BACCALAUREUS TECHNOLOGIAE: CLINICAL TECHNOLOGY
Qualification code: BTCT01 - NQF Level 7

Campus where offered: Arcadia Campus (block-mode classes)
Last year of new intake: 2019
Teach-out (phase-out) date: 31 December 2022

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.

Key to asterisk:
* Subjects are also offered as a semester (S1). This is an interm arangement to accommodate students that did not meet the ruirements for Competency Based Assessment or who were unable to collect sufficient data for their projects in 2020 due to Covid-19.

ATTENDANCE

CODE	SUBJECT	CREDIT
One of the following subjects:		
CRD400T	Cardiology IV	(0,500)
CRD401T	Cardiology IV*	(0,500)
CRD400R	Cardiology IV (re-registration)	(0,000)
CRD401R	Cardiology IV (re-registration)*	(0,000)
CTC400T	Critical Care IV	(0,500)
CTC401T	Critical Care IV*	(0,500)
CTC400R	Critical Care IV (re-registration)	(0,000)
CTC401R	Critical Care IV (re-registration)*	(0,000)
NEP400T	Nephrology IV	(0,500)
NEP401T	Nephrology IV*	(0,500)
NEP400R	Nephrology IV (re-registration)	(0,000)
NEP401R	Nephrology IV (re-registration)*	(0,000)
NPH400T	Neurophysiology IV	(0,500)
NPH401T	Neurophysiology IV*	(0,500)
NPH400R	Neurophysiology IV (re-registration)	(0,000)
NPH401R	Neurophysiology IV (re-registration)*	(0,000)
PRF400T	Perfusion IV	(0,500)
PRF401T	Perfusion IV*	(0,500)
PRF400R	Perfusion IV (re-registration)	(0,000)
PRF401R	Perfusion IV (re-registration)*	(0,000)
PUL400T	Pulmonology IV	(0,500)
PUL401T	Pulmonology IV*	(0,500)
PUL400R	Pulmonology IV (re-registration)	(0,000)
PUL401R	Pulmonology IV (re-registration)*	(0,000)
RBY400T	Reproductive Biology IV	(0,500)
RBY401T	Reproductive Biology IV*	(0,500)
RBY400R	Reproductive Biology IV (re-registration)	(0,000)
RBY401R	Reproductive Biology IV (re-registration)*	(0,000)

FIRST SEMESTER

RMN201D	Research Methodology: Natural Sciences (compulsory subject)	(0,250)

SECOND SEMESTER

PMR101T	Principles of Management I (compulsory subject)	(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:

C

CARDIOLOGY IV (CRD400T/R) **PROJECT ASSESSMENT**
(Subject custodian: Department of Biomedical Sciences)
Specialised echocardiography. Mechanisms of arrhythmogenesis. Advanced electro-physiological studies. Interventional management of arrhythmias. Cardiac pharmacology. (Total tuition time: not available)

CRITICAL CARE IV (CTC400T/R) **PROJECT ASSESSMENT**
(Subject custodian: Department of Biomedical Sciences)
Pathophysiology. Treatment regimes. Nutrition. (Total tuition time: not available)

N

NEPHROLOGY IV (NEP400T/R) **PROJECT ASSESSMENT**
(Subject custodian: Department of Biomedical Sciences)
Anatomy of the renal system. Functions of the kidney, excretory function of the kidney. Renal processing of individual substances, water balance, micturition, renal function tests and abnormalities. (Total tuition time: not available)

NEUROPHYSIOLOGY IV (NPH400T/R) **PROJECT ASSESSMENT**
(Subject custodian: Department of Biomedical Sciences)
Electro-encephalogram, polysomnography, evoked potential recordings, electromyography. Neurography. (Total tuition time: not available)

P

PERFUSION IV (PRF400T/R) **PROJECT ASSESSMENT**
(Subject custodian: Department of Biomedical Sciences)
Physiological calculations of flow rates, physiological fluids. Effects of temperature changes, monitoring: pre-, intra- and post-cardiac drugs. Cardioplegia, perfusion of different organs, tissue changes, blood physiology, pathology of cardiopulmonary bypass on different organs, flow dynamics, blood conservation, different perfusions, paediatric perfusion. (Total tuition time: not available

PRINCIPLES OF MANAGEMENT I (PMR101T) **1 X 3-HOUR PAPER**
(Subject custodian: Department of Management and Entrepreneurship)
Managers and management, planning, organisation, leading, control, decision-making, motivation, leadership and supervision, communication, coordination, human resource management, financial management, entrepreneurship, marketing management, legal aspects of contracts, business plan. (Total tuition time: not available)

PULMONOLOGY IV (PUL400T/R) **PROJECT ASSESSMENT**
(Subject custodian: Department of Biomedical Sciences)
Exercise studies. Sleep studies. Advanced body plethysmographic studies. Control of ventilation studies. Industrial respiratory diseases. Allergies. Clinical trials and procedures. Bronchoscopic procedures. Nebulisation. Pulmonary-related procedures. Ventilation/perfusion studies with radio-active materials. (Total tuition time: not available)

R

REPRODUCTIVE BIOLOGY IV (RBY400T/R) **PROJECT ASSESSMENT**

(Subject custodian: Department of Biomedical Sciences)

Micro-manipulation. Cell culturing. Bioassays. Sperm function tests. Computer-assisted sperm motility.Fluorescence microscopy. Electron microscopy. Biochemical separation techniques, system quality controls. (Total tuition time: not available)

RESEARCH METHODOLOGY: NATURAL SCIENCES (RMN201D) **1 X 3-HOUR PAPER**

(Subject custodians: Departments of Biomedical Sciences)

Purpose, nature and meaning of research, basic structure of a research proposal, identify a research problem, literature review, research aims, objectives and hypotheses, research design types, sampling procedures, reliability and validity. Research budget and research funding. Types of quantitative data, basic principles of non-parametric tests, introduction to descriptive statistics. Probability (p-values) and hypothesis testing, introduction to inferential statistics (student's t-test, ANOVA and correlations). Introduction to epidemiological data. Interpretation of graphs and tables. Introduction to qualitative research (sampling, data-collection procedures, interviews, data analysis, literature control, trustworthiness, research approaches). Basic principles of research ethics. Dissemination of research findings. (Total tuition time: One full block week: ± 40 hours)