POSTGRADUATE DIPLOMA IN BIOTECHNOLOGY

PGDip (Biotechnology) - NQF Level 8 (120 credits)

Qualification code: PDBI22

SAQA ID: 101898, CHE NUMBER: H/H16/E052CAN

Campus where offered: Arcadia Campus

REMARKS

a. *Admission requirement(s):*
An Advanced Diploma in Biotechnology, **or** a Baccalaureus Technologiae: Biotechnology, **or** a Bachelor's degree in Biotechnology or Microbiology, **or** an equivalent qualification at NQF Level 7 with 120 credits. Preference will be given to applicants with an average of 60% or more in the previous qualification.

Holders of any other equivalent South African or international qualification may also be considered, see Chapter 1 of Students' Rules and Regulations.

b. *Selection criteria:*
Admission is subject to selection. Prospective students will be evaluated based on the academic progress in the previous qualification and/or work experience.

All completed applications received within the published due dates will be ranked. After consideration of the Departmental Student Enrolment Plan, only the top ranking applicants will be selected. Once a programme is full, a waiting list will be in place to provide an opportunity for applicants to fill places of those who did not register on time. Applicants will be informed of their status per official letter from the Office of the Registrar, alternatively, they can check their application status on the TUT website, www.tut.ac.za.

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

d. *Intake for the qualification:*
January only.

e. *Presentation:*
Block-mode classes offered over two years.

f. *Minimum duration:*
A minimum of one or two years (depending on the programme offering).

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

h. *Re-registration:*
A student may re-register for the module Postgraduate Research Project only with the permission of the Head of the Department. The purpose of the re-registration is to provide students with an opportunity to complete the project only, and not to redo it, should they fail the module.

CURRICULUM

ATTENDANCE 2023

CODE	MODULE	NQF-L	CREDIT
AMI108G	Applied Molecular Biology	(8)	(36)

FIRST SEMESTER

BIM118G	Biometrics	(8)	(12)
RET118G	Research Methodology and Ethics	(8)	(12)

TOTAL CREDITS FOR THE YEAR: **60**

ATTENDANCE 2024

CODE	MODULE	NQF-L	CREDIT
PBI108G	Postgraduate Research Project	(8)	(24)
PBI118R	Postgraduate Research Project (re-registration) (first-semester module, see paragraph h)	(8)	(0)

FIRST SEMESTER

BII118G	Bioinformatics	(8)	(18)

SECOND SEMESTER

BIE118G	Bioethics	(8)	(18)

TOTAL CREDITS FOR THE YEAR: **60**

TOTAL CREDITS FOR QUALIFICATION: **120**

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 module. At time of publication, the syllabus content was defined as follows:

A

APPLIED MOLECULAR BIOLOGY (AMI108G) **CONTINUOUS ASSESSMENT**

(Module custodian: Department of Biotechnology and Food Technology)

This module provides the students with the concepts and principles of DNA typing and profiling in forensic, animal and plant genetics. Upon completion, the student will be able to appreciate importance and apply the knowledge of Molecular Biology and to understand the applications thereof. (Total tuition time: 360 hours)

B

BIOETHICS (BIE118G) **CONTINUOUS ASSESSMENT**

(Module custodian: Department of Biotechnology and Food Technology)

This module prepares the student to undertake advanced reflection and critical thinking by applying and practicing ethical issues relevant to this field. The student should understand the ethical issues and define, discuss and critically analyse ethical issues in different areas of Biotechnology such as research, medical, agriculture, genetics, animal and pharmaceutical industry. (Total tuition time: 180 hours)

BIOINFORMATICS (BII118G) **CONTINUOUS ASSESSMENT**

(Module custodian: Department of Biotechnology and Food Technology)

This module guides the student in the understanding and usage of computer programmes to address problems specific to the field of Biotechnology, essentially a computational area of molecular biology. The student will be trained to apply the skills to routine tasks regarding molecular biology. (Total tuition time: 180 hours)

BIOMETRICS (BIM118G) **CONTINUOUS ASSESSMENT**

(Module custodian: Department of Biotechnology and Food Technology)

This module prepares the student to function effectively in a scientific environment and apply the key terms and techniques in the field of statistics (descriptive statistics and statistical inference). Descriptive statistics include graphical techniques and numerical descriptive measures to summarise and present the data to yield useful information, allowing persons to make decisions and recommendations. Statistical inference includes Process of making estimations, predictions and decisions about a population based on sample data. (Total tuition time: 120 hours)

P

POSTGRADUATE RESEARCH PROJECT (PBI108G, PBI118R) **PROJECT ASSESSMENT**

(Module custodian: Department of Biotechnology and Food Technology)

This module strengthens and deepens the range of skills and knowledge needed for research. The scope of knowledge within this module includes (but not limited to): The application of research statistics; Report writing skills; Laboratory methods; Time management; Ethics; and Research methodology to develop advanced reflection and critical thinking skills by applying and practicing research methods relevant to this field of study. (Total tuition time: 240 hours)

R

RESEARCH METHODOLOGY AND ETHICS (RET118G) **CONTINUOUS ASSESSMENT**

(Module custodian: Department of Biotechnology and Food Technology)

This module prepares the student to work effectively in a scientific research environment and apply the key terms, rules, theories, methodology and techniques utilised in the field of Biotechnology, ethically and professionally. (Total tuition time: 120 hours)