

BACCALAUREUS TECHNOLOGIAE: WATER CARE

Qualification code: BTWC10 - NQF Level 7

Campus where offered: Arcadia Campus

Important notification to new applicants:

Students who intend to enrol for this qualification should take note that no new applications will be accepted as from 2020. Potential students are advised to consult the University's website for possible new qualifications which are aligned with the newly-implemented Higher Education Qualification Sub-Framework.

REMARKS

- a. *Admission requirement(s):*
A National Diploma: Water Care or an NQF Level 6 bachelor's degree in Water Sciences from a South African university.

Holders of any other equivalent South African or international qualifications may also be considered, but will have to apply about six months in advance for the recognition of such qualifications. Candidates will be required to submit an evaluation of their qualifications by the South African Qualifications Authority (SAQA) with their application forms for admission. The Faculty reserves the right to assess these qualifications and the applicant's suitability/competence for admission to the programme. Proof of English proficiency may be required. Depending on the nature of such an equivalent qualification, the completion of certain additional subjects may be required.

- b. *Selection criteria:*
Selection is based on an assessment by a departmental selection panel.

- c. *Minimum duration:*
One year.

- d. *Presentation:*
Block-mode classes offered over a period of one and a half years.

- e. *Intake for the qualification:*
January only.

- f. *Exclusion and readmission:*
See Chapter 2 of Students' Rules and Regulations.

- g. *Recognition of Prior Learning (RPL), equivalence and status:*
See Chapter 30 of Students' Rules and Regulations.

- h. *Subject credits:*
Subject credits are shown in brackets after each subject.

Key to asterisks:

- * Information does not correspond to information in Report 151.
(Deviations approved by the Senate in May 2009.)



CURRICULUM

SUBJECTS PRINTED IN BOLD ARE NOT FOR REGISTRATION PURPOSES.

FIRST YEAR

CODE	SUBJECT	CREDIT
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FIRST SEMESTER

RMN201T	Research Methodology: Natural Sciences*	
RMN20XT	Research Methodology: Natural Sciences: (0,050) Water Care*	
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
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FIRST SEMESTER

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

TOTAL CREDITS FOR THE QUALIFICATION: **1,000**

SUBJECT/MODULE 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/module. On 01 August 2017, 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 (RSY20YT) **1 X 3-HOUR PAPER**
(*Subject custodian: Department of Mathematics and Statistics*)
A general introduction to research methodology, which includes the planning and execution of the research process, as well as the different types of research and research strategies. Basic principles of measurements and methods of data collection. (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)

