodian: Department of Management and Entrepreneurship)
Evolution of management, management practices, styles of management, management by objectives, top management and team work, external relations, protocol, case studies. (Total tuition time: not available)

R

RESEARCH METHODOLOGY: NATURAL SCIENCES: STATISTICS (RMN20YT) **CONTINUOUS ASSESSMENT**
(Subject custodian: Department of Mathematics and Statistics)
Statistical methods for the preparation and working of data, including descriptive statistical methods. (Total tuition time: not available

RESEARCH METHODOLOGY: NATURAL SCIENCES: WATER CARE (RMN20XT) **CONTINUOUS ASSESSMENT**
(Subject custodian: Department of Environmental, Water and Earth Sciences)
General introduction to research methodology, planning and execution of the research process, as well as the different research types and research strategies. Basic principles of measurement and data collection methods. (Total tuition time: ± 45 hours)

W

WATER UTILITY MANAGEMENT II (WUM201T) **1 X 3-HOUR PAPER**
(Subject custodian: Department of Environmental, Water and Earth Sciences)
Management functions (planning, organising, leading and control). Human resources functions. Problem solving. Strategic and operational planning. Change management. Quality improvement. Leadership. Water safety plans. (Total tuition time: ± 64 hours)

WATER QUALITY MANAGEMENT IV (WQM401T) **1 X 3-HOUR PAPER**

(Subject custodian: Department of Environmental, Water and Earth Sciences)

Policies and guidelines. Resource-directed measures. Source-directed measures. Waste treatment technologies. (Total tuition time: ± 24 hours)

WATER TREATMENT: PROJECT IV (WTO401T) **CONTINUOUS ASSESSMENT**

(Subject custodian: Department of Environmental, Water and Earth Sciences)

Students must perform an investigation of a practical or applied research nature of at least 120 hours. A written report or dissertation must be submitted for evaluation. (Total tuition time: ± 32 hours)