



**Tshwane University
of Technology**

We empower people

PROSPECTUS ADDENDUM 2/2011



2011 PROSPECTUS

ADDENDUM 2/2011

ISSN 0258-7343

TSHWANE UNIVERSITY OF TECHNOLOGY

PARTS OF THE PROSPECTUS

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PLEASE NOTE

1. Although the information in this Prospectus has been compiled as accurately as possible, the Council accepts no responsibility for any inaccuracies in this publication. This Prospectus is valid for 2011 only.
2. The "overview of syllabus" is only an outline of the syllabus of a subject. The complete syllabus of a subject appears in the subject study guide.
3. The campus indicated is subject to change and confirmation.
4. Prospective students will not be admitted to any qualification without prior evaluation.
5. The closing date for applications for admission to first-semester and year courses is 15 August of the preceding year, except for certain courses of which the closing date is 15 June. The closing date for second-semester courses is 15 May of the year concerned.

THE INDICATED APPLICATION FEES MUST ACCOMPANY ALL APPLICATIONS.

Important:

TUT admission requirements for entry-level programmes adhere to national legislation and therefore the following are required:

- BEd degrees: at least four subjects at a performance level 4.
- National Diplomas: at least four subjects at performance level 3.
- Acceptance is subject to available capacity according to the student Enrolment Plan (SEP).

Please verify specific and additional requirements per programme as indicated in the prospectus.

ACCEPTANCE IS SUBJECT TO AVAILABLE CAPACITY ACCORDING TO THE STUDENT ENROLMENT PLAN (SEP)

Alternative and international qualifications (e.g. HIGSCE, IGCSE, NSSCA&O Level, IB Higher and Standard Level) will be assessed on the equivalent basis by the South African Qualifications Authority, and a full or conditional exemption certificate will be issued. This exemption certificate is a prerequisite for all students who want to enrol for undergraduate studies. The Tshwane University of Technology cannot obtain this certificate on your behalf. Candidates may also apply for recognition of prior learning at the Office of the Registrar. The specific relevant documentation will be requested from these applicants, and these cases will be handled on an individual basis. Candidates from private schools in South Africa (who did not write any of the examinations mentioned above) may apply to the Office of the Registrar for admission via the Senate's discretionary route.

ENQUIRIES

Contact Centre

Tel: 086 1102 421

Fax: 086 110 2421

Admission Enquiries

Tel: 012 382 5750

The Registrar

Private Bag X680

PRETORIA 0001

Tel: 012 382 5911

Fax: 012 382 5114

ARCADIA CAMPUS

Private Bag X680

PRETORIA 0001

Tel: 012 382 5911

175 Nelson Mandela Drive

PRETORIA

Fax: 012 382 5114

ARTS CAMPUS

Private Bag X680

PRETORIA 0001

Tel: 012 382 5911

Cnr. Du Toit and Edmund streets

PRETORIA

Fax: 012 382 5114

EMALAHLENI CAMPUS

The Campus Director

PO Box 3211

EMALAHLENI 1035

Tel: 013 653 3100

19 Swartbos Avenue

EMALAHLENI

Fax: 013 653 3101

GA-RANKUWA CAMPUS

Private Bag X680

PRETORIA 0001

Tel: 012 382 0500

2827, Zone 2, Botsi Street

GA-RANKUWA

Fax: 012 382 0814

MBOMBELA CAMPUS (NELSPRUIT CAMPUS)

The Campus Director

Private Bag X11312

MBOMBELA 1200

Tel: 013 745 3500/3603

Madiba Drive

MBOMBELA

Fax: 013 745 3512

POLOKWANE CAMPUS

The Campus Director

Private Bag X9496

POLOKWANE 0700

Tel: 015 287 0700

Cnr. Market and Excelsior streets

POLOKWANE

Fax: 015 297 7609

PRETORIA CAMPUS

Private Bag X680

PRETORIA 0001

Tel: 012 382 5911

Staatsartillerie Road

PRETORIA WEST

Fax: 012 382 5114

SOSHANGUVE CAMPUS

Private Bag X680

PRETORIA 0001

Tel: 012 382 9000

2 Aubrey Matlala Road, Block K

SOSHANGUVE

Fax: 012 382 0966

Enquiries relating to fees:

The Chief Financial Officer

Private Bag X680

PRETORIA 0001

Tel: 086 1102 422

Fax: 012 382 5701



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FACULTY OF SCIENCE

The following are decisions approved by Senate. Due to time constraints these decisions could not be reflected in the Faculty Prospectus (Part 7) of 2011.

1. DEPARTMENT OF BIOTECHNOLOGY AND FOOD TECHNOLOGY

1.1 NATIONAL DIPLOMA: BIOTECHNOLOGY (EXTENDED CURRICULUM PROGRAMME WITH FOUNDATION PROVISION)

(Pending final approval – DHET)

Qualification code: NDBTF1

REMARKS

a. Admission requirement(s) and selection criteria:

• FOR STUDENTS WHO OBTAINED A SENIOR CERTIFICATE BEFORE 2008:

Admission requirement(s): A Senior Certificate or an equivalent qualification, with E symbols at the Higher Grade or E symbols at the Standard Grade for English, Mathematics and Physical Sciences.

Recommended subject(s): Biology.

Selection criteria: Candidates who meet these minimum requirements will be considered for admission Prospective students currently in Grade 12 will be provisionally selected according to their Grade 11 results.

• FOR STUDENTS WHO HAVE OBTAINED A NATIONAL SENIOR CERTIFICATE SINCE 2008:

Admission requirement(s): A National Senior Certificate or an equivalent qualification, with English, Mathematics and Physical Sciences.

Recommended subject(s): Life Sciences.

Selection criteria: Admission Points Score (APS):

SUBJECT REQUIREMENTS	MINIMUM PERFORMANCE LEVEL/SCORE
Specifically required subjects:	
English – home language or first additional language	4
Mathematics	4
Physical Sciences	4
Additional subjects (excluding Life Orientation):	
Any three other subjects with a final score of 9	
TOTAL APS SCORE:	21

Assessment procedures: Candidates who meet these minimum requirements will be considered for admission.

b. Minimum duration: Four years.

c. Presentation and campus: Arcadia Campus (day classes).

d. Intake for the qualification: January only.

- e. Readmission: See Chapter 3 of Students' Rules and Regulations.
- f. Recognition: Students who were registered for qualification NDBTF0 and who are still in the process of completing it will be channeled (re-registered) to this programme. Recognition will be granted for all subjects passed.
- g. Practicals: It is compulsory to attend 100% of the practicals. Students must pass the practical component of a subject to obtain permission to sit for the examination.
- h. Textbooks: Textbooks and other educational material will be required.
- i. Safety wear: Specific safety wear is compulsory (where applicable), and must be purchased by the student. The approximate cost is R700.
- j. Projects and assignments: Students will be expected to undertake projects and assignments in some of the subjects.
- k. Experiential Learning I and II: See Chapter 5 of Students' Rules and Regulations.
- l. Subject credits: Subject credits are shown in brackets after each subject. The total number of credits required for this qualification is 3,500.

SUBJECTS PRINTED IN BOLD ARE NOT FOR REGISTRATION PURPOSES

FIRST YEAR

CODE	SUBJECT	CREDIT	PREREQUISITE SUBJECT(S)
FPCLS01	Foundation Chemistry: Life Sciences	(0,200)	
FPMLS01	Foundation Mathematics: Life Sciences	(0,180)	
FPPLS01	Foundation Physics: Life Sciences	(0,200)	

FIRST SEMESTER

FPBIO01	Foundation Biology	(0,100)
FPENG02	Foundation English	(0,100)

SECOND SEMESTER

MBI101T	Microbiology I	(0,150)	Foundation Biology
FPLSK02	Foundation Life Skills	(0,072)	

TOTAL CREDITS FOR THE FIRST YEAR: **1,002**

SECOND YEAR

FIRST SEMESTER

MBI241T	Microbiology II	(0,130)	Microbiology I
PTM101T	Process Technology and Management I		
PTM10YT	Process Technology and Management: Computer Skills I	(0,040)	Foundation Life Sciences
SSH101T	Sanitation, Safety and Hygiene I	(0,110)	
TOTAL CREDITS FOR THE SEMESTER:		0,280	

SECOND SEMESTER

ACI201T	Analytical Chemistry: Biological II	(0,126)	Foundation Chemistry: Life Sciences
BCH221B	Biochemistry II	(0,130)	Foundation Chemistry: Life Sciences
PTM101T	Process Technology and Management I		
PTM10XT	Process Technology and Management: Theory I	(0,070)	Foundation Mathematics: Life Sciences Foundation Physics: Life Sciences

TOTAL CREDITS FOR THE SEMESTER: 0,326

TOTAL CREDITS FOR THE SECOND YEAR: **0,606**

THIRD YEAR

FIRST SEMESTER

DIR201T	Disease and Immune Response II	(0,125)	Microbiology I
FMT201T	Fermentation Technology II	(0,125)	Microbiology I
MBB301T	Microbial Biochemistry III	(0,125)	Biochemistry II

TOTAL CREDITS FOR THE SEMESTER: 0,375

SECOND SEMESTER

ALB301T	Analytical Biochemistry III	(0,127)	Analytical Chemistry: Biological II
BPS301T	Bioprocessing III	(0,125)	Fermentation Technology II
FMB311T	Food Microbiology III	(0,140)	Microbiology II
MBG301T	Microbiology: Biological III	(0,125)	Microbiology II

TOTAL CREDITS FOR THE SEMESTER: 0,517

TOTAL CREDITS FOR THE THIRD YEAR: **0,892**

FOURTH YEAR

On completion of all the above subjects. If a student has one outstanding subject in the third year, such a case will be reviewed and permission might be granted in collaboration with the specific employer.

FIRST SEMESTER

EXP1BIO	Experiential Learning I	(0,500)	
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SECOND SEMESTER

EXP2BIO	Experiential Learning II	(0,500)	Experiential Learning I
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TOTAL CREDITS FOR THE FOURTH YEAR: **1,000**

1.2 NATIONAL DIPLOMA: BIOTECHNOLOGY

Qualification code: NDBT03

NO NEW REGISTRATIONS FOR THIS QUALIFICATION ARE ACCEPTED AS FROM 2012. STUDENTS WHO ARE CURRENTLY REGISTERED FOR THIS QUALIFICATION HAVE UNTIL 2016 TO OBTAIN IT, SUBJECT TO THE STIPULATIONS OF REGULATION 3.1.1 ON THE MAXIMUM DURATION OF STUDY.

Phase-out date: 31 December 2016

Campus where offered:
Arcadia Campus (Day classes).

SUBJECTS PRINTED IN BOLD ARE NOT FOR REGISTRATION PURPOSES

FIRST YEAR

FIRST SEMESTER

CODE	SUBJECT	CREDIT	PREREQUISITE SUBJECT(S)
CAL101T	Calculations and Statistics	(0,080)	
CHE141C	Chemistry IB	(0,150)	
PHU161C	Physics IB	(0,120)	
SSH101T	Sanitation, Safety and Hygiene I	(0,110)	
TOTAL CREDITS FOR THE SEMESTER:		0,460	

SECOND SEMESTER

ACI201T	Analytical Chemistry: Biological II	(0,130)	Chemistry IB
BCH221B	Biochemistry II	(0,130)	Chemistry IB
MBI101T	Microbiology I	(0,150)	
PTM101T	Process Technology and Management I		
PTM10XT	Process Technology and Management: Theory I	(0,070)	
PTM10YT	Process Technology and Management: Computer Skills I	(0,040)	
TOTAL CREDITS FOR THE SEMESTER:		0,520	
TOTAL CREDITS FOR THE FIRST YEAR:		0,980	

SECOND YEAR

FIRST SEMESTER

DIR201T	Disease and Immune Response II	(0,125)	Microbiology I
FMT201T	Fermentation Technology II	(0,125)	Microbiology I
MBB301T	Microbial Biochemistry III	(0,125)	Biochemistry II
MBI241T	Microbiology II	(0,130)	Microbiology I
TOTAL CREDITS FOR THE SEMESTER:		0,505	

SECOND SEMESTER

ALB301T	Analytical Biochemistry III	(0,125)	Analytical Chemistry: Biological II
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BPS301T	Bioprocessing III	(0,125)	Fermentation Technology II
FMB311T	Food Microbiology III	(0,140)	Microbiology II
MBG301T	Microbiology: Biological III	(0,125)	Microbiology II

TOTAL CREDITS FOR THE SEMESTER: 0,515

TOTAL CREDITS FOR THE SECOND YEAR: **1,020**

THIRD YEAR

On completion of all the above subjects.

FIRST OR SECOND SEMESTER

EXP1BIO	Experiential Learning I	(0,500)	
EXP2BIO	Experiential Learning II	(0,500)	Experiential Learning I

TOTAL CREDITS FOR THE THIRD YEAR: **1,000**

1.3 NATIONAL DIPLOMA: FOOD TECHNOLOGY (EXTENDED CURRICULUM PROGRAMME WITH FOUNDATION PROVISION)
(Pending final approval – DHET)
Qualification code: NDFTF1

REMARKS

a. Admission requirement(s) and selection criteria:

- FOR STUDENTS WHO OBTAINED A SENIOR CERTIFICATE BEFORE 2008:**

Admission requirement(s): A Senior Certificate or an equivalent qualification, with E symbols at the Higher Grade or E symbols at the Standard Grade for English, Mathematics and Physical Sciences.

Recommended subject(s): Biology.

Selection criteria: Candidates who meet these minimum requirements will be considered for admission. Prospective students currently in Grade 12 will be provisionally selected according to their Grade 11 results.

- FOR STUDENTS WHO HAVE OBTAINED A NATIONAL SENIOR CERTIFICATE SINCE 2008:**

Admission requirement(s): A National Senior Certificate or an equivalent qualification, with English, Mathematics and Physical Sciences.

Recommended subject(s): Life Sciences.

Selection criteria:

Admission Points Score (APS):

SUBJECT REQUIREMENTS	MINIMUM PERFORMANCE LEVEL/SCORE
Specifically required subjects:	
English – home language or first additional language	4
Mathematics	4
Physical Sciences	4
Additional subjects (excluding Life Orientation):	
Any three other subjects with a final score of 9	
TOTAL APS SCORE:	21

Assessment procedures: Candidates who meet these minimum requirements will be considered for admission.

- b. Minimum duration: Four years.
- c. Presentation and campus: Arcadia Campus (day classes).
- d. Intake for the qualification: January only.
- e. Readmission: See Chapter 3 of Students' Rules and Regulations.
- f. Recognition: Students who were registered for qualification NDBTF0 and who are still in the process of completing it will be channeled (re-registered) to this programme. Recognition will be granted for all subjects passed.
- g. Practicals: It is compulsory to attend 100% of the practicals. Students must pass the practical component of a subject to obtain permission to sit for the examination.
- h. Textbooks: Textbooks and other educational material may be required.
- i. Safety wear: Specific safety wear is compulsory (where applicable), and must be purchased by the student. The approximate cost is R700.
- j. Projects and assignments: Students will be expected to undertake projects and assignments in some of the subjects.
- k. Experiential Learning I and II: See Chapter 5 of Students' Rules and Regulations.
- l. Subject credits: Subject credits are shown in brackets after each subject. The total number of credits required for this qualification is 3,500.

SUBJECTS PRINTED IN BOLD ARE NOT FOR REGISTRATION PURPOSES

FIRST YEAR

CODE	SUBJECT	CREDIT	PREREQUISITE SUBJECT(S)
FPCLS01	Foundation Chemistry: Life Sciences	(0,200)	
FPMLS01	Foundation Mathematics: Life Sciences	(0,180)	
FPPLS01	Foundation Physics: Life Sciences	(0,200)	

FIRST SEMESTER

FPBIO01	Foundation Biology	(0,100)
FPENG02	Foundation English	(0,100)

SECOND SEMESTER

FTN111T	Food Technology I	(0,150)
FPLSK02	Foundation Life Skills	(0,072)

TOTAL CREDITS FOR THE FIRST YEAR: **1,002**

SECOND YEAR

FIRST SEMESTER

FPE101T	Food Process Engineering I		
FPE10YT	Food Process Engineering: Computer Skills I	(0,075)	Foundation Life Skills
FQA101T	Food Quality Assurance I	(0,100)	Food Technology I
FTN211T	Food Technology II	(0,160)	Food Technology I Foundation English

TOTAL CREDITS FOR THE SEMESTER: 0,335

SECOND SEMESTER

ACI201T	Analytical Chemistry: Biological II	(0,125)	Foundation Chemistry: Life Sciences
BCH221B	Biochemistry II	(0,125)	Foundation Chemistry: Life Sciences
MBI101T	Microbiology I	(0,148)	Foundation Biology

TOTAL CREDITS FOR THE SEMESTER: 0,398

TOTAL CREDITS FOR THE SECOND YEAR: **0,733**

THIRD YEAR

FIRST SEMESTER

FBI301T	Food Biochemistry III	(0,140)	Biochemistry II
MBI241T	Microbiology II	(0,125)	Microbiology I

TOTAL CREDITS FOR THE SEMESTER: 0,265

SECOND SEMESTER

FDC301T	Food Production III	(0,125)	Food Biochemistry III Food Technology II Microbiology II Microbiology II
FMB311T	Food Microbiology III	(0,140)	
FPE101T	Food Process Engineering I		
FPE10XT	Food Process Engineering: Food Engineering I	(0,075)	Foundation Mathematics: Life Sciences Foundation Physics: Life Sciences Food Technology II
FTN301T	Food Technology III	(0,160)	

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE THIRD YEAR: **0,765**

FOURTH YEAR

FIRST SEMESTER

On completion of all the above subjects. If a student has one outstanding subject in the third year, such a case will be reviewed and permission might be granted in collaboration with the specific employer.

EXP1FDT Experiential Learning I (0,500)

TOTAL CREDITS FOR THE SEMESTER: 0,500

SECOND SEMESTER

EXP2FDT Experiential Learning II (0,500) Experiential Learning I

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE FOURTH YEAR: **1,000**

1.4 NATIONAL DIPLOMA: FOOD TECHNOLOGY

Qualification code: NDFT03

NO NEW REGISTRATIONS FOR THIS QUALIFICATION ARE ACCEPTED AS FROM 2012. STUDENTS WHO ARE CURRENTLY REGISTERED FOR THIS QUALIFICATION HAVE UNTIL 2016 TO OBTAIN IT, SUBJECT TO THE STIPULATIONS OF REGULATION 3.1.1 ON THE MAXIMUM DURATION OF STUDY.

Phase-out date: 31 December 2016

Campus where offered:
Arcadia Campus (Day classes).

Key to asterisks:

* Information does not correspond to information in Report 151.
(Deviations approved by the Senate in August 2005.)

SUBJECTS PRINTED IN BOLD ARE NOT FOR REGISTRATION PURPOSES

FIRST YEAR

FIRST SEMESTER

CODE	SUBJECT	CREDIT	PREREQUISITE SUBJECT(S)
CAL101T	Calculations and Statistics	(0,080)	
CHE141C	Chemistry IB	(0,147)*	
FPE101T	Food Process Engineering I		
FPE10YT	Food Process Engineering: Computer Skills I	(0,075)	
PHU161C	Physics IB	(0,125)	
TOTAL CREDITS FOR THE SEMESTER:		0,427	

SECOND SEMESTER

ACI201T	Analytical Chemistry: Biological II	(0,125)	Chemistry IB
BCH221B	Biochemistry II	(0,125)	Chemistry IB
FTN111T	Food Technology I	(0,150)	
MBI101T	Microbiology I	(0,148)	
TOTAL CREDITS FOR THE SEMESTER:		0,548	
TOTAL CREDITS FOR THE FIRST YEAR:		0,975	

SECOND YEAR

FIRST SEMESTER

FBI301T	Food Biochemistry III	(0,140)	Biochemistry II
FQA101T	Food Quality Assurance I	(0,100)	Food Technology I
FTN211T	Food Technology II	(0,160)	Food Technology I
MBI241T	Microbiology II	(0,125)	Microbiology I

TOTAL CREDITS FOR THE SEMESTER: 0,525

SECOND SEMESTER

FDC301T	Food Production III	(0,125)	Food Biochemistry III Food Technology II Microbiology II Microbiology II
FMB311T	Food Microbiology III	(0,140)	
FPE101T	Food Process Engineering I		
FPE10XT	Food Process Engineering: Food Engineering I	(0,075)	Calculations and Statistics Physics IB
FTN301T	Food Technology III	(0,160)	Food Technology II

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE SECOND YEAR: **1,025**

THIRD YEAR

On completion of all first- and second-year subjects.

FIRST OR SECOND SEMESTER

EXP1FDT	Experiential Learning I	(0,500)	
EXP2FDT	Experiential Learning II	(0,500)	Experiential Learning I

TOTAL CREDITS FOR THE THIRD YEAR: **1,000**

1.5 SUBJECT INFORMATION

Syllabus content subject to change to accommodate industry changes. These are only the syllabi of the new subjects. Please consult the Faculty Prospectus (Part 7) for information pertaining to the rest of the subjects.

SUBJECT NAME: FOUNDATION CHEMISTRY: LIFE SCIENCES

SUBJECT CODE: FPCLS01

EVALUATION METHOD: 1 X 3-HOUR PAPER

TOTAL TUITION TIME: ± 160 hours

OVERVIEW OF SYLLABUS:

Scientific methodology and its use in discovering chemistry. Numbers in chemistry. The use of SI units. Matter. Atomic structure. Compounds in chemistry. The mole concept and chemical calculations. The electronic structure of the atom and electronic configurations within the periodic table. Chemical bonding. The states of matter and the binding forces within matter. Basic concepts of the gas laws. Solutions in chemistry. Acids, bases and salts. Oxidation and reduction and the balancing of equations. Organic chemistry and the chemistry of life.

SUBJECT NAME: FOUNDATION LIFE SKILLS
SUBJECT CODE: FPLSK02
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours

OVERVIEW OF SYLLABUS:

This subject was designed to assist a student to adapt academically and socially to student life. It will include topics such as: time-management, self motivation, managing stress, study methods as well as laboratory safety.

SUBJECT NAME: FOUNDATION MATHEMATICS: LIFE SCIENCES
SUBJECT CODE: FPMLS01
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 120 hours

OVERVIEW OF SYLLABUS:

Arithmetic. Graphs. Functions. Basic algebra. Trigonometry. Differentiation. Mensuration. Basic statistics.

SUBJECT NAME: FOUNDATION PHYSICS: LIFE SCIENCES
SUBJECT CODE: FPPLS01
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 160 hours

OVERVIEW OF SYLLABUS:

Introduction to physics. Basic mathematics for physics. Measurements. Mechanics. Heat. Waves, sound and optics. Magnetism and electricity. Electromagnetism. Atomic and nuclear physics.

2. DEPARTMENT OF CHEMISTRY

2.1 NATIONAL DIPLOMA: ANALYTICAL CHEMISTRY (EXTENDED CURRICULUM PROGRAMME WITH FOUNDATION PROVISION) (Pending final approval – DHET) Qualification code: NDACF1

REMARKS

a. Admission requirement(s) and selection criteria:

- **FOR STUDENTS WHO OBTAINED A SENIOR CERTIFICATE BEFORE 2008:**

Admission requirement(s): A Senior Certificate or an equivalent qualification with an E symbol at the Standard Grade for Mathematics, Physical Sciences and English.

Selection criteria: Prospective students must obtain a minimum score of 60 in the Potential Assessment battery (test) carried out by TUT's Department of Student Counselling.

- **FOR STUDENTS WHO HAVE OBTAINED A NATIONAL SENIOR CERTIFICATE SINCE 2008:**
See qualification NDAC03.

b. Minimum duration: Three and a half years.

c. Presentation and campus: Arcadia Campus (day classes).

d. Intake for this qualification: January only.

e. Readmission: See Chapter 3 of Students' Rules and Regulations.

- f. Recognition: Students who were registered for qualification NDACF0 and who are still in the process of completing it will be channeled (re-registered) to this programme. Recognition will be granted for all subjects passed.
- g. Practicals: It is compulsory for students to attend 100% of the practicals, and the student must pass the practical component of a subject to be admitted to the examination.
- h. Textbooks: Textbooks and other educational material will be required.
- i. Safety wear: Specific safety wear is compulsory (where applicable), and students must purchase it themselves.
- j. Subject credits: Subject credits are shown in brackets after each subject. The total number of credits required for this qualification is 3,500.

SEMESTER SUBJECTS ARE OFFERED IN BOTH SEMESTERS

FIRST YEAR

CODE	SUBJECT	CREDIT	PREREQUISITE SUBJECT(S)
FPCHE04	Foundation Chemistry	(0,225)	
FPMAT06	Foundation Mathematics	(0,183)	
FPPHU05	Foundation Physics	(0,184)	

FIRST SEMESTER

FPENG02	Foundation English	(0,100)
FPLSK02	Foundation Life Skills	(0,100)

SECOND SEMESTER

ANC101T	Analytical Chemistry I	(0,125)	Foundation Chemistry
CSK101B	Computer Skills I	(0,083)	

TOTAL CREDITS FOR THE FIRST YEAR: **1,000**

SECOND YEAR

FIRST SEMESTER

AHP201T	Analytical Chemistry: Practical II	(0,100)	Analytical Chemistry I Computer Skills I Foundation Chemistry Foundation Mathematics
ANC251T	Analytical Chemistry II	(0,100)	Analytical Chemistry I Computer Skills I Foundation Chemistry Foundation Mathematics
ICH231T	Inorganic Chemistry II	(0,100)	Foundation Chemistry Foundation English
OCH221T	Organic Chemistry II	(0,100)	Foundation Chemistry Foundation English
PCB221T	Physical Chemistry II	(0,100)	Foundation Chemistry Foundation English Foundation Mathematics
TOTAL CREDITS FOR THE SEMESTER:		0,500	Foundation Physics

SECOND SEMESTER

ENC201T	Environmental Chemistry II	(0,083)	Foundation Chemistry Foundation Life Skills Computer Skills I
ICH321T	Inorganic Chemistry III	(0,139)	Foundation Life Skills Inorganic Chemistry II Computer Skills I
OCH321T	Organic Chemistry III	(0,139)	Foundation Life Skills Organic Chemistry II Computer Skills I
PCB321T	Physical Chemistry III	(0,139)	Foundation Life Skills Physical Chemistry II

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE SECOND YEAR: **1,000**

THIRD YEAR

FIRST SEMESTER

AHP311T	Analytical Chemistry: Practical III	(0,200)	Analytical Chemistry II Analytical Chemistry: Practical II
ANC321T	Analytical Chemistry III	(0,200)	Analytical Chemistry II
CQA201T	Chemical Quality Assurance	(0,100)	Analytical Chemistry II Analytical Chemistry: Practical II

TOTAL CREDITS FOR THE SEMESTER: 0,500

SECOND SEMESTER

One of the following options:

Option 1

ENC301T	Environmental Chemistry III	(0,100)	Environmental Chemistry II
EPS101B	Entrepreneurial Skills	(0,100)	
IBA201T	Industrial Chemical Analysis	(0,100)	Analytical Chemistry I
MAT271T	Mathematics II	(0,100)	Foundation Mathematics I
PHU201T	Physics II	(0,100)	Foundation Physics I

Option 2

EXP1ACH	Experiential Learning (this subject and Chemistry Project III may not be taken during the same semester, except with the permission of the Head of the Department)	(0,500)	Analytical Chemistry III Analytical Chemistry: Practical III
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TOTAL CREDITS FOR THE THIRD YEAR: **1,000**

FOURTH YEAR

FIRST SEMESTER

One of the following options:

Option 1

EXP1ACH	Experiential Learning (this subject may not be taken with any other subject during the same semester, except with the permission of the Head of the Department)	(0,500)	Analytical Chemistry III Analytical Chemistry: Practical III
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Option 2

CPJ311T	Chemistry Project III	(0,500)	Analytical Chemistry III Analytical Chemistry: Practical III
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TOTAL CREDITS FOR THE FOURTH YEAR: **0,500**

2.2 SUBJECT INFORMATION

Syllabus content subject to change to accommodate industry changes. These are only the syllabi of the new subjects. Please consult the Faculty Prospectus (Part 7) for information pertaining to the rest of the subjects.

SUBJECT NAME: FOUNDATION CHEMISTRY
SUBJECT CODE: FPCHE04
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 160 hours

OVERVIEW OF SYLLABUS:

Scientific methodology and its use in discovering chemistry. Numbers in chemistry. The use of SI units. Matter. Atomic structure. Compounds in chemistry. The mole concept and chemical calculations. The electronic structure of the atom and electronic configurations within the periodic table. Chemical bonding. The states of matter and the binding forces within matter. Basic concepts of the gas laws. Solutions in chemistry. Acids, bases and salts. Oxidation and reduction and the balancing of equations. Organic chemistry and the chemistry of life.

SUBJECT NAME: FOUNDATION MATHEMATICS
SUBJECT CODE: FPMAT06
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 160 hours

OVERVIEW OF SYLLABUS:

Arithmetic. Graphs. Functions. Basic algebra. Trigonometry. Differentiation. Mensuration. Basic statistics.

SUBJECT NAME: FOUNDATION PHYSICS
SUBJECT CODE: FPPHU05
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 160 hours

OVERVIEW OF SYLLABUS:

Introduction to physics. Basic mathematics for physics. Measurements. Mechanics. Heat. Waves, sound and optics. Magnetism and electricity. Electromagnetism. Atomic and Nuclear physics.

NOTES

A series of horizontal dotted lines for writing notes. The lines are evenly spaced and cover most of the page. At the bottom, there is a light gray shaded area. Faint, light gray geometric shapes, including a large circle on the right and several overlapping polygons, are visible in the background.

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