

3. DEPARTMENT OF BIOMEDICAL SCIENCES

3.1 BACHELOR OF HEALTH SCIENCE IN CLINICAL TECHNOLOGY

BHSci (Clinical Technology) - NQF Level 8 (496 credits)

Qualification type: Professional Bachelor's Degree

Qualification code: BPCL20

SAQA ID: 111828, CHE NUMBER: H/H16/E148CAN

Campus where offered: Arcadia Campus

REMARKS

a. *Admission requirement(s) and selection criteria:*

Entry into the programme is highly competitive due to the popularity of the programme and limited available spaces. The number of selected students is dependent on the approval and availability of clinical student posts at the participating and HPCSA-accredited training facilities. Please take note that all completed applications received within the published closing dates will be ranked. Only the top-ranked applicants will be selected according to the Student Enrolment Plan (SEP). Preference would be given to first-time entering students. Once a programme is full, a waiting list will be created to provide an opportunity for applicants to fill the places of those who did not register on time. Applicants will be informed of their status per an official letter from the Office of the Registrar, alternatively, they can check their application status on the TUT website, www.tut.ac.za.

• **FOR APPLICANTS WHO OBTAINED A NATIONAL DIPLOMA AT NQF LEVEL 6:**

Applicants who completed a relevant national diploma (at NQF Level 6) and who graduated and proceeded to work in industry can apply. Applicants should follow an articulation process in which exemption will be granted for 50% of the credits of the completed (and conferred) national diploma. Detailed information on the process to follow is available at the relevant academic department.

• **FOR APPLICANTS WHO OBTAINED A SENIOR CERTIFICATE BEFORE 2008:**

Admission requirement(s):

A Senior Certificate with a matriculation endorsement or equivalent qualification, with a D symbol at Higher Grade, or C symbols at Standard Grade for: English, Mathematics, Physical Science and Biology.

Selection criteria:

To be considered for this qualification, candidates must have an Admission Point Score (APS) of at least **24**.

• **FOR APPLICANTS WHO OBTAINED A NATIONAL SENIOR CERTIFICATE IN OR AFTER 2008:**

Admission requirement(s):

A National Senior Certificate or an equivalent qualification, with a bachelor's degree endorsement, or an equivalent qualification, with an achievement level of at least 4 for English (home language or first additional language), 4 for Mathematics or Technical Mathematics, 4 for Physical Sciences or Technical Sciences and 4 for Life Sciences.

Selection criteria:

To be considered for this qualification, candidates must have an Admission Point Score (APS) of at least **24** (excluding Life Orientation).



- **FOR APPLICANTS WITH PREVIOUS HIGHER EDUCATION EXPOSURE (COMPLETE OR INCOMPLETE HIGHER EDUCATION QUALIFICATIONS)**
 Preference would be given to first-time entering students, however, a maximum of 5% of the spaces available in the programme are available to make provision for the following:
 - Candidates who have registered for any relevant higher education qualification at this institution or any other higher education institution (a South African university or any international university), who have not completed the qualification.
 - Candidates who have completed a relevant higher education qualification at this institution or any other higher education institution (a South African university or any international university).
- b. *Assessment procedure(s):*
 Applicants will be invited for a TUT potential assessment test and depending on the results will be invited for an interview. Structured panel interviews are conducted by the full-time academic staff in the department of the Clinical Technology programme, as well as appointed qualified clinical technology part-time staff from industry to further streamline admission to the programme. The APS will contribute 40%, the TUT potential assessment will contribute 20% and the interview will contribute 40% of the final score.
- c. *Recognition of Prior Learning (RPL), equivalence and status:*
 Information on the rules and the process to follow is available in Chapter 30 of Students' Rules and Regulations (Part 1 of the Prospectus).
- d. *Intake for the qualification:*
 January only.
- e. *Presentation:*
 Day classes.
- f. *Minimum duration:*
 Four years.
- g. *Exclusion and readmission:*
 See Chapter 2 of Students' Rules and Regulations (Part 1 of the Prospectus).
- h. *Other requirements:*
 Vaccination against Hepatitis B is compulsory. Students are also encouraged to be vaccinated against COVID-19 before they can undertake clinical training at the hospitals.
- i. *Practicals:*
 100% attendance is compulsory for all practical classes. Students must pass the practical component of a subject to obtain admission to sit for the examination.
- j. *Personal protective equipment:*
 Specific safety wear is compulsory in the practical laboratories.
- k. *Registration as a student clinical technologist:*
 - Registration with the Health Professions Council of South Africa (HPCSA) as a student clinical technologist is compulsory.
 - International students will be allowed to register at the HPCSA only as student clinical technologist; and for the duration of the relevant qualification. However, they will not be able to register with the HPCSA as a clinical technologist.
- l. *Professional registration as a clinical technologist:*
 Registration as a qualified clinical technologist takes place four years after registration as a student clinical technologist, provided that the candidate completes the four academic years successfully. A student can only be registered with the HPCSA as a Graduate Clinical Technologist once the minimum HPCSA required number of clinical training hours are completed.

m. *Clinical training (third and fourth year):*

The Head of the Department reserves the right to place students in some of the seven categories after consultation with industry. Students will receive guidance in their second year on the available options for the following year. Clinical training must be completed at an accredited unit. During the training period, the student is subject to the jurisdiction of the training unit. The duration of the clinical training is two years, however, registration in certain categories may include an additional re-registration at the end of the fourth year of the practical module Clinical Science Practice IV (in category), in order to obtain the required training hours and amount of procedures for entrance into the final competency based assessments and completion of Work Integrated Learning.

CURRICULUM

Key to asterisks:

* Information does not correspond to SAQA registration certificate as per SAQA ID: 111828. (The deviations were approved by the Senate meeting of June 2024.)

FIRST YEAR

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
11P105X	Communication for Academic Purposes	(5)	(10)	
CLP105P	Clinical Professional Practice I	(5)	(12)	
CPL105X	Computer Literacy	(5)	(10)	
FLF125P	Foundation Life Skills (block mode)	(5)	(2)	
HAN105P	Human Anatomy I	(5)	(18)	
HPY105P	Human Physiology I	(5)	(18)	
MAS105P	Mathematics and Statistics*	(5)	(12)	

FIRST SEMESTER

CHS115P	Chemistry for Health Sciences I	(5)	(12)
PHS115P	Physics for Health Sciences I	(5)	(12)
RPL115P	Research Principles I	(5)	(6)

SECOND SEMESTER

MBH115P	Medical Law, Bio-Ethics and Human Rights I	(5)	(9)
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TOTAL CREDITS FOR THE FIRST YEAR: **121**

SECOND YEAR

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
BAP206P	Biomedical Apparatus II	(6)	(18)	Human Anatomy I Human Physiology I
CLC206P	Clinical Science Practice II	(6)	(12)	Clinical Professional Practice I Human Anatomy I Human Physiology I
CLP206P	Clinical Professional Practice II	(6)	(12)	Clinical Professional Practice I
HAN206P	Human Anatomy II	(6)	(18)	Human Anatomy I
HPY206P	Human Physiology II	(6)	(18)	Human Physiology I
PMY206P	Pharmacology II	(6)	(18)	Chemistry for Health Sciences I Human Anatomy I Human Physiology I
PTS206P	Pathophysiology II	(6)	(18)	Human Anatomy I Human Physiology I



FIRST SEMESTER

MBH216P	Medical Law, Bio-Ethics and Human Rights II	(6)	(9)	Medical Law, Bio-Ethics and Human Rights I
RPL216P	Research Principles II	(6)	(6)	Research Principles I
TOTAL CREDITS FOR THE SECOND YEAR:			129	

THIRD YEAR

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
CLP307P	Clinical Professional Practice III	(7)	(12)	Clinical Professional Practice II Medical Law, Bio-Ethics and Human Rights II
HAM307P	Health Care Administration and Management I	(7)	(12)	
MBH317P	Medical Law, Bio-Ethics and Human Rights III (first-semester module)	(7)	(9)	Medical Law, Bio-Ethics and Human Rights II
RPL307P	Research Principles III	(7)	(6)	Research Principles II

One of the following electives:

The prerequisite modules for all modules are: Human Anatomy II, Human Physiology II and Pathophysiology II.

CCA307P	Anatomy and Physiology III in: Critical Care	(7)	(18)	
CYA307P	Anatomy and Physiology III in: Cardiology	(7)	(18)	
NEA307P	Anatomy and Physiology III in: Nephrology	(7)	(18)	
NRA307P	Anatomy and Physiology III in: Neurophysiology	(7)	(18)	
PLA307P	Anatomy and Physiology III in: Pulmonology	(7)	(18)	
RDA307P	Anatomy and Physiology III in: Reproductive Biology	(7)	(18)	
VAA307P	Anatomy and Physiology III in: Cardiovascular Perfusion	(7)	(18)	

One of the following electives:

The prerequisite modules for all modules are: Human Anatomy II, Human Physiology II and Pathophysiology II.

CCB307P	Biomedical Apparatus III in: Critical Care	(7)	(24)	
CYB307P	Biomedical Apparatus III in: Cardiology	(7)	(24)	
NEB307P	Biomedical Apparatus III in: Nephrology	(7)	(24)	
NRB307P	Biomedical Apparatus III in: Neurophysiology	(7)	(24)	
PLB307P	Biomedical Apparatus III in: Pulmonology	(7)	(24)	
RDB307P	Biomedical Apparatus III in: Reproductive Biology	(7)	(24)	
VAB307P	Biomedical Apparatus III in: Cardiovascular Perfusion	(7)	(24)	

One of the following electives:

The prerequisite modules for all modules are: *Biomedical Apparatus II, Clinical Professional Practice II, Clinical Science Practice II, Human Anatomy II, Human Physiology II and Pathophysiology II.*

CCE307P	Clinical Science Practice III in: Critical Care	(7)	(18)
CYE307P	Clinical Science Practice III in: Cardiology	(7)	(18)
NEE307P	Clinical Science Practice III in: Nephrology	(7)	(18)
NRE307P	Clinical Science Practice III in: Neurophysiology	(7)	(18)
PLE307P	Clinical Science Practice III in: Pulmonology	(7)	(18)
RBE307P	Clinical Science Practice III in: Reproductive Biology	(7)	(18)
VAE307P	Clinical Science Practice III in: Cardiovascular Perfusion	(7)	(18)

One of the following electives:

The prerequisite modules for all modules are: *Human Anatomy II, Human Physiology II and Pathophysiology II.*

CCP307P	Pathophysiology III in: Critical Care	(7)	(18)
CYP307P	Pathophysiology III in: Cardiology	(7)	(18)
NEP307P	Pathophysiology III in: Nephrology	(7)	(18)
NRP307P	Pathophysiology III in: Neurophysiology	(7)	(18)
PLP307P	Pathophysiology III in: Pulmonology	(7)	(18)
RBP307P	Pathophysiology III in: Reproductive Biology	(7)	(18)
VAP307P	Pathophysiology III in: Cardiovascular Perfusion	(7)	(18)

plus one of the following first-semester electives:

CCH317P	Pharmacology III in: Critical Care	(7)	(6)	Pharmacology II
CYH317P	Pharmacology III in: Cardiology	(7)	(6)	Pharmacology II
NEH317P	Pharmacology III in: Nephrology	(7)	(6)	Pharmacology II
NRH317P	Pharmacology III in: Neurophysiology	(7)	(6)	Pharmacology II
PLH317P	Pharmacology III in: Pulmonology	(7)	(6)	Pharmacology II
RBH317P	Pharmacology III in: Reproductive Biology	(7)	(6)	Pharmacology II
VAH317P	Pharmacology III in: Cardiovascular Perfusion	(7)	(6)	Pharmacology II

TOTAL CREDITS FOR THE THIRD YEAR: **123**

FOURTH YEAR

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
CDG408P	Clinical Education and Mentoring I	(8)	(12)	Clinical Professional Practice III Clinical Science Practice III (<i>at least one of the electives</i>)
CLP408P	Clinical Professional Practice IV	(8)	(12)	Clinical Professional Practice III
HAM408P	Health Care Administration and Management II	(8)	(12)	Health Care Administration and Management I



MBH418P	Medical Law, Bio-Ethics and Human Rights IV (first-semester module)	(8)	(9)	Medical Law, Bio-Ethics and Human Rights III
PTS418P	Pathophysiology IV (first-semester module)	(8)	(12)	Anatomy and Physiology III (<i>at least one of the electives</i>) Pathophysiology III (<i>at least one of the electives</i>)
RPL408P	Research Principles IV and Project	(8)	(30)	Research Principles III

plus one of the following electives that aligns with elective completed in the third year:

CCB408P	Biomedical Apparatus IV in: Critical Care	(8)	(12)	Biomedical Apparatus III in: Critical Care
CYB408P	Biomedical Apparatus IV in: Cardiology	(8)	(12)	Biomedical Apparatus III in: Cardiology
NEB408P	Biomedical Apparatus IV in: Nephrology	(8)	(12)	Biomedical Apparatus III in: Nephrology
NRB408P	Biomedical Apparatus IV in: Neurophysiology	(8)	(12)	Biomedical Apparatus III in: Neurophysiology
PLB408P	Biomedical Apparatus IV in: Pulmonology	(8)	(12)	Biomedical Apparatus III in: Pulmonology
RDB408P	Biomedical Apparatus IV in: Reproductive Biology	(8)	(12)	Biomedical Apparatus III in: Reproductive Biology
VAB408P	Biomedical Apparatus IV in: Cardiovascular Perfusion	(8)	(12)	Biomedical Apparatus III in: Cardiovascular Perfusion

plus one of the following electives that aligns with elective completed in the third year:

CCE408P	Clinical Science Practice IV in: Critical Care	(8)	(24)	Clinical Science Practice III in: Critical Care
CCE408R	Clinical Science Practice IV in: Critical Care (re-registration)	(8)	(0)	
CCE418R	Clinical Science Practice IV in: Critical Care (re-registration, first-semester module)	(8)	(0)	
CYE408P	Clinical Science Practice IV in: Cardiology	(8)	(24)	Clinical Science Practice III in: Cardiology
CYE408R	Clinical Science Practice IV in: Cardiology (re-registration)	(8)	(0)	
CYE418R	Clinical Science Practice IV in: Cardiology (re-registration, first-semester module)	(8)	(0)	
NEE408P	Clinical Science Practice IV in: Nephrology	(8)	(24)	Clinical Science Practice III in: Nephrology
NEE408R	Clinical Science Practice IV in: Nephrology (re-registration)	(8)	(0)	
NEE418R	Clinical Science Practice IV in: Nephrology (re-registration, first-semester module)	(8)	(0)	
NRE408P	Clinical Science Practice IV in: Neurophysiology	(8)	(24)	Clinical Science Practice III in: Neurophysiology
NRE408R	Clinical Science Practice IV in: Neurophysiology (re-registration)	(8)	(0)	
NRE418R	Clinical Science Practice IV in: Neurophysiology (re-registration, first-semester module)	(8)	(0)	
PLE408P	Clinical Science Practice IV in: Pulmonology	(8)	(24)	Clinical Science Practice III in: Pulmonology

PLE408R	Clinical Science Practice IV in: Pulmonology (re-registration)	(8)	(0)	
PLE418R	Clinical Science Practice IV in: Pulmonology (re-registration, first- semester module)	(8)	(0)	
RBE408P	Clinical Science Practice IV in: Reproductive Biology	(8)	(24)	Clinical Science Practice III in: Reproductive Biology
RBE408R	Clinical Science Practice IV in: Reproductive Biology (re-registration)	(8)	(0)	
RBE418R	Clinical Science Practice IV in: Reproductive Biology (re-registration, first-semester module)	(8)	(0)	
VAE408P	Clinical Science Practice IV in: Cardiovascular Perfusion	(8)	(24)	Clinical Science Practice III in: Cardiovascular Perfusion
VAE408R	Clinical Science Practice IV in: Cardiovascular Perfusion (re-registration)	(8)	(0)	
VAE418R	Clinical Science Practice IV in: Cardiovascular Perfusion (re-registration, first- semester module)	(8)	(0)	
TOTAL CREDITS FOR THE THIRD YEAR:			123	
TOTAL CREDITS FOR THE QUALIFICATION:			496	

