2007
PROSPECTUS

PART 2

FACULTY OF AGRICULTURE, HEALTH
AND NATURAL SCIENCES

ISSN 0258-7343

TSHWANE UNIVERSITY OF TECHNOLOGY
PARTS OF THE PROSPECTUS

Students’ Rules and Regulations Part 1
Faculty of Agriculture, Health and Natural Sciences Part 2
Faculty of Economics and Finance Part 3
Faculty of Engineering and Built Environment Part 4
Faculty of Humanities Part 5
Faculty of Information and Communication Technology Part 6
Faculty of Management Sciences Part 7
Faculty of The Arts Part 8
Distance Education Part 9
Postgraduate Studies Part 10
Foundation Studies Part 11
NSSP Part 12

PLEASE NOTE

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 2007 only.

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.

Prospective students will not be admitted to any courses without prior evaluation.

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.
TELEPHONIC ENQUIRIES

Contact Centre
Tel. 086 110 2421

Enquiries:

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Private Bag X680
PRETORIA 0001
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Fax: (012) 382-5114

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GA-RANKUWA
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Fax: (012) 382-2255

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Fax: (012) 382-5114

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Fax: (012) 382-0966

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The Campus Director
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NELSPRUIT 1200
Tel. (013) 745-3500
Fax: (013) 745-3512

POLOKWANE SATELLITE CAMPUS
The Campus Director
Private Bag X9496
cor. Market and Excelsior Street
POLOKWANE 0700
Tel. (015) 287-0700
Fax: (015) 297-7609
WITBANK SATELLITE CAMPUS
The Campus Director
PO Box 3211
WITBANK 1035
WITBANK
Tel. (013) 653-3100
Fax: (013) 653-3101

Enquiries relating to fees:

The Chief Financial Officer
Private Bag X680
PRETORIA 0001
Tel. 086 1102 421
Fax: (012) 382-5701
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1. DEPARTMENT OF ANIMAL SCIENCES

1.1 NATIONAL DIPLOMA: AGRICULTURE: ANIMAL PRODUCTION

Course code: NDAP04

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Senior Certificate or an equivalent qualification.

b. Selection criteria: Students are selected by means of a formula for academic merit, based on scholastic performance.

Formula for determination of academic merit:

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>HG</th>
<th>SG</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>8</td>
<td>6</td>
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<td>B</td>
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<td>C</td>
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<td>D</td>
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<td>E</td>
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<td>2</td>
</tr>
<tr>
<td>F</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Applicants are given two additional points for the following subjects (SG or HG):

- Physical Science
- Computer Principles
- Computer Studies
- Mathematics
- Statistics
- Chemistry
- Geography
- Field Husbandry
- Agricultural Science
- Practical Agriculture
- Agriculture
- Biology
- Agricultural Economics
- Physics

Applicants who score 15 or more points (for a maximum of six subjects) according to the formula for academic merit determination, are accepted.

Applicants who score 0 to 14 points are referred to the Department of Animal Sciences.

c. Recommended subject(s): Mathematics, Physical Science, Biology and agricultural subjects.

d. Minimum duration: Three years.

e. Presentation: Two years (four semesters) of day classes, followed by twelve months of applicable experiential learning.

f. Intake for the course: January only.
g. Registration for the subjects of this course: January and July.

h. Other requirements: Students have to pass all the subjects presented from the first to the fourth semesters before they will be permitted to undertake experiential learning.

i. Experiential Learning I and II: See Chapter 5 of Students’ Rules and Regulations.

j. Readmission: See Chapter 3 of Students’ Rules and Regulations.

k. Subject credits: Subject credits are shown in brackets after every subject.

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

**FIRST YEAR**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
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<tbody>
<tr>
<td>AAP101T</td>
<td>Agricultural Anatomy and Physiology I</td>
<td>(0,125)</td>
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</tr>
<tr>
<td>AGS101T</td>
<td>Agricultural Science I</td>
<td>(0,125)</td>
<td></td>
</tr>
<tr>
<td>NPT101T</td>
<td>Natural Pastures I</td>
<td>(0,125)</td>
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</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,375

**SECOND SEMESTER**

<table>
<thead>
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<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
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<tr>
<td>ANU201T</td>
<td>Animal Nutrition II</td>
<td>(0,125)</td>
<td>Agricultural Science I</td>
</tr>
<tr>
<td>APE101T</td>
<td>Animal Production Economics I</td>
<td>(0,125)</td>
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<tr>
<td>CVT101T</td>
<td>Cultivated Pastures I</td>
<td>(0,125)</td>
<td></td>
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</table>

TOTAL CREDITS FOR THE SEMESTER: 0,375

TOTAL CREDITS FOR THE FIRST YEAR: 0,750

**SECOND YEAR**

**FIRST SEMESTER**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>BPD201T</td>
<td>Beefer Production II</td>
<td>(0,125)</td>
<td>Agricultural Anatomy and Physiology I</td>
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<tr>
<td>MPD201T</td>
<td>Milk Production II</td>
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<tr>
<td>PFM201T</td>
<td>Pig Production II</td>
<td>(0,125)</td>
<td>Agricultural Anatomy and Physiology I</td>
</tr>
<tr>
<td>POD201T</td>
<td>Poultry Production II</td>
<td>(0,125)</td>
<td>Agricultural Anatomy and Physiology I</td>
</tr>
<tr>
<td>SSP201T</td>
<td>Small Stock Production II</td>
<td>(0,125)</td>
<td>Agricultural Anatomy and Physiology I</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,625
SECOND SEMESTER

MPM101T Manpower Management I (0,124)*

plus three of the following subjects:

BPD301T Beefer Production III (0,167) Beefer Production II
MPD301T Milk Production III (0,167) Milk Production II
PFM301T Pig Production III (0,167) Pig Production II
POD301T Poultry Production III (0,167) Poultry Production II
SSP301T Small Stock Production III (0,167) Small Stock Production II

TOTAL CREDITS FOR THE SEMESTER: 0,625
TOTAL CREDITS FOR THE SECOND YEAR: 1,250

THIRD YEAR

FIRST OR SECOND SEMESTER

After completion of all the above subjects.

EXP1AAP Experiential Learning I (0,500)
EXP2AAP Experiential Learning II (0,500) Experiential Learning I

TOTAL CREDITS FOR THE THIRD YEAR: 1,000

1.2 BACCALAUREUS TECHNOLOGIAE: AGRICULTURE: ANIMAL PRODUCTION
Course code: BTAP03

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Agriculture: Animal Production or an equivalent qualification. However, this does not apply to students who registered for the National Diploma for the first time before 2006 and who have not since interrupted their studies.

b. Selection criteria: All applications are subject to selection.

c. Minimum duration: One year.

d. Presentation: Block course.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January only.

g. Readmission: See Chapter 3 of Students’ Rules and Regulations.

h. Subject credits: Subject credits are shown in brackets after every subject.
YEAR SUBJECTS

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGC100T</td>
<td>Agricultural Communication I</td>
<td>(0,250)</td>
</tr>
<tr>
<td>DPS400T</td>
<td>Animal Production IV</td>
<td>(0,250)</td>
</tr>
<tr>
<td>PUU400T</td>
<td>Project Management: Agriculture IV</td>
<td>(0,250)</td>
</tr>
<tr>
<td>RMD100C</td>
<td>Research Methodology</td>
<td>(0,250)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

1.3 NATIONAL DIPLOMA: EQUINE SCIENCE
Course code: NDEQ04

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Senior Certificate or an equivalent qualification.

b. Selection criteria: Students are selected by means of a formula for academic merit, based on scholastic performance.

Formula for determination of academic merit:

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<td>3</td>
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<tr>
<td>E</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>F</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Applicants are given two additional points for the following subjects (SG or HG):

- Physical Science
- Computer Principles
- Computer Studies
- Mathematics
- Statistics
- Chemistry
- Geography
- Field Husbandry
- Agricultural Science
- Practical Agriculture
- Agriculture
- Biology
- Agricultural Economics
- Physics

Applicants who score 15 or more points (for a maximum of six subjects) according to the formula for academic merit determination are accepted.

Applicants who score 0 to 14 points are referred to the Department of Animal Sciences.
c. Recommended subject(s): Mathematics, Physical Science, Biology and agricultural subjects.

d. Minimum duration: Three years.

e. Presentation: Two years (four semesters) of day classes, followed by twelve months of applicable experiential learning.

f. Intake for the course: January only.

g. Registration for the subjects of this course: January and July.

h. Prerequisite for awarding of diploma: A recognised first-aid certificate.

i. Other requirements: Students have to pass all the subjects presented from the first to the fourth semesters before they will be permitted to undertake experiential learning.

j. Termination of studies: Should a student become physically disabled during his or her study period, and is unable to do practicals, he or she would be obliged to terminate his or her studies until he or she has recovered.

k. Experiential Learning I and II: See Chapter 5 of Students’ Rules and Regulations.

l. Readmission: See Chapter 3 of Students’ Rules and Regulations.

m. Subject credits: Subject credits are shown in brackets after every subject.

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

FIRST YEAR

FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
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</thead>
<tbody>
<tr>
<td>COA101T</td>
<td>Computer Application I*</td>
<td>(0,125)</td>
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</tr>
<tr>
<td>EAP101T</td>
<td>Equine Anatomy and Physiology I</td>
<td>(0,125)</td>
<td></td>
</tr>
<tr>
<td>EQB111T</td>
<td>Equine Breeding I</td>
<td>(0,125)</td>
<td></td>
</tr>
<tr>
<td>PSC121T</td>
<td>Pasture Science I</td>
<td>(0,125)</td>
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</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

SECOND SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EQN111T</td>
<td>Equine Nutrition I</td>
<td>(0,125)</td>
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<tr>
<td>STB201T</td>
<td>Stable Management II</td>
<td>(0,125)</td>
<td>Equine Breeding I</td>
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<tr>
<td>VTS101T</td>
<td>Veterinary Science I</td>
<td>(0,125)</td>
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</tr>
<tr>
<td>ZTN211T</td>
<td>Zootechnology II</td>
<td>(0,125)</td>
<td>Equine Anatomy and Physiology I</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

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

FIRST SEMESTER

AEC101T Agricultural Production Economics I (0,125)  
MFM201T Mare and Foal Management II (0,125)  Equine Breeding I  
SLM201T Stallion Management II (0,125)  Equine Breeding I  
VTS211T Veterinary Science II (0,125)  Veterinary Science I  
TOTAL CREDITS FOR THE SEMESTER: 0,500

SECOND SEMESTER

DMN211T Data Management II (0,125)  Computer Application I  
FRY111T Farriery I (0,125)  
STB301T Stable Management III (0,125)  Stable Management II  
ZTN311T Zootechnology III (0,125)  Zootechnology II  
TOTAL CREDITS FOR THE SEMESTER: 0,500  
TOTAL CREDITS FOR THE SECOND YEAR: 1,000

THIRD YEAR

FIRST SEMESTER

After completion of all the above subjects.

EXP1EQS Experiential Learning I (0,500)  
TOTAL CREDITS FOR THE SEMESTER: 0,500

SECOND SEMESTER

EXP2EQS Experiential Learning II (0,500)  Experiential Learning I  
TOTAL CREDITS FOR THE SEMESTER: 0,500  
TOTAL CREDITS FOR THE THIRD YEAR: 1,000

1.4 BACCALAUREUS TECHNOLOGIAE: EQUINE SCIENCE

Course code: BTEQ03  
Campus where offered: Pretoria Campus  

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Equine Science or an equivalent qualification. However, this does not apply to students who registered for the Naional Diploma for the first time before 2006 and who have not since interrupted their studies.

b. Selection criteria: All applications are subject to selection.

c. Minimum duration: One year.

d. Presentation: Block course.
e. Intake for the course: January only.
f. Registration for the subjects of this course: January only.
g. Readmission: See Chapter 3 of Students’ Rules and Regulations.
h. Subject credits: Subject credits are shown in brackets after every subject.

YEARSUBJECTS

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
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<tbody>
<tr>
<td>AGC100T</td>
<td>Agricultural Communication I</td>
<td>(0,250)</td>
</tr>
<tr>
<td>EQC400T</td>
<td>Equine Science IV</td>
<td>(0,250)</td>
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<td>PUU400T</td>
<td>Project Management: Agriculture IV</td>
<td>(0,250)</td>
</tr>
<tr>
<td>RMD100H</td>
<td>Research Methodology</td>
<td>(0,250)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

1.5 NATIONAL HIGHER DIPLOMA: PIG PRODUCTION MANAGEMENT
Course code: HDVD93

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

NO NEW REGISTRATIONS FOR THIS COURSE ARE ACCEPTED AS FROM 2007. STUDENTS WHO ARE CURRENTLY REGISTERED FOR THIS QUALIFICATION WILL HAVE UNTIL 2007 TO OBTAIN IT, SUBJECT TO THE STIPULATIONS OF REGULATION 3.1.1(a) ON THE MAXIMUM DURATION OF STUDY.

Phase-out date: 31 December 2007

REMARKS

a. Admission requirement(s): A National Diploma: Agriculture: Animal Production or an equivalent qualification in an applicable study field. Students must be permanently employed in the pig industry.

b. Selection criteria: A personal interview with the selection committee is compulsory.

c. Minimum duration: One year.

d. Presentation: Block course.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January and July.

g. Readmission: See Chapter 3 of Students’ Rules and Regulations.

h. Subject credits: Subject credits are shown in brackets after every subject.
FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
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<th>PREREQUISITE SUBJECT(S)</th>
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<tr>
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<td>Pig Health Science III</td>
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<td>Pig Production II</td>
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<tr>
<td>PNM101T</td>
<td>Pig Farm Management I</td>
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<td>TOTAL CREDITS FOR THE SEMESTER:</td>
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SECOND SEMESTER

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<td>PBE401T</td>
<td>Pig Breeding IV</td>
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<td>Animal Breeding III or an</td>
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<td>equivalent subject</td>
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<tr>
<td>PHS401T</td>
<td>Pig Nutrition IV</td>
<td>(0,200)</td>
<td>Animal Nutrition III or an</td>
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<td></td>
<td>equivalent subject</td>
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<tr>
<td>PNM201T</td>
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<tr>
<td></td>
<td>TOTAL CREDITS FOR THE SEMESTER:</td>
<td>0,600</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOTAL CREDITS FOR THE QUALIFICATION:</td>
<td>1,000</td>
<td></td>
</tr>
</tbody>
</table>

1.6 NATIONAL HIGHER DIPLOMA: POULTRY PRODUCTION MANAGEMENT
Course code: HDVA91

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

NO NEW REGISTRATIONS FOR THIS COURSE ARE ACCEPTED AS FROM 2007. STUDENTS WHO ARE CURRENTLY REGISTERED FOR THIS QUALIFICATION WILL HAVE UNTIL 2007 TO OBTAIN IT, SUBJECT TO THE STIPULATIONS OF REGULATION 3.1.1(a) ON THE MAXIMUM DURATION OF STUDY.

Phase-out date: 31 December 2007

REMARKS

a. Admission requirement(s): A National Diploma: Agriculture: Animal Production or an equivalent qualification in an applicable study field. Students must be permanently employed in the poultry industry.

b. Selection criteria: A personal interview with the selection committee is compulsory.

c. Minimum duration: One year.

d. Presentation: Block course.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January and July.

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

h. Subject credits: Subject credits are shown in brackets after every subject.

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

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBI101T</td>
<td>Poultry Biology I</td>
<td>(0,166)*</td>
<td></td>
</tr>
<tr>
<td>PMM101T</td>
<td>Poultry Production Management I</td>
<td>(0,167)</td>
<td></td>
</tr>
<tr>
<td>PTO301T</td>
<td>Poultry Technology III</td>
<td>(0,167)</td>
<td>Poultry Production II</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

SECOND SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNU401T</td>
<td>Poultry Nutrition IV</td>
<td>(0,166)*</td>
<td>Animal Nutrition III or an equivalent subject</td>
</tr>
<tr>
<td>PTO401T</td>
<td>Poultry Technology IV</td>
<td>(0,167)</td>
<td>Poultry Technology III</td>
</tr>
<tr>
<td>PUT101T</td>
<td>Poultry Unit Planning I</td>
<td>(0,167)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

1.7 MAGISTER TECHNOLOGIAE: AGRICULTURE

Course code: MTAP98

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Agriculture: Animal Production, a Baccalaureus Technologiae: Equine Science or an equivalent qualification. Prospective students must apply in good time for status to be awarded for equivalent qualifications. Research proposals must be approved by the Department before final registration for the course. Details of the requirements for research proposals are available on request. The final registration and re-registration dates are usually at the end of February and at the end of August.

b. Promotional requirement(s): In the dissertation, the student must show proof of his or her understanding of a specific problem in the study field. The student must also demonstrate an ability to arrange and analyse the material logically, make logical deductions or conclusions, and propose improvements or ways to solve the problem. The dissertation must comply with the norms set by the University.

The Magister Technologiae: Agriculture will be conferred on a student who -

- is in possession of a Baccalaureus Technologiae: Agriculture: Animal Production, a Baccalaureus Technologiae: Equine Sciences or an equivalent qualification;
- has completed an approved research project of at least one year's duration on obtaining the required degree;
- has submitted an acceptable dissertation accompanied by one article of a standard suitable for publication;
- has passed the prescribed examination (an additional oral examination or academic discourse may be required after the dissertation has been evaluated); and
- has presented a colloquium of at least 40 minutes on the research project, for non-examination purposes.
c. Duration: A minimum of one year and a maximum of three years.

d. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPS500T</td>
<td>Dissertation: Animal Production</td>
<td>(1,000)</td>
</tr>
<tr>
<td>DPS500R</td>
<td>Dissertation: Animal Production</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

(re-registration)

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

1.8 **DOCTOR TECHNOLOGIAE: AGRICULTURE**

Course code: DTAP98

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

**REMARKS**

a. Admission requirement(s): A Magister Technologiae: Agriculture or an equivalent qualification. Prospective students must apply in good time for status to be awarded for equivalent qualifications. Research proposals must be approved by the Department before final registration for the course. Details of the requirements for research proposals are available on request. The final registration and re-registration dates are usually at the end of February and at the end of August.

b. Promotional requirement(s): In the thesis, the student must show proof of his or her understanding of a specific problem in the study field. The student must also demonstrate an ability to arrange and analyse the material logically, make logical deductions or conclusions, and then propose improvements or ways to solve the problem. The dissertation must comply with the norms set by the University.

The Doctor Technologiae: Agriculture will be conferred on a student who -

- is in possession of a Magister Technologiae: Agriculture or an equivalent qualification;
- has completed an approved research project of at least two years' duration on obtaining the required degree;
- has submitted an acceptable thesis, accompanied by two articles of a standard suitable for publication;
- has passed the prescribed examination (an additional oral examination or academic discourse may be required after the thesis has been evaluated); and
- has presented a colloquium of at least 40 minutes on the research project, for non-examination purposes.

c. Duration: A minimum of two years and a maximum of five years.

d. Subject credits: Subject credits are shown in brackets after every subject.
<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPS700T</td>
<td>Thesis: Animal Production</td>
<td>(2,000)</td>
</tr>
<tr>
<td>DPS700R</td>
<td>Thesis: Animal Production (re-registration)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE QUALIFICATION: 2,000**

### 1.9 SUBJECT INFORMATION

**SUBJECT NAME:** AGRICULTURAL ANATOMY AND PHYSIOLOGY I  
**SUBJECT CODE:** AAP101T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** ± 112 hours  
**OVERVIEW OF SYLLABUS:**  
A systematic, summarised study of the skeleton, muscular system, organs and organ systems of the different production animals, as well as the physiology of digestion, milk production and endocrinology.

**SUBJECT NAME:** AGRICULTURAL COMMUNICATION I  
**SUBJECT CODE:** AGC100T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** ± 60 hours  
**OVERVIEW OF SYLLABUS:**  
Group forming in the working environment, democracy and democratic groups, group functioning, group application, group management, group aims, evaluation and leadership.

**SUBJECT NAME:** AGRICULTURAL PRODUCTION ECONOMICS I  
**SUBJECT CODE:** AEC101T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** ± 40 hours  
**OVERVIEW OF SYLLABUS:**  

**SUBJECT NAME:** AGRICULTURAL SCIENCE I  
**SUBJECT CODE:** AGS101T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** ± 96 hours  
**OVERVIEW OF SYLLABUS:**  
An introduction to the basics of science, as required later in the course. Specific aspects of organic chemistry, biochemistry, physics, mathematics, biology, computer application, cell biology, genetics and accounting.

**SUBJECT NAME:** ANIMAL NUTRITION II  
**SUBJECT CODE:** ANU201T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** ± 96 hours  
**OVERVIEW OF SYLLABUS:**  
The maintenance and production requirements of ruminants and monogastric animals. The nutrients in feed, namely protein, energy, vitamins, minerals and fats. Feed components and chemical feed additives.
SUBJECT NAME: ANIMAL PRODUCTION IV
SUBJECT CODE: DPS400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 300 hours
OVERVIEW OF SYLLABUS:
Advanced concepts in small stock, poultry, pig, beef, milk and fodder production. Preparation and presentation of three seminars on approved animal and fodder production topics.

SUBJECT NAME: ANIMAL PRODUCTION ECONOMICS I
SUBJECT CODE: APE101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:
Study field of agricultural economics with the emphasis on production management and microeconomics of production, with specific reference to animal production systems. Introduction to general farming management and internal management information systems with reference to the principles of financial management under conditions of risk and uncertainty in an agricultural context.

MODULE 1
General agricultural economics: overview of agricultural economics, from general economics at macro- and microeconomic level to business economics and enterprise management. Attention is given to the general management process and the management of the enterprise functions within a managerial philosophy of management by objectives.

MODULE 2
Production economics and management: principles of agricultural production economics and production management, with the emphasis on microeconomics of production and with reference to the newer approach of production operations systems management.

MODULE 3
Farming management: the emphasis is placed on internal management information systems and management accounting, principles of financial management under conditions of risk and uncertainty in agriculture.

SUBJECT NAME: BEEFER PRODUCTION II
SUBJECT CODE: BPD201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 96 hours
OVERVIEW OF SYLLABUS:
An introductory study of beefer production with the emphasis on the beefer industry, breeds, breeding, reproduction, equipment, marketing, diseases and nutrition.

SUBJECT NAME: BEEFER PRODUCTION III
SUBJECT CODE: BPD301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 96 hours
OVERVIEW OF SYLLABUS:
An in-depth study of management programmes, marketing, seminars, applied nutrition, efficiency of farming, judging. Farm planning: beefer production and computer application.

SUBJECT NAME: COMPUTER APPLICATION I
SUBJECT CODE: COA101T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 60 hours
OVERVIEW OF SYLLABUS:
An introduction to computers, hardware, software and operating systems. Algorithm design. Practical application in word processing, databases and spreadsheets. Agricultural packages.

SUBJECT NAME: CULTIVATED PASTURES I
SUBJECT CODE: CVT101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 120 hours
OVERVIEW OF SYLLABUS:
Broadening the field of pasture science by studying the role of cultivated pastures, soil and veld management, radical veld improvement, irrigation, fodder conservation, grass and legume pastures, grazing mixtures, drought feeding and fodder-flow planning.
SUBJECT NAME: DATA MANAGEMENT II
SUBJECT CODE: DMN211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:
Principles of electronic data processing: data capturing, data manipulation, data processing and information management. Practical applications of stud management in a database package.

SUBJECT NAME: EQUINE ANATOMY AND PHYSIOLOGY I
SUBJECT CODE: EAP101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 112 hours
OVERVIEW OF SYLLABUS:
An introduction to the basic anatomy and physiology of the horse, referring to the musculoskeletal system, organs and organ systems, as well as specific aspects of neurology and endocrinology.

SUBJECT NAME: EQUINE BREEDING I
SUBJECT CODE: EQB111T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 80 hours
OVERVIEW OF SYLLABUS:
An introduction to basic mammalian genetics, especially as applied to horse breeding. Horse diseases related to genetic deficiency.

SUBJECT NAME: EQUINE NUTRITION I
SUBJECT CODE: EQN111T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 80 hours
OVERVIEW OF SYLLABUS:
An introduction to livestock nutrition. The anatomy and physiology of the digestive system of the horse, feed analyses and a horse's nutrient requirements. Classification and characteristics of different fodders. Practical horse feeding, as well as basic ration formulation.

SUBJECT NAME: EQUINE SCIENCE IV
SUBJECT CODE: EQC400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 300 hours
OVERVIEW OF SYLLABUS:
A comprehensive study of particular aspects of the equine industry. Critical evaluation of research publications in the specific fields of study, as well as preparation for seminars.

SUBJECT NAME: EXPERIENTIAL LEARNING I
SUBJECT CODE: EXP1AAP, EXP1EQS
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: 6 months
OVERVIEW OF SYLLABUS:
A project as determined by the University in collaboration with the employer.

SUBJECT NAME: EXPERIENTIAL LEARNING II
SUBJECT CODE: EXP2AAP, EXP2EQS
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: 6 months
OVERVIEW OF SYLLABUS:
A project as determined by the University in collaboration with the employer.

SUBJECT NAME: FARRIERY I
SUBJECT CODE: FRY111T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 84 hours
OVERVIEW OF SYLLABUS:
An intensive course in all theoretical aspects of the shoeing of horses, as well as practical hoof care. The aim is not to train farriers, but to present the practice of shoeing to enable students to make a better assessment of the newly shod horse.
SUBJECT NAME: MANPOWER MANAGEMENT I  
SUBJECT CODE: MPM101T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 60 hours  
OVERVIEW OF SYLLABUS:  
Cardinal aspects of legislation, trade unions, human relations, ethics in the workplace, grievance procedures, in-service training, appointments and work studies.

SUBJECT NAME: MARE AND FOAL MANAGEMENT II  
SUBJECT CODE: MFM201T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 54 hours  
OVERVIEW OF SYLLABUS:  
A complete course with practical demonstrations on the handling and care of the mare and foal, from the foal's birth to its weaning.

SUBJECT NAME: MILK PRODUCTION II  
SUBJECT CODE: MPD201T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 96 hours  
OVERVIEW OF SYLLABUS:  
Introduction to milk production with the emphasis on the dairy industry, dairy breeds, nutrition and management, milk production, breeding, reproduction, herd health, herd composition, parlour layout and mechanical milking.

SUBJECT NAME: MILK PRODUCTION III  
SUBJECT CODE: MPD301T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 96 hours  
OVERVIEW OF SYLLABUS:  
An in-depth study of health regulations, the processing of dairy products, applied economics and management, applied nutrition, applied breeding, seminars, equipment, planning and layout of units, management programmes. Farm planning: milk production and computer application.

SUBJECT NAME: NATURAL PASTURES I  
SUBJECT CODE: NPT101T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 120 hours  
OVERVIEW OF SYLLABUS:  
The importance of veld pastures. The morphology, physiology and composition of grasses. Ecological and grazing concepts. Production characteristics of the main grazing areas of South Africa. Growth and production. Veld evaluation. The animal as a factor in veld management. Methods and principles of veld management.

SUBJECT NAME: PASTURE SCIENCE I  
SUBJECT CODE: PSC121T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 50 hours  
OVERVIEW OF SYLLABUS:  
The morphology and physiology of grasses. Veld types and the interaction between livestock and pastures. Methods and principles of veld management. The characteristics, nutritional value and productivity of veld. The burning of veld, bush encroachment and radical veld improvement. The establishment, maintenance and management of cultivated pastures. The most important grasses, legumes, fodder trees and shrubs. Feed conservation and the planning of a fodder-flow programme.
<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>Subject Code</th>
<th>Evaluation Method</th>
<th>Total Tuition Time</th>
<th>Overview of Syllabus</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIG BREEDING IV</td>
<td>PBE401T</td>
<td>1 X 3-HOUR PAPER</td>
<td>± 30 hours</td>
<td>This course will enable the student to apply certain breeding practices and selection principles, and to estimate breeding values. A national certificate course in the artificial insemination of pigs is offered and includes reproduction physiology and technology. A junior pig-judging course is offered, as well as an overview of the South African pig industry, such as breeding companies and stud breeders.</td>
</tr>
<tr>
<td>PIG FARM MANAGEMENT I</td>
<td>PNM101T</td>
<td>1 X 3-HOUR PAPER</td>
<td>± 30 hours</td>
<td>Housing aspects according to production stages, types of housing for the extensive and intensive production of pigs, principles of housing requirements, as well as well-being aspects. The principles of record-keeping and data analysis, as well as computer operation, the principles of stock management.</td>
</tr>
<tr>
<td>PIG FARM MANAGEMENT II</td>
<td>PNM201T</td>
<td>1 X 3-HOUR PAPER</td>
<td>± 30 hours</td>
<td>A major part of this module comprises financial management, including capital budgeting, costing and operating capital management. Farm tax, including the principles of the Income Tax Act. Organised agriculture and the marketing of pork. Labour management and training techniques.</td>
</tr>
<tr>
<td>PIG HEALTH SCIENCE III</td>
<td>PIH301T</td>
<td>1 X 3-HOUR PAPER</td>
<td>± 30 hours</td>
<td>This course consists of four parts, namely pig anatomy, including the digestive system, the skeleton, the respiratory system and the reproductive system. Post-mortem techniques. The third part includes diseases, prevention and treatment, and the principles of hygiene, medication, available preparations and their application.</td>
</tr>
<tr>
<td>PIG NUTRITION IV</td>
<td>PHS401T</td>
<td>1 X 3-HOUR PAPER</td>
<td>± 30 hours</td>
<td>This is the major part of the complete syllabus and consists of the formulation of complete diets, the nutritional requirements for different production stages, feed analyses and feeding techniques, as well as additives. The purchase of raw materials and the management of a fodder-flow programme.</td>
</tr>
<tr>
<td>PIG PRODUCTION II</td>
<td>PFM201T</td>
<td>1 X 3-HOUR PAPER</td>
<td>± 30 hours</td>
<td>An introductory study of the South African pig industry, breeds, breeding, reproduction, nutrition, diseases and housing.</td>
</tr>
<tr>
<td>PIG PRODUCTION III</td>
<td>PFM301T</td>
<td>1 X 3-HOUR PAPER</td>
<td>± 30 hours</td>
<td>An in-depth study of breeding, management, housing, applied nutrition, marketing, economy, data processing, reproduction technology, farm planning - pig production and computer application.</td>
</tr>
</tbody>
</table>
SUBJECT NAME: POULTRY BIOLOGY I
SUBJECT CODE: PBI101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 30 hours
OVERVIEW OF SYLLABUS:
A review of basic breeding principles, selection, breeding systems and genetic progress. A study of the anatomy, physiology and reproduction of poultry.

SUBJECT NAME: POULTRY NUTRITION IV
SUBJECT CODE: PNU401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 30 hours
OVERVIEW OF SYLLABUS:
A study of the feed industry and the availability of feed components. The basic principles of nutrition, including digestion and the use and metabolism of nutrients. The suitability of feed components for poultry. Additives in feeds and the formulation of rations. Phase feeding of different types of poultry and the occurrence of nutrition-related disorders.

SUBJECT NAME: POULTRY PRODUCTION II
SUBJECT CODE: POD201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 96 hours
OVERVIEW OF SYLLABUS:
An introductory study of poultry production with the emphasis on the poultry industry, breeds, breeding, reproduction, equipment, housing, nutrition and diseases.

SUBJECT NAME: POULTRY PRODUCTION III
SUBJECT CODE: POD301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 96 hours
OVERVIEW OF SYLLABUS:
An in-depth study of broiler management, layer management, seminars, the handling of manure, marketing, applied nutrition, hatchery management, strategic planning. Farm planning: poultry production and computer application.

SUBJECT NAME: POULTRY PRODUCTION MANAGEMENT I
SUBJECT CODE: PMM101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 30 hours
OVERVIEW OF SYLLABUS:
A study of business management, including budgeting, and the planning and controlling of systems. Work study to improve productivity. Personnel management to identify needs, and training to promote good labour relations.

SUBJECT NAME: POULTRY TECHNOLOGY III
SUBJECT CODE: PTO301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 30 hours
OVERVIEW OF SYLLABUS:
A review of the effects of the environment on poultry production and the different housing systems that may be used. A study of different types of equipment to improve production and product quality.

SUBJECT NAME: POULTRY TECHNOLOGY IV
SUBJECT CODE: PTO401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 30 hours
OVERVIEW OF SYLLABUS:
An advanced study of poultry technology for stockmanship in respect of different types of poultry, the development of hatchery management and equipment. Identifying disease and the implementation of disease-preventative programmes.
ANIMAL SCIENCES

SUBJECT NAME: POULTRY UNIT PLANNING I
SUBJECT CODE: PUT101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 30 hours
OVERVIEW OF SYLLABUS:
A study of strategic planning in the poultry industry to identify requirements. The identification and evaluation of production parameters. Methods of production programming and data management.

SUBJECT NAME: PROJECT MANAGEMENT: AGRICULTURE IV
SUBJECT CODE: PUU400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 200 hours
OVERVIEW OF SYLLABUS:
The development and evaluation of a control or development strategy and/or programme regarding a selected diversification or specialist field in agriculture, using existing literature. Internal evaluation on the basis of preparation for and the presentation of a seminar through a colloquium.

SUBJECT NAME: RESEARCH METHODOLOGY
SUBJECT CODE: RMD100C, RMD100H
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 236 hours
OVERVIEW OF SYLLABUS:
Research in agriculture, scientific research, theoretical concepts, practising a science, defining problems, motivation, literature studies, aims, sampling, the preliminary investigation, the research report, the interpretation and discussion of scientific data, the planning of a research project, statistical processing.

SUBJECT NAME: SMALL STOCK PRODUCTION II
SUBJECT CODE: SSP201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 96 hours
OVERVIEW OF SYLLABUS:
Introduction to small stock production with the emphasis on the small stock industry, breeds, breeding, reproduction, diseases, nutrition and production systems.

SUBJECT NAME: SMALL STOCK PRODUCTION III
SUBJECT CODE: SSP301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 96 hours
OVERVIEW OF SYLLABUS:
An in-depth study of management programmes, applied nutrition, marketing, equipment and housing, seminars, wool classification, breeding, judging, strategic planning. Farm planning: small stock production and computer application.

SUBJECT NAME: STABLE MANAGEMENT II
SUBJECT CODE: STB201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 51 hours
OVERVIEW OF SYLLABUS:
The layout of buildings and the construction of stables, ancillary buildings and arenas. Field management and fencing. All aspects of the daily management of a stable yard and the handling of horses.

SUBJECT NAME: STABLE MANAGEMENT III
SUBJECT CODE: STB301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 31 hours
OVERVIEW OF SYLLABUS:
This subject is divided into two subsections. The first covers the management of labour, as well as business, administrative and financial tasks concerning the running of a yard. The second is a study of exercise physiology. Exercise routines and the application of physiological norms in the exercising of horses. Riding programmes and the basic training of horses.
SUBJECT NAME: STALLION MANAGEMENT II
SUBJECT CODE: SLM201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 50 hours
OVERVIEW OF SYLLABUS:
An in-depth study of the handling, training and health of the stallion, with special reference to the healthy stallion.

SUBJECT NAME: VETERINARY SCIENCE I
SUBJECT CODE: VTS101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 92 hours
OVERVIEW OF SYLLABUS:
The pathogenesis of diseases and disturbances of normal function and balance in the body. The development of diseases as caused by micro-organisms, toxins, trauma and parasites. Functional disturbances. First aid for horses.

SUBJECT NAME: VETERINARY SCIENCE II
SUBJECT CODE: VTS211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 107 hours
OVERVIEW OF SYLLABUS:
In this course specific conditions of the horse, affecting the musculoskeletal system and the different organ systems, will be discussed. Special problems of the newborn foal are dealt with separately. Introduction to veterinary drugs and their routes of administration, as well as preventative medicine.

SUBJECT NAME: ZOO TECHNOLOGY II
SUBJECT CODE: ZTN211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 126 hours
OVERVIEW OF SYLLABUS:
All important and interesting technical data on the equine industry are dealt with in this subject. The historical development of the horse and the different breeds and types. The ideal conformation and the deviations from it, normal gaits and gait abnormalities. Identification of horses, including age determination, blood typing and legal implications. Tack and harness, bandages and protective gear.

SUBJECT NAME: ZOO TECHNOLOGY III
SUBJECT CODE: ZTN311T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 104 hours
OVERVIEW OF SYLLABUS:
A study of saddles, harnesses, other relevant equipment and their uses. Training programmes for shows. Special care of horses at shows and of the competing horse.
2. **DEPARTMENT OF BIOMEDICAL SCIENCES**

### 2.1 NATIONAL DIPLOMA: BIOMEDICAL TECHNOLOGY

**Course code:** NDBM01

**Campus where offered:**
- Arcadia Campus
- Soshanguve Campus (Pipeline students only - no new first-years/new intake)

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

### REMARKS

**a. Admission requirement(s):**

*For 2007:* A Senior Certificate or an equivalent qualification, with Mathematics, Physical Science and Biology or Physiology, with C symbols at Standard Grade or E symbols at Higher Grade.

*As from 2008:* A Senior Certificate or an equivalent qualification, with English, Mathematics, Physical Science and Biology or Physiology, with C symbols at Standard Grade or E symbols at Higher Grade.

**b. Selection criteria:**

Prospective students will be selected for admission, based on a Potential Assessment, as well as an interview with a departmental selection panel.

**c. Highly recommended subject(s):**

English.

**d. Minimum duration:**

Three years.

**e. Presentation:**

Five semesters of day classes and one semester of experiential learning (Laboratory Practice III).

**f. Intake for the course:**

January only.

**g. Registration for the subjects of this course:**

January and July.

**h. Practicals:**

100% attendance is compulsory for all practicals. Students must pass the practical component of a subject to obtain admission to sit for the examination.

**i. Textbooks:**

Additional textbooks and other educational material will be required.

**j. Safety wear:**

Specific safety wear is compulsory and must be purchased by the student.

**k. Other requirements:**

Vaccination against Hepatitis B is compulsory.

**l. Registration as a student medical technologist:**

It is compulsory for every student to register with the Health Professions Council of South Africa (HPCSA) as a student medical technologist.

**m. Professional registration as a medical technologist:**

Registration as a qualified medical technologist takes place four years after registration as a student medical technologist, provided that the candidate has completed the first three academic years successfully. The candidate must also have
worked in a laboratory approved by the HPCSA for at least 14 months and must have passed the Board examination of the Society of Medical Laboratory Technologists of South Africa (SMLTSA).

n. Laboratory Practice III (experiential learning): No student will be permitted to register for Laboratory Practice III unless he or she has passed all the set subjects of the first five academic semesters. Laboratory Practice III must be done in a laboratory accredited by the Health Professions Council of South Africa.

o. Readmission: See Chapter 3 of Students’ Rules and Regulations.

p. Subject credits: Subject credits are shown in brackets after every subject.

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

FIRST YEAR

FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
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<tbody>
<tr>
<td>APY141T</td>
<td>Anatomy and Physiology I</td>
<td>(0,250)</td>
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<tr>
<td>CAL101T</td>
<td>Calculations and Statistics</td>
<td>(0,100)</td>
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<tr>
<td>CHE141C</td>
<td>Chemistry IB</td>
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<tr>
<td>IMT101T</td>
<td>Introduction to Medical Technology</td>
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<tr>
<td>PHU161C</td>
<td>Physics IB</td>
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SECOND SEMESTER

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<td>BCH221T</td>
<td>Biochemistry II</td>
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<tr>
<td>CPG101T</td>
<td>Cellular Pathology I</td>
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<td>IML211T</td>
<td>Immunology II</td>
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<td>MBI101T</td>
<td>Microbiology I</td>
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SECOND YEAR

FIRST SEMESTER

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<td>CPH111T</td>
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<td>MBI241B</td>
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<td>PPT201T</td>
<td>Pathophysiology II</td>
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SECOND SEMESTER

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<td>CPH241T</td>
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<tr>
<td>HAT221T</td>
<td>Haematology II</td>
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<td>Blood Transfusion Technology</td>
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</tbody>
</table>
The subject below is not compulsory for obtaining the qualification. However, the Department strongly recommends that students take this subject to prepare them for the labour market.

CSK101B  Computer Skills I*   (0,000)
TOTAL CREDITS FOR THE SEMESTER:  0,375
TOTAL CREDITS FOR THE SECOND YEAR:  0,875

THIRD YEAR

FIRST SEMESTER

CPG301T  Cellular Pathology III  (0,125)  Cellular Pathology II
CPH311T  Chemical Pathology III  (0,125)  Chemical Pathology II
HAT321T  Haematology III  (0,125)  Haematology II
MBI321T  Microbiology III  (0,125)  Microbiology II
TOTAL CREDITS FOR THE SEMESTER:  0,500

SECOND SEMESTER

Students must pass all the above subjects in order to continue with the following subject:

LAP301T  Laboratory Practice III  (0,500)
TOTAL CREDITS FOR THE SEMESTER:  0,500
TOTAL CREDITS FOR THE THIRD YEAR:  1,000

2.2 BACCALEUREUS TECHNOLOGIAE: BIOMEDICAL TECHNOLOGY
Course code: BTBM01

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Biomedical Technology or an equivalent qualification. However, this does not apply to students who registered for the National Diploma for the first time before 2007 and who have not since interrupted their studies.

b. Selection criteria: All applications are subject to selection.

c. Minimum duration: One year.

d. Presentation: Evening classes offered over a period of two years.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January and July.

g. Practicals: 100% attendance is compulsory for all practicals. Students must pass the practical component of a subject to obtain admission to sit for the examination.
h. Textbooks: Additional textbooks and other educational material will be required.

i. Safety wear: Specific safety wear is compulsory and must be purchased by the student.

j. Other requirements: Vaccination against Hepatitis B is compulsory.

k. Registration as a student medical technologist: It is compulsory for every student to register with the Health Professions Council of South Africa (HPCSA) either as a student or a qualified medical technologist.

l. Professional registration as a medical technologist: Registration as a qualified medical technologist takes place four years after registration as a student medical technologist. The candidate must also have worked in a laboratory approved by the HPCSA for at least 14 months and must have passed the Board examination of the Society of Medical Laboratory Technologists of South Africa (SMLTSA).

m. Readmission: See Chapter 3 of Students’ Rules and Regulations.

n. Subject credits: Subject credits are shown in brackets after every subject.

### FIRST AND SECOND YEAR
Subjects will be offered as determined by the Head of the Department.

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<tr>
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<td>MLB400T</td>
<td>Molecular Biology IV</td>
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**FIRST SEMESTER**

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**SECOND SEMESTER**

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

### 2.3 MAGISTER TECHNOLOGIAE: BIOMEDICAL TECHNOLOGY
Course code: MTBM96

**Campus where offered:** Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

**REMARKS**

a. Admission requirement(s): A Baccalaureus Technologiae: Biomedical Technology or an equivalent qualification.

b. Selection criteria: A personal interview with a selection committee.

c. Duration: A minimum of one year and a maximum of three years. Students must re-register annually for this programme.
d. Structure: The course consists of a research project, which must be recorded in the form of a dissertation.

e. Subject credits: Subject credits are shown in brackets after every subject.

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<tr>
<td>BIT500R</td>
<td>Dissertation: Biomedical Technology (re-registration)</td>
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</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

2.4 DOCTOR TECHNOLOGIAE: BIOMEDICAL TECHNOLOGY
Course code: DTBM96

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Biomedical Technology or an equivalent qualification.

b. Selection criteria: A personal interview with a selection committee.

c. Duration: A minimum of two years and a maximum of five years. Students must re-register annually for this programme.

d. Structure: The course consists of a research project, which must be recorded in the form of a thesis.

e. Subject credits: Subject credits are shown in brackets after every subject.

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<tr>
<th>CODE</th>
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<td>Thesis: Biomedical Technology</td>
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<tr>
<td>BIT700R</td>
<td>Thesis: Biomedical Technology (re-registration)</td>
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</table>

TOTAL CREDITS FOR THE QUALIFICATION: 2,000

2.5 NATIONAL DIPLOMA: CLINICAL TECHNOLOGY
Course code: NDCT00

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): For 2007: A Senior Certificate or an equivalent qualification, with Mathematics, Physical Science and Biology or Physiology, with C symbols at Standard Grade or E symbols at Higher Grade.
As from 2008: A Senior Certificate or an equivalent qualification, with English, Mathematics, Physical Science and Biology or Physiology, with C symbols at Standard Grade or E symbols at Higher Grade.

b. Selection criteria: Further selection for admission will be based on a Potential Assessment, as well as an interview with a departmental selection panel.

c. Recommended subject(s): English.

d. Minimum duration: Three years.

e. Presentation: Four semesters of day classes and two semesters of appropriate clinical training in a clinical unit approved by the Health Professions Council of South Africa (HPCSA).

f. Intake for the course: January only.

g. Registration for the subjects of this course: January and July.

h. Practicals: 100% attendance is compulsory for all practicals. Students must pass the practical component of a subject to obtain admission to sit for the examination.

i. Textbooks: Additional textbooks and other educational material will be required.

j. Safety wear: Specific safety wear is compulsory and must be purchased by the student.

k. Other requirements: Immunisation against Hepatitis B is compulsory. Transport to and from the accredited training venue is the student's own responsibility.

l. Registration as a student clinical technologist: It is compulsory for every student to register with the HPCSA as a student clinical technologist.

m. Professional registration as a clinical technologist: A candidate may register as a qualified clinical technologist (under supervision) after successfully completing the subjects of the first three academic years.

n. Clinical training (third year): The Head of the Department reserves the right to train students in only some of the seven categories after consultation with the industry. Students will receive guidance in their second year regarding the available options for the following year. Clinical training must be completed at an accredited unit. During the training period, the student is also subjected to the jurisdiction of this unit. The duration of the clinical training is one year.

o. Readmission: See Chapter 3 of Students’ Rules and Regulations.

p. Subject credits: Subject credits are shown in brackets after every subject.

Key to asterisks
* Information does not correspond with information in Report 151.
(Deviations approved by the Senate in August 2005.)
### FIRST YEAR

<table>
<thead>
<tr>
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<tr>
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<td>Anatomy I</td>
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<td>PSO100C</td>
<td>Physiology I</td>
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#### FIRST SEMESTER

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<tbody>
<tr>
<td>CAL101T</td>
<td>Calculations and Statistics</td>
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<tr>
<td>CHE141C</td>
<td>Chemistry IB</td>
<td>(0.125)</td>
<td></td>
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<tr>
<td>PHU161C</td>
<td>Physics IB</td>
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#### SECOND SEMESTER

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<tbody>
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<td>PDY101T</td>
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**TOTAL CREDITS FOR THE FIRST YEAR:** 1,000

### SECOND YEAR

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<tbody>
<tr>
<td>BPR200T</td>
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<td>OSA200T</td>
<td>Organ and System Pathophysiology II</td>
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#### FIRST SEMESTER

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<tr>
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<td>COA101C</td>
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**TOTAL CREDITS FOR THE SECOND YEAR:** 1,000

### THIRD YEAR

One of the following seven options must be taken:

#### OPTION 1
**CARDIOLOGY**

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<td>KKP300T</td>
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#### OPTION 2
**NEPHROLOGY**

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### OPTION 3  NEUROPHYSIOLOGY

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Anatomy and Physiology II
Biomedical Apparatus and Procedures II

### OPTION 4  PULMONOLOGY

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<td>KPU310T</td>
<td>Pulmonology: Clinical Practice III</td>
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<td>Pulmonology: Clinical Technology Practice III</td>
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<td>PBP310T</td>
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Anatomy and Physiology II
Biomedical Apparatus and Procedures II

### OPTION 5  CRITICAL CARE

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Anatomy and Physiology II
Biomedical Apparatus and Procedures II

### OPTION 6  REPRODUCTION* BIOLOGY

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<td>KRE320T</td>
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<td>RBA310T</td>
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Anatomy and Physiology II
Biomedical Apparatus and Procedures II

### OPTION 7  PERFUSION

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<td>Perfusion: Biomedical Apparatus III</td>
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<td>PFP310T</td>
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Anatomy and Physiology II
Biomedical Apparatus and Procedures II

**TOTAL CREDITS FOR THE THIRD YEAR:** 1,000
2.6 BACCALAUREUS TECHNOLOGIÆ: CLINICAL TECHNOLOGY
Course code: BTCT01

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Clinical Technology or an equivalent qualification. However, this does not apply to students who registered for the National Diploma for the first time before 2007 and who have not since interrupted their studies.

b. Selection criteria: All applications are subject to selection.

c. Minimum duration: One year.

d. Presentation: Evening classes offered over a period of two years.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January and July.

g. Practicals: 100% attendance is compulsory for all practicals. Students must pass the practical component of a subject to obtain admission to sit for the examination.

h. Textbooks: Additional textbooks and other educational material will be required.

i. Other requirements: Immunisation against Hepatitis B is compulsory.

j. Registration as a student clinical technologist: It is compulsory for every student to register with the Health Professions Council of South Africa (HPCSA) as a qualified clinical technologist (under supervision).

k. Professional registration as a clinical technologist: A candidate may register as a qualified clinical technologist (independent practice) after successfully completing the required subjects of the Baccalaureus Technologiae.

l. Readmission: See Chapter 3 of Students’ Rules and Regulations.

m. Subject credits: Subject credits are shown in brackets after every subject.

FIRST YEAR
FIRST SEMESTER

<table>
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TOTAL CREDITS FOR THE SEMESTER: 0,250
**SECOND SEMESTER**

PMR101T  Principles of Management I  (0,250)

TOTAL CREDITS FOR THE SEMESTER:  0,250

TOTAL CREDITS FOR THE FIRST YEAR:  0,500

**SECOND YEAR**

One of the following subjects:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Subject</th>
<th>Credits</th>
<th>Research Methodology:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRD400T</td>
<td>Cardiology IV</td>
<td>0,500</td>
<td>Natural Sciences</td>
</tr>
<tr>
<td>CRD400R</td>
<td>Cardiology IV (re-registration)</td>
<td>0,000</td>
<td></td>
</tr>
<tr>
<td>CTC400T</td>
<td>Critical Care IV</td>
<td>0,500</td>
<td>Natural Sciences</td>
</tr>
<tr>
<td>CTC400R</td>
<td>Critical Care IV (re-registration)</td>
<td>0,000</td>
<td></td>
</tr>
<tr>
<td>NEP400T</td>
<td>Nephrology IV</td>
<td>0,500</td>
<td>Natural Sciences</td>
</tr>
<tr>
<td>NEP400R</td>
<td>Nephrology IV (re-registration)</td>
<td>0,000</td>
<td></td>
</tr>
<tr>
<td>NPH400T</td>
<td>Neurophysiology IV</td>
<td>0,500</td>
<td>Natural Sciences</td>
</tr>
<tr>
<td>NPH400R</td>
<td>Neurophysiology IV (re-registration)</td>
<td>0,000</td>
<td></td>
</tr>
<tr>
<td>PRF400T</td>
<td>Perfusion IV</td>
<td>0,500</td>
<td>Natural Sciences</td>
</tr>
<tr>
<td>PRF400R</td>
<td>Perfusion IV (re-registration)</td>
<td>0,000</td>
<td></td>
</tr>
<tr>
<td>PUL400T</td>
<td>Pulmonology IV</td>
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<td>Natural Sciences</td>
</tr>
<tr>
<td>PUL400R</td>
<td>Pulmonology IV (re-registration)</td>
<td>0,000</td>
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<tr>
<td>RBY400T</td>
<td>Reproductive Biology IV</td>
<td>0,500</td>
<td>Natural Sciences</td>
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<td>RBY400R</td>
<td>Reproductive Biology IV (re-registration)</td>
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<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SECOND YEAR:  0,500

TOTAL CREDITS FOR THE QUALIFICATION:  1,000

---

### 2.7 MAGISTER TECHNOLOGIAE: CLINICAL TECHNOLOGY

**Course code: MTCT98**

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

### REMARKS

- **a. Admission requirement(s):** A Baccalaureus Technologiae: Clinical Technology or an equivalent qualification.
- **b. Selection criteria:** A personal interview with a selection committee.
- **c. Duration:** A minimum of one year and a maximum of three years. Students must re-register annually for this programme.
- **d. Structure:** The course consists of a research project that must be recorded in the form of a dissertation.
2.8 DOCTOR TECHNOLOGIAE: CLINICAL TECHNOLOGY
Course code: DTCT98

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Clinical Technology or an equivalent qualification.

b. Selection criteria: A personal interview with a selection committee.

c. Duration: A minimum of two years and a maximum of five years. Students must re-register annually for this programme.

d. Structure: The course consists of a research project that must be recorded in the form of a thesis.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCY500T</td>
<td>Dissertation: Clinical Technology</td>
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</tr>
<tr>
<td>CCY500R</td>
<td>Dissertation: Clinical Technology</td>
<td>(0,000)</td>
</tr>
<tr>
<td>(re-registration)</td>
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<td></td>
</tr>
</tbody>
</table>

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

2.9 NATIONAL DIPLOMA: RADIOGRAPHY: DIAGNOSTIC
Course code: NDRG96

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): For 2007: A Senior Certificate or an equivalent qualification with Mathematics, Physical Science and Biology or Physiology, with C symbols at Standard Grade or E symbols at Higher Grade.
As from 2008: A Senior Certificate or an equivalent qualification with English, Mathematics, Physical Science and Biology or Physiology, with C symbols at Standard Grade or E symbols at Higher Grade.

b. Selection criteria: Applicants will be selected provisionally; they will undergo a Potential Assessment and may subsequently be invited for a personal interview.

c. Recommended subject(s): English.

d. Minimum duration: Three years.

e. Presentation: Day classes.

f. Intake for the course: January only.

g. Registration for the subjects of this course: January only.

h. Professional registration: Compulsory once-only registration with the Health Professions Council of South Africa (HPCSA) as a student radiographer.

i. First-aid certificate: A compulsory first-aid course is presented at the University in the first year of study.

j. Additional expenses: Required uniforms: approximately R1 300. Prescribed textbooks: approximately R6 000.

k. Other requirements: Immunisation against Hepatitis B is compulsory. A valid driver’s licence is compulsory. Transport to and from various venues is the student's own responsibility.

l. Course rules: Unless otherwise stipulated, special course rules are applicable to students who register for this course. It is the responsibility of students to familiarise themselves with these rules.

m. Community service: After students have completed the basic training programme (three years), they must complete compulsory community service (twelve months), as stipulated by the National Department of Health.

n. Readmission: See Chapter 3 of Students’ Rules and Regulations.

o. Subject credits: Subject credits are shown in brackets after every subject.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANA100T</td>
<td>Anatomy I</td>
<td>(0,150)</td>
<td></td>
</tr>
<tr>
<td>CRP100T</td>
<td>Clinical Radiographic Practice I</td>
<td>(0,200)</td>
<td></td>
</tr>
<tr>
<td>PPM100T</td>
<td>Psycho-dynamics of Patient Management I</td>
<td>(0,100)</td>
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<tr>
<td>PSO100B</td>
<td>Physiology I</td>
<td>(0,150)</td>
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</tr>
<tr>
<td>RPR100T</td>
<td>Radiographic Practice I</td>
<td>(0,200)</td>
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</tr>
<tr>
<td>RCS100T</td>
<td>Radiation Science I</td>
<td>(0,200)</td>
<td></td>
</tr>
<tr>
<td>RSC10PT</td>
<td>Radiation Science: Physics and Chemistry I</td>
<td>(0,100)</td>
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</tr>
<tr>
<td>RSC10QT</td>
<td>Radiation Science: Image Recording I</td>
<td>(0,100)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE FIRST YEAR: 1,000
## SECOND YEAR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRP200T</td>
<td>Clinical Radiographic Practice II(D)</td>
<td>(0,200)</td>
</tr>
<tr>
<td>RGP200T</td>
<td>Radiographic Pathology II</td>
<td>(0,200)</td>
</tr>
<tr>
<td>RPR200T</td>
<td>Radiographic Practice II</td>
<td>(0,250)</td>
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<tr>
<td>RSC220T</td>
<td>Radiation Science II</td>
<td>(0,175)</td>
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<tr>
<td>RSC22PT</td>
<td>Radiation Science: Radiation Physics and Protection and Equipment II</td>
<td>(0,175)</td>
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<tr>
<td>RSC22QT</td>
<td>Radiation Science: Image Recording, Ultrasound and Radiobiology II</td>
<td>(0,175)</td>
</tr>
</tbody>
</table>

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

## THIRD YEAR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRP300T</td>
<td>Clinical Radiographic Practice III(D)</td>
<td>(0,300)</td>
</tr>
<tr>
<td>RGM300T</td>
<td>Radiographic Management III(D)</td>
<td>(0,100)</td>
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<tr>
<td>RPR300T</td>
<td>Radiographic Practice III(D)</td>
<td>(0,350)</td>
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<tr>
<td>RSC300T</td>
<td>Radiation Science III(D)</td>
<td>(0,125)</td>
</tr>
<tr>
<td>RSC30PT</td>
<td>Radiation Science: Specialised Equipment III(D)</td>
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<tr>
<td>RSC30QT</td>
<td>Radiation Science: Image Recording III(D)</td>
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</table>

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

### 2.10 BACCALAUREUS TECHNOLOGIAE: RADIOGRAPHY: DIAGNOSTIC

Course code: BTRG96

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

### REMARKS

a. Admission requirement(s): A National Diploma: Radiography: Diagnostic or an equivalent qualification. However, this does not apply to students who registered for the National Diploma for the first time before 2007 and who have not since interrupted their studies.
b. Selection criteria: All applications are subject to selection.

c. Minimum duration: One year.

d. Presentation: Block course offered over a period of two years on specific contact days.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January only.


g. Professional registration: Compulsory registration with the Health Professions Council of South Africa as a diagnostic radiographer.

h. Additional expenses: Prescribed textbooks: approximately R3 000.

i. Other requirements: Transport to and from various venues is the student's own responsibility.

j. Course rules: Unless otherwise stipulated, special course rules are applicable to students who register for this course. It is the responsibility of students to familiarise themselves with these rules.

k. Readmission: See Chapter 3 of Students’ Rules and Regulations.

l. Subject credits: Subject credits are shown in brackets after every subject.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPP100B</td>
<td>Management Principles and Practice I</td>
<td>(0,100)</td>
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</tr>
<tr>
<td>RMQ200C</td>
<td>Research Methods and Techniques</td>
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</table>

TOTAL CREDITS FOR THE FIRST YEAR: 0,200

**SECOND YEAR**

<table>
<thead>
<tr>
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<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRP400T</td>
<td>Radiographic Practice IV(D)</td>
<td>(0,800)</td>
<td>Management Principles and Practice I Research Methods and Techniques</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SECOND YEAR: 0,800

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

2.11 **MAGISTER TECHNOLOGIAE: RADIOGRAPHY**

Course code: MTRG97

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

**REMARKS**

a. Admission requirement(s): A Baccalaureus Technologiae: Radiography: Diagnostic or an equivalent qualification.
b. Selection criteria: A personal interview with a selection committee.

c. Duration: A minimum of one year and a maximum of three years. Students must re-register annually for this programme.

d. Structure: The course consists of a research project that must be recorded in the form of a dissertation.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>RGD500T</td>
<td>Dissertation: Radiography</td>
<td>(1,000)</td>
</tr>
<tr>
<td>RGD500R</td>
<td>Dissertation: Radiography</td>
<td>(0,000)</td>
</tr>
<tr>
<td></td>
<td>(re-registration)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

2.12 DOCTOR TECHNOLOGIAE: RADIOGRAPHY
Course code: DTRG97

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Radiography or an equivalent qualification.

b. Selection criteria: A personal interview with a selection committee.

c. Duration: A minimum of two years and a maximum of five years. Students must re-register annually for this programme.

d. Structure: The course consists of a research project that must be recorded in the form of a thesis.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
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<th>SUBJECT</th>
<th>CREDIT</th>
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</thead>
<tbody>
<tr>
<td>RGD700T</td>
<td>Thesis: Radiography</td>
<td>(2,000)</td>
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<tr>
<td>RGD700R</td>
<td>Thesis: Radiography</td>
<td>(0,000)</td>
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<tr>
<td></td>
<td>(re-registration)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 2,000
REMARKS

a. Admission requirement(s): For 2007: A Senior Certificate or an equivalent qualification, with Mathematics, Physical Science and Biology or Physiology, with C symbols at Standard Grade or E symbols at Higher Grade.

As from 2008: A Senior Certificate or an equivalent qualification, with English, Mathematics, Physical Science and Biology or Physiology, with C symbols at Standard Grade or E symbols at Higher Grade.

b. Selection criteria: Further selection for admission will be based on a Potential Assessment, as well as an interview with a departmental selection panel.

c. Recommended subject(s): English.

d. Minimum duration: Three years.

e. Presentation: Four semesters of day classes and two semesters of experiential learning.

f. Intake for the course: January only.

g. Registration for the subjects of this course: January and July.

h. Registration as a veterinary technologist: It is compulsory for every first-year student to register with the South African Veterinary Council (SAVC) as a veterinary technologist. Registration must be renewed every year.

i. Professional registration as a veterinary technologist: Candidates must register as qualified veterinary technologists (under supervision) after successfully completing the subjects of the first three academic years. After successful completion of the fifth academic year, the candidate must register as a veterinary technologist (independent practice).

j. Practicals: 100% attendance is compulsory for all practicals. Students must pass the practical component of a subject to obtain admission to sit for the examination.

k. Textbooks: Additional textbooks and other educational material will be required.

l. Safety wear: Specific safety wear is compulsory and must be purchased by the student.

m. Experiential Learning I: See Chapter 5 of Students’ Rules and Regulations.

n. Readmission: See Chapter 3 of Students’ Rules and Regulations.

o. Subject credits: Subject credits are shown in brackets after every subject.
## FIRST YEAR
### FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
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</thead>
<tbody>
<tr>
<td>CAL101T</td>
<td>Calculations and Statistics</td>
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</tr>
<tr>
<td>CHE141C</td>
<td>Chemistry IB</td>
<td>(0,100)</td>
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</tr>
<tr>
<td>CSK101B</td>
<td>Computer Skills I</td>
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<tr>
<td>PHU161C</td>
<td>Physics IB</td>
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<tr>
<td>VDA111T</td>
<td>Food Animals Anatomy and Physiology I</td>
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TOTAL CREDITS FOR THE SEMESTER: 0,500

### SECOND SEMESTER

<table>
<thead>
<tr>
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<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
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</thead>
<tbody>
<tr>
<td>BCH221T</td>
<td>Biochemistry II</td>
<td>(0,125)</td>
<td>Chemistry IB</td>
</tr>
<tr>
<td>HTL201T</td>
<td>Histology</td>
<td>(0,125)</td>
<td>Food Animals Anatomy and Physiology I</td>
</tr>
<tr>
<td>HVS201T</td>
<td>Haematology: Veterinary Science</td>
<td>(0,125)</td>
<td>Food Animals Anatomy and Physiology I</td>
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<tr>
<td>MBI101T</td>
<td>Microbiology I</td>
<td>(0,125)</td>
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</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE FIRST YEAR: 1,000

## SECOND YEAR
### FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCH311T</td>
<td>Biochemistry III</td>
<td>(0,125)</td>
<td>Biochemistry II</td>
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<tr>
<td>EAT211T</td>
<td>Experimental Animal Technology II</td>
<td>(0,125)</td>
<td>Food Animals Anatomy and Physiology I</td>
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<tr>
<td>IML211T</td>
<td>Immunology II</td>
<td>(0,125)</td>
<td>Haematology: Veterinary Science</td>
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<tr>
<td>MBI241B</td>
<td>Microbiology II</td>
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<td>Microbiology I</td>
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</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

### SECOND SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEM301T</td>
<td>Helminthology III</td>
<td>(0,100)</td>
<td>Microbiology II</td>
</tr>
<tr>
<td>PZY301T</td>
<td>Protozoology III</td>
<td>(0,100)</td>
<td>Microbiology II</td>
</tr>
<tr>
<td>VIR311T</td>
<td>Virology III</td>
<td>(0,100)</td>
<td>Immunology II</td>
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<tr>
<td>VTE301T</td>
<td>Veterinary Entomology III</td>
<td>(0,100)</td>
<td>Microbiology II</td>
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<tr>
<td>VTM301T</td>
<td>Veterinary Microbiology III</td>
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<td>Microbiology II</td>
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</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE SECOND YEAR: 1,000

## THIRD YEAR
After the completion of all first-, second- and third-semester subjects.

### FIRST SEMESTER

<table>
<thead>
<tr>
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<th>CREDIT</th>
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<tbody>
<tr>
<td>EXP1VET</td>
<td>Experiential Learning I</td>
<td>(0,500)</td>
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</table>
## SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVT201T</td>
<td>Applied Veterinary Technology II</td>
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</tr>
<tr>
<td></td>
<td>Experiential Learning I</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,500  
**TOTAL CREDITS FOR THE THIRD YEAR:** 1,000

### 2.14 BACCALAUREUS TECHNOLOGIAE: VETERINARY TECHNOLOGY

**Course code:** BTVE96  
**Campus where offered:** Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

## REMARKS

**a. Admission requirement(s):** A National Diploma: Veterinary Technology or an equivalent qualification. However, this does not apply to students who registered for the National Diploma for the first time before 2007 and who have not since interrupted their studies.

**b. Selection criteria:** All applications are subject to selection.

**c. Minimum duration:** One year offered over a period of two years.

**d. Presentation:** Day classes, evening classes and/or block courses.

**e. Intake for the course:** January and July.

**f. Registration for the subjects of this course:** January and July.

**g. Professional registration as a veterinary technologist:** After successful completion of the second academic year, the candidate must register as a veterinary technologist (independent practice).

**h. Practicals:** 100% attendance is compulsory for all practicals. Students must pass the practical component of a subject to obtain admission to sit for the examination.

**i. Textbooks:** Additional textbooks and other educational material will be required.

**j. Safety wear:** Specific safety wear is compulsory and must be purchased by the student.

**k. Readmission:** See Chapter 3 of Students’ Rules and Regulations.

**l. Subject credits:** Subject credits are shown in brackets after every subject.
FIRST AND SECOND YEAR
Subjects will be offered in semesters as determined by the Head of the Department.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPS101T</td>
<td>Entrepreneurial Skills</td>
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<tr>
<td>PJA401T</td>
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<td>(0,280)</td>
<td>Research Methodology:</td>
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<tr>
<td></td>
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<td>Natural Sciences</td>
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<tr>
<td>PJA401R</td>
<td>Project: Veterinary Technology IV</td>
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<td></td>
<td>(re-registration)</td>
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<tr>
<td>RMN201B</td>
<td>Research Methodology: Natural Sciences</td>
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</table>

plus two of the following subjects:

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLB400T</td>
<td>Molecular Biology IV (year subject)</td>
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<tr>
<td>PRY401T</td>
<td>Parasitology IV</td>
<td>(0,280)</td>
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<tr>
<td>PTX401T</td>
<td>Pharmacology and Toxicology IV</td>
<td>(0,280)</td>
</tr>
<tr>
<td>RPT401T</td>
<td>Reproduction Technology IV</td>
<td>(0,280)</td>
</tr>
<tr>
<td>VIR401T</td>
<td>Virology IV</td>
<td>(0,280)</td>
</tr>
<tr>
<td>VTB401T</td>
<td>Veterinary Bacteriology IV</td>
<td>(0,280)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

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2.15 MAGISTER TECHNOLOGIAE: VETERINARY TECHNOLOGY
Course code: MTVE96

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Veterinary Technology or an equivalent qualification.

b. Selection criteria: A personal interview with a selection committee.

c. Duration: A minimum of one year and a maximum of three years. Students must re-register annually for this programme.

d. Structure: The course consists of a research project, which must be recorded in the form of a dissertation.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTY500T</td>
<td>Dissertation: Veterinary Technology</td>
<td>(1,000)</td>
</tr>
<tr>
<td>VTY500R</td>
<td>Dissertation: Veterinary Technology (re-reg)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000
2.16 DOCTOR TECHNOLOGIAE: VETERINARY TECHNOLOGY
Course code: DTVE96

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Veterinary Technology or an equivalent qualification.

b. Selection: A personal interview with a selection committee.

c. Duration: A minimum of two years and maximum of five years. Students must re-register annually for this programme.

d. Structure: The course consists of a research project, which must be recorded in the form of a thesis.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
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<tbody>
<tr>
<td>VTY700T</td>
<td>Thesis: Veterinary Technology</td>
<td>(2,000)</td>
</tr>
<tr>
<td>VTY700R</td>
<td>Thesis: Veterinary Technology (re-registration)</td>
<td>(0,000)</td>
</tr>
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</table>

TOTAL CREDITS FOR THE QUALIFICATION: 2,000

2.17 SUBJECT INFORMATION

SUBJECT NAME: ANATOMY I
SUBJECT CODE: ANA100T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
A study of basic human anatomy. The emphasis is on the major parts of the body and on the characteristics of all the individual bones.

SUBJECT NAME: ANATOMY I
SUBJECT CODE: ANA100B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Systemic anatomy, including osteology, anthropology, myology, neurology, angiology, splanchnology, surface anatomy and regional anatomy.

SUBJECT NAME: ANATOMY AND PHYSIOLOGY I
SUBJECT CODE: APY141T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
The subject serves as an introduction to subjects following later in the course. The emphasis is on cell structure and tissues. All the systems in the body are discussed, with the emphasis on those aspects of importance to the course.
SUBJECT NAME: ANATOMY AND PHYSIOLOGY II
SUBJECT CODE: APY211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
An integrated study of microanatomy, physiological anatomy, physiology and physiological chemistry of the following systems: digestive, metabolic, thermo-regulatory, endocrine, nervous, reproductive.

SUBJECT NAME: APPLIED VETERINARY TECHNOLOGY II
SUBJECT CODE: AVT201T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Project. Students have to submit a report.

SUBJECT NAME: BIOCHEMISTRY II
SUBJECT CODE: BCH221T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
pH and buffers, nucleic acids, carbohydrates, amino acids and proteins, enzymes and lipids.

SUBJECT NAME: BIOCHEMISTRY III
SUBJECT CODE: BCH311T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Metabolism of carbohydrates, lipids, proteins and nitrogen-containing compounds. Protein biosynthesis.

SUBJECT NAME: BIOMEDICAL APPARATUS AND PROCEDURES II
SUBJECT CODE: BPR200T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: BLOOD TRANSFUSION TECHNOLOGY
SUBJECT CODE: BDT211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Basic immunology and genetics, ABO, Rh, HLA and other systems, determination of ABO and Rh blood groups, government regulations, preparation of blood components and applicable laboratory tests.

SUBJECT NAME: CALCULATIONS AND STATISTICS
SUBJECT CODE: CAL101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: CARDIOLOGY: BIOMEDICAL APPARATUS III
SUBJECT CODE: CBM300T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
SUBJECT NAME: CARDIOLOGY: CLINICAL PRACTICE III
SUBJECT CODE: KKP300T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: CARDIOLOGY: CLINICAL TECHNOLOGY PRACTICE III
SUBJECT CODE: KKP310T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Practice-based competency tests of all the relevant cardiological procedures and skills.

SUBJECT NAME: CARDIOLOGY IV
SUBJECT CODE: CRD400T
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: CELLULAR PATHOLOGY I
SUBJECT CODE: CPG101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Introduction to cellular pathology. Preparation techniques for histology: collection and fixation of tissues, embedding and sectioning of tissues, staining and mounting.

SUBJECT NAME: CELLULAR PATHOLOGY II
SUBJECT CODE: CPG221T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: CELLULAR PATHOLOGY III
SUBJECT CODE: CPG301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Histology and cytology of the respiratory tract, urinary tract, gastro-intestinal tract and serous cavities. Cytology of other sites: fine-needle aspiration and the central nervous system. Cytogenetics, techniques and application.

SUBJECT NAME: CHEMICAL PATHOLOGY I
SUBJECT CODE: CPH111T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
SUBJECT NAME: CHEMICAL PATHOLOGY II
SUBJECT CODE: CPH241T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Laboratory instruments, automation and maintenance. Amino acids and proteins. Immuno-chemical techniques. Carbohydrate metabolism. Lipid metabolism. CSF and other body fluids and prenatal testing.

SUBJECT NAME: CHEMICAL PATHOLOGY III
SUBJECT CODE: CPH311T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: CHEMISTRY IB
SUBJECT CODE: CHE141C
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Inorganic chemistry: atoms, molecules, periodic table, mole concept, chemical calculations, chemistry and elements of groups 1A, 4A, 5A, 6A. Organic chemistry: introduction, alkanes, alkenes, aromates, alkanols, phenols, halogen compounds, alkanoates, alkynes, aldehydes, ketones and alkanolic acids.

SUBJECT NAME: CLINICAL RADIOGRAPHIC PRACTICE I
SUBJECT CODE: CRP100T
EVALUATION METHOD: PRACTICAL
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Application of Radiographic Practice I in the X-ray department. Clinical, continuous assessment throughout the year.

SUBJECT NAME: CLINICAL RADIOGRAPHIC PRACTICE II(D)
SUBJECT CODE: CRP200T
EVALUATION METHOD: PRACTICAL
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Application of Radiographic Practice II in the X-ray department. Clinical, continuous assessment throughout the year.

SUBJECT NAME: CLINICAL RADIOGRAPHIC PRACTICE III(D)
SUBJECT CODE: CRP300T
EVALUATION METHOD: PRACTICAL
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Application of Radiographic Practice III(D) in the X-ray department. Clinical, continuous assessment throughout the year, with an external evaluation at the end of the year.

SUBJECT NAME: COMPUTER APPLICATIONS I
SUBJECT CODE: COA101C
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 60 hours
OVERVIEW OF SYLLABUS:
SUBJECT NAME: COMPUTER SKILLS I
SUBJECT CODE: CSK101B
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 60 hours
OVERVIEW OF SYLLABUS:
Basic computer literacy regarding DOS, word-processing programs (e.g. WordPerfect), spreadsheets (e.g. Lotus), and databases (e.g. dBase). Project.

SUBJECT NAME: CRITICAL CARE: BIOMEDICAL APPARATUS III
SUBJECT CODE: CBP310T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Electrocardiography, invasive and non-invasive pressure monitoring, assessment of pulmonary volumes, measurements (pH, blood gas and electrolytes), treatment of respiratory failure, clinical anaesthesia, thermometry, assessment of homeostasis, infusion devices.

SUBJECT NAME: CRITICAL CARE: CLINICAL PRACTICE III
SUBJECT CODE: KSK310T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Electrical safety, electrocardiography, cardio-pulmonary resuscitation, invasive and non-invasive pressure monitoring, assessment of pulmonary volumes, blood-gas sampling, arterial oxygen saturation, acid-base values, nebulisation, humidification, positive pO2.

SUBJECT NAME: CRITICAL CARE: CLINICAL TECHNOLOGY PRACTICE III
SUBJECT CODE: KSK320T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Practice-based competency tests of all the relevant critical-care procedures and skills.

SUBJECT NAME: CRITICAL CARE IV
SUBJECT CODE: CTC400T
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENTREPRENEURIAL SKILLS
SUBJECT CODE: EPS101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 60 hours
OVERVIEW OF SYLLABUS:
Entrepreneurship, core business strategies, marketing strategies, operational strategies, financial planning and management, human resource planning.

SUBJECT NAME: EXPERIENTIAL LEARNING I
SUBJECT CODE: EXP1VET
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
A training programme is compiled in collaboration with the supervisor.

SUBJECT NAME: EXPERIMENTAL ANIMAL TECHNOLOGY II
SUBJECT CODE: EAT211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Handling, care, husbandry, nutrition, breeding of experimental animals, e.g. mice, rats, guinea-pigs and rabbits, and the prevention of diseases. Design of captivity facilities. Feeding, ventilation and sterilisation systems. Genetics and legislation concerning experimental animals.
SUBJECT NAME: FOOD ANIMALS ANATOMY AND PHYSIOLOGY I
SUBJECT CODE: VDA111T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Microscopic and macroscopic study of all structures and organs in the bodies of food animals, as well as the functioning of these organs and structures.

SUBJECT NAME: HAEMATOLOGY II
SUBJECT CODE: HAT221T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Origin and normal development of the haemopoietic elements, the erythrocytes and leukocytes, platelet/megakaryocyte system and haemostasis.

SUBJECT NAME: HAEMATOLOGY III
SUBJECT CODE: HAT321T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Abnormal erythrocyte morphology and function, leucocytes and thrombocytes. Causes and laboratory findings of anaemia, leukaemias and coagulation defects.

SUBJECT NAME: HAEMATOLOGY: VETERINARY SCIENCE
SUBJECT CODE: HVS201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Morphology and functions of erythrocytes, leucocytes and thrombocytes, applicable laboratory tests. Abnormal morphology and functions of blood cells, causes and laboratory findings of anaemias and coagulation defects.

SUBJECT NAME: HELMINTHOLOGY III
SUBJECT CODE: HEM301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Identification of parasitic helminths on the grounds of diagnostic characteristics. The life cycle of helminths and prevention and control measures are studied in detail. Recognition and pathology of diseases. Laboratory techniques are introduced.

SUBJECT NAME: HISTOLOGY
SUBJECT CODE: HTL201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Fixation, bedding and cutting of tissue. Staining and mounting of histological slide preparations. Preparations are used for diagnosis. Cell structures and basic tissue types.

SUBJECT NAME: IMMUNOLOGY II
SUBJECT CODE: IML211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
SUBJECT NAME: INTRODUCTION TO MEDICAL TECHNOLOGY
SUBJECT CODE: IMT101T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 60 hours
OVERVIEW OF SYLLABUS:
The field of medical technology. Introduction to medical laboratory practices, terminology and safety.

SUBJECT NAME: INTEGRATED PATHOPHYSIOLOGY IV
SUBJECT CODE: IPP400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
The pathogenesis of the different systems of the body are studied with reference to the following systems: the skin, skeleton, muscle, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems. The emphasis is on laboratory diagnosis and not on clinical cases. Case studies will be used.

SUBJECT NAME: LABORATORY MANAGEMENT
SUBJECT CODE: LMG201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 60 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: LABORATORY PRACTICE III
SUBJECT CODE: LAP301T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Practical training at pathology laboratories in chemical pathology, haematology and microbiology.

SUBJECT NAME: MANAGEMENT PRINCIPLES AND PRACTICE I
SUBJECT CODE: MPP100B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 60 hours
OVERVIEW OF SYLLABUS:
Basic management skills and techniques, as well as office management. Advanced personnel and financial management. Dealing with conflict and diversity.

SUBJECT NAME: MICROBIOLOGY I
SUBJECT CODE: MBI101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
General introduction, microscopy, Protista, mycete and Monera, eukaryotes, prokaryotes and viruses, microbial nutrition, growth and culture media, sterilisation and control of micro-organisms, aseptic techniques and pure culture techniques, basic terminology and principles of microbial metabolism, practical microbiology.

SUBJECT NAME: MICROBIOLOGY II
SUBJECT CODE: MBI241B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Enrichment culture techniques and long-term preservation of micro-organisms. Advanced composition and structure of prokaryotes. Introduction to the genetics of micro-organisms. Microbial metabolism. Identification of the more important groups of bacteria, using biochemical and serological tests.
SUBJECT NAME: MICROBIOLOGY III
SUBJECT CODE: MBI321T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Medical mycology: classification of yeasts and moulds of medical importance, mycological procedures, pathogenesis and laboratory identification of medically important yeasts and moulds. Medical parasitology: classification of protozoa and helminths of medical importance, parasitological procedures, life cycles and pathogenicity of medically important parasites. Medical virology: general properties and classification of medically important viruses, culturing of viruses, the properties, isolation and culturing of medically important viruses.

SUBJECT NAME: MOLECULAR BIOLOGY IV
SUBJECT CODE: MLB400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: NEPHROLOGY IV
SUBJECT CODE: NEP400T
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
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.

SUBJECT NAME: NEPHROLOGY: BIOMEDICAL APPARATUS III
SUBJECT CODE: NRB310T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: NEPHROLOGY: CLINICAL PRACTICE III
SUBJECT CODE: NRC310T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Patient observation, blood transfusions, setting up disposable equipment, haemodialysis.

SUBJECT NAME: NEPHROLOGY: CLINICAL TECHNOLOGY PRACTICE III
SUBJECT CODE: NRC320T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Practice-based competency tests of all the relevant nephrological procedures and skills.

SUBJECT NAME: NEUROPHYSIOLOGY IV
SUBJECT CODE: NPH400T
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Electroencephalogram, polysomnography, evoked potential recordings, electromyography. Neurography.
SUBJECT NAME: NEUROPHYSIOLOGY: BIOMEDICAL APPARATUS III
SUBJECT CODE: NPB310T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Electroencephalogram, polysomnography, evoked potential recordings, electromyography.

SUBJECT NAME: NEUROPHYSIOLOGY: CLINICAL PRACTICE III
SUBJECT CODE: NPC310T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Electroencephalogram investigations, sleep recordings, polygraphic recordings, visual and somatosensory evoked potential studies, electromyographic studies.

SUBJECT NAME: NEUROPHYSIOLOGY: CLINICAL TECHNOLOGY PRACTICE III
SUBJECT CODE: NPC320T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Practice-based competency tests of all the relevant neurophysiological procedures and skills.

SUBJECT NAME: ORGAN AND SYSTEM PATHOPHYSIOLOGY II
SUBJECT CODE: OSA200T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: PARASITOLOGY IV
SUBJECT CODE: PRY401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: 90 hours
OVERVIEW OF SYLLABUS:
The ecological and epidemiological principles that have an influence on the occurrence and distribution of parasites in Southern Africa. The population dynamics of parasites. Principles of integrated pest control. The prevention of pollution and biological resistance against chemical pesticides. Project.

SUBJECT NAME: PATHOPHYSIOLOGY II
SUBJECT CODE: PPT201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: 90 hours
OVERVIEW OF SYLLABUS:
The disruption of the normal physiological functions of the body, and the processes that lead to disruption. To understand these processes, the individual sciences of histopathology, microbiology, haematology and chemical pathology are combined in an integral concept.

SUBJECT NAME: PERFUSION IV
SUBJECT CODE: PRF400T
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
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.
SUBJECT NAME: PERFUSION: BIOMEDICAL APPARATUS III  
SUBJECT CODE: PBD310T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: Not available  
OVERVIEW OF SYLLABUS: 
Heart-lung machines, flow meters, vaporisers, thermometers, heating-cooling systems, safety apparatus, cardioplegia, oxygenators, cardiotomy reservoirs, filters, tubing, pressure monitoring systems, cannulas, suckers, sterilisation, blood gas and electrolyte analysers, draining systems, balloon pumps.

SUBJECT NAME: PERFUSION: CLINICAL PRACTICE III  
SUBJECT CODE: PFP310T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: Not available  
OVERVIEW OF SYLLABUS: 
Determining the layout of the heart-lung machine, physiology of perfusion, laboratory equipment, emergency procedures, parameters during ECC.

SUBJECT NAME: PERFUSION: CLINICAL TECHNOLOGY PRACTICE III  
SUBJECT CODE: PFP320T  
EVALUATION METHOD: CONTINUOUS ASSESSMENT  
TOTAL TUITION TIME: Not available  
OVERVIEW OF SYLLABUS: 
Practice-based competency tests of all the relevant perfusion procedures and skills.

SUBJECT NAME: PHARMACOLOGY II  
SUBJECT CODE: PMC200T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: Not available  
OVERVIEW OF SYLLABUS: 

SUBJECT NAME: PHARMACOLOGY AND TOXICOLOGY IV  
SUBJECT CODE: PTX401T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 90 hours  
OVERVIEW OF SYLLABUS: 
Administration routes. Basic principles of toxicology. Sampling, handling and analytical techniques.

SUBJECT NAME: PHYSICS IB  
SUBJECT CODE: PHU161C  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 90 hours  
OVERVIEW OF SYLLABUS: 
A general physics course with applications in the biological sciences: general laws of movement, mechanics, heat, hydrodynamics, electricity and magnetism, wave motion, nuclear physics.

SUBJECT NAME: PHYSIOLOGY I  
SUBJECT CODE: PSO100B  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: Not available  
OVERVIEW OF SYLLABUS: 
The number, size, position, structure, basic functions and the relationship of organs to one another.
SUBJECT NAME: PHYSIOLOGY I
SUBJECT CODE: PSO100C
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available

SUBJECT NAME: PRINCIPLES OF MANAGEMENT I
SUBJECT CODE: PMR101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS: 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.

SUBJECT NAME: PROJECT: VETERINARY TECHNOLOGY IV
SUBJECT CODE: PJA401T
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS: Project. Students must submit a protocol and a report.

SUBJECT NAME:PROTOZOLOGY III
SUBJECT CODE: PZY301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS: Identification of parasitic protozoa and recognition of the diseases they cause in food animals and pets. Diagnostic characteristics, life cycles, pathology, prevention and control. Laboratory techniques are introduced.

SUBJECT NAME: PSYCHO-DYNAMICS I
SUBJECT CODE: PDY101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS: Professionalism, ethics, developmental psychology, patient care, applied psychology.

SUBJECT NAME: PSYCHO-DYNAMICS OF PATIENT MANAGEMENT I
SUBJECT CODE: PPM100T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS: Professionalism, ethics, developmental psychology and applied psychology.

SUBJECT NAME: PULMONOLOGY IV
SUBJECT CODE: PUL400T
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: Not available
SUBJECT NAME: PULMONOLOGY: BIOMEDICAL APPARATUS III
SUBJECT CODE: PBP310T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Spirometry, flow measuring devices, transducers, transcutaneous monitoring, gas chromatography, mass spectrometry, thermal conductive detectors, analysers (optical transmission, infrared, paramagnetic, Geissler tube, blood gas), lung functions, whole-body plethysmography, bronchoscopy.

SUBJECT NAME: PULMONOLOGY: CLINICAL PRACTICE III
SUBJECT CODE: KPU310T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Sterilisation, electrical safety, gas laws, lung volumes, ventilation, spirogram, flow-volume curves, lung scans, whole-body plethysmography, diffusion, bronchodilators, bronchoscopy.

SUBJECT NAME: PULMONOLOGY: CLINICAL TECHNOLOGY PRACTICE III
SUBJECT CODE: KPU320T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Practice-based competency tests of all the relevant pulmonological procedures and skills.

SUBJECT NAME: RADIATION SCIENCE: IMAGE RECORDING I
SUBJECT CODE: RSC10QT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Basic theory of film materials, cassettes, intensifying screens and automatic processing.

SUBJECT NAME: RADIATION SCIENCE: IMAGE RECORDING III(D)
SUBJECT CODE: RSC30QT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
More advanced theory and practice of image recording and its application to diagnostic radiography, such as duplication, photographic subtraction, macroradiography, quality assurance, fluoroscopy, photofluorography, digital radiography, wet and dry laser printer.

SUBJECT NAME: RADIATION SCIENCE: IMAGE RECORDING, ULTRASOUND AND RADIOBIOLOGY II
SUBJECT CODE: RSC22QT
EVALUATION METHOD: 2 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
More advanced theory and practice of image recording in diagnostic radiography, such as sensitometry, luminescence exposure factors. Basic principles of ultrasound, introductory course to radiobiology.

SUBJECT NAME: RADIATION SCIENCE: PHYSICS AND CHEMISTRY I
SUBJECT CODE: RSC10PT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Basic concepts of the structure of matter, optics, electricity, transformers and vacuum-tube electronics that form a basis for Radiation Science II and Radiation Science III(D). Basic introduction to chemistry.
SUBJECT NAME: RADIATION SCIENCE: RADIATION PHYSICS AND PROTECTION AND EQUIPMENT II
SUBJECT CODE: RSC22PT
EVALUATION METHOD: 2 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Supply of electricity to X-ray rooms, X-ray tube designs, including X-ray tables and tube stands, exposure switching and methods for limited scattered beams. The atomic structure and electromagnetic rays. The excitation of X-rays, attenuation and interaction of radiation with matter, radiation risks and radiation protection in all X-ray departments.

SUBJECT NAME: RADIATION SCIENCE: SPECIALISED EQUIPMENT III(D)
SUBJECT CODE: RSC30PT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: RADIOGRAPHIC MANAGEMENT III(D)
SUBJECT CODE: RGM300T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
The principles of management in a diagnostic X-ray department, stock control, planning. Basic managerial skills and techniques, as well as office practice.

SUBJECT NAME: RADIOGRAPHIC PATHOLOGY II
SUBJECT CODE: RGP200T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
A study of normal and pathological states found in general and specialised radiographic procedures. Cross-section and general body-section anatomy is emphasised in respect of, especially, tomography and ultrasound.

SUBJECT NAME: RADIOGRAPHIC PRACTICE I
SUBJECT CODE: RPR100T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Basic principles of diagnostic radiography and routine and special projections of structures of the body. Introductory courses to radiation oncology, nuclear medicine and ultrasound. The responsibility of the radiographer towards the patient.

SUBJECT NAME: RADIOGRAPHIC PRACTICE II
SUBJECT CODE: RPR200T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Technique adaptions for seriously injured patients, pathological conditions and children. Special techniques for soft-tissue demonstration, as well as pathological conditions.

SUBJECT NAME: RADIOGRAPHIC PRACTICE III(D)
SUBJECT CODE: RPR300T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Special projections and techniques to demonstrate certain localised areas of the skeleton and other structures: angiography, myelography, tomography, arthography, discography and sinography. Paediatric radiography and the basic principles and applications of new radiographic techniques, such as computer tomography and magnetic resonance imaging.
SUBJECT NAME: RADIOGRAPHIC PRACTICE IV(D)
SUBJECT CODE: PRP400T
EVALUATION METHOD: 2 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: REPRODUCTION: BIOMEDICAL APPARATUS III
SUBJECT CODE: RBA310T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Laboratory equipment. Functioning of a computer-assisted sperm analysis (CASA) system. Microscopes. Photographic and videographic equipment. Maintenance of equipment.

SUBJECT NAME: REPRODUCTION: CLINICAL PRACTICE III
SUBJECT CODE: KRE310T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Laboratory safety. Computer-assisted sperm analysis (CASA). Biomedical statistics, word processing and data management, sterility and quality control in the workplace, ethics and handling of laboratory animals, handling of chemicals in the reproductive biology laboratory.

SUBJECT NAME: REPRODUCTION: CLINICAL TECHNOLOGY PRACTICE III
SUBJECT CODE: KRE320T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Practice-based competency tests of all the relevant reproductive procedures and skills.

SUBJECT NAME: REPRODUCTION TECHNOLOGY IV
SUBJECT CODE: RPT401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Practical and theoretical knowledge of the anatomy and physiology of the reproduction systems of animals. The application of semen technology, including semen preservation, semen evaluation and artificial insemination. Embryo technology involves all aspects of fertilisation, embryo development and implantation, maintenance of pregnancy and assistance with partus.

SUBJECT NAME: REPRODUCTIVE BIOLOGY IV
SUBJECT CODE: RBY400T
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: RESEARCH METHODOLOGY: NATURAL SCIENCES
SUBJECT CODE: RMN201B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
SUBJECT NAME: RESEARCH METHODS AND TECHNIQUES
SUBJECT CODE: RMQ200C
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Theory of research and statistics, as well as statistic calculations.

SUBJECT NAME: RESEARCH METHODS AND TECHNIQUES
SUBJECT CODE: RMQ201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 60 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: VETERINARY BACTERIOLOGY IV
SUBJECT CODE: VTB401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
The more important pathogenic bacteria, mycoplasmas and fungi of veterinary importance are covered with respect to isolation, identification and symptoms. Advanced techniques. Project.

SUBJECT NAME: VETERINARY ENTOMOLOGY III
SUBJECT CODE: VTE301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Identification of parasitic insects and the recognition of diseases transferred and caused by them. Life cycles of insects and environmental factors that influence those cycles. Prevention and control, as well as chemical control. Acarology (ticks and mites).

SUBJECT NAME: VETERINARY MICROBIOLOGY III
SUBJECT CODE: VTM301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
Micro-organisms (bacteria and fungi) that cause veterinary diseases. Emphasis is placed on the isolation and identification of organisms.

SUBJECT NAME: VIROLOGY III
SUBJECT CODE: VIR311T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: VIROLOGY IV
SUBJECT CODE: VIR401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 90 hours
OVERVIEW OF SYLLABUS:
3. DEPARTMENT OF BIOTECHNOLOGY AND FOOD TECHNOLOGY

3.1 NATIONAL DIPLOMA: BIOTECHNOLOGY
Course code: NDBT03

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

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

b. Selection criteria: Admission is subject to evaluation and applicants will have to take a potential test and an additional entrance examination. Based on their results in the above, they will either be admitted directly to their programme of choice, or to a foundation programme linked to that programme. The latter would result in an extension of the minimum period of study. Prospective students currently in Grade 12 will be provisionally selected on their Grade 11 results.

c. Recommended subject(s): Biology.

d. Minimum duration: Three years.

e. Presentation: Four semesters of day classes and two semesters of experiential learning.

f. Intake for the course: January only.

g. Registration for the subjects of this course: January and July.

h. Practical: It is compulsory to attend 100% of practicals. Students must pass the practical component of a subject to obtain permission to sit for the examination.

i. Textbooks: Textbooks and other educational material will be required.

j. Safety wear: Specific safety wear is compulsory (where applicable) and must be purchased by the student. The approximate cost is R500.

k. Projects and assignments: Students will be expected to undertake projects and assignments in some of the subjects.

l. Experiential Learning I and II: See Chapter 5 of Students’ Rules and Regulations.

m. Readmission: See Chapter 3 of Students’ Rules and Regulations.

n. Subject credits: Subject credits are shown in brackets after every subject.


**FIRST YEAR**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
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</thead>
<tbody>
<tr>
<td>CAL101T</td>
<td>Calculations and Statistics</td>
<td>(0,080)</td>
<td></td>
</tr>
<tr>
<td>CHE141C</td>
<td>Chemistry IB</td>
<td>(0,150)</td>
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</tr>
<tr>
<td>PHU161C</td>
<td>Physics IB</td>
<td>(0,120)</td>
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<tr>
<td>SSH101T</td>
<td>Sanitation, Safety and Hygiene I</td>
<td>(0,110)</td>
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**TOTAL CREDITS FOR THE SEMESTER:** 0,460

**SECOND SEMESTER**

<table>
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<tbody>
<tr>
<td>ACI201T</td>
<td>Analytical Chemistry: Biological II</td>
<td>(0,130)</td>
<td>Chemistry IB</td>
</tr>
<tr>
<td>BCH221B</td>
<td>Biochemistry II</td>
<td>(0,130)</td>
<td>Chemistry IB</td>
</tr>
<tr>
<td>MBI101T</td>
<td>Microbiology I</td>
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<tr>
<td>PTM100T</td>
<td>Process Technology and Management I</td>
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<tr>
<td>PTM10XT</td>
<td>Process Technology and Management: Theory I</td>
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<tr>
<td>PTM10YT</td>
<td>Process Technology and Management: Computer Skills</td>
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**TOTAL CREDITS FOR THE SEMESTER:** 0,520

**TOTAL CREDITS FOR THE FIRST YEAR:** 0,980

**SECOND YEAR**

**FIRST SEMESTER**

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

**SECOND SEMESTER**

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<tbody>
<tr>
<td>ALB301T</td>
<td>Analytical Biochemistry III</td>
<td>(0,125)</td>
<td>Analytical Chemistry: Biological II</td>
</tr>
<tr>
<td>BPS301T</td>
<td>Bioprocessing III</td>
<td>(0,125)</td>
<td>Fermentation Technology II</td>
</tr>
<tr>
<td>FMB311T</td>
<td>Food Microbiology III</td>
<td>(0,140)</td>
<td>Microbiology II</td>
</tr>
<tr>
<td>MBG301T</td>
<td>Microbiology: Biological III</td>
<td>(0,125)</td>
<td>Microbiology II</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,515

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

**THIRD YEAR**

*After the completion of all first- and second-year subjects.*

**FIRST AND SECOND SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
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</thead>
<tbody>
<tr>
<td>EXP1BIO</td>
<td>Experiential Learning I</td>
<td>(0,500)</td>
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</tr>
<tr>
<td>EXP2BIO</td>
<td>Experiential Learning II</td>
<td>(0,500)</td>
<td>Experiential Learning I</td>
</tr>
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</table>

**TOTAL CREDITS FOR THE THIRD YEAR:** 1,000
3.2 BACCALAUREUS TECHNOLOGIAE: BIOTECHNOLOGY

Course code: BTBT01

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Biotechnology or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: A personal interview with a departmental selection panel may be required.

c. Minimum duration: One year.

d. Presentation: Block course offered over a period of two years.

e. Intake for the course: January and July.

f. Registration for the subjects of this course: January and July.

g. Readmission: See Chapter 3 of Students’ Rules and Regulations.

h. Subject credits: Subject credits are shown in brackets after every subject.

Subjects will be offered as determined by the Department.

FIRST YEAR

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
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<tbody>
<tr>
<td>IBI401T</td>
<td>Industrial Biotechnology IV</td>
<td>(0,125)</td>
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<tr>
<td>MBT401T</td>
<td>Medical Biotechnology IV</td>
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SECOND SEMESTER (2007)

<table>
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<tr>
<th>CODE</th>
<th>SUBJECT</th>
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<tbody>
<tr>
<td>RMN201B</td>
<td>Research Methodology: Natural Sciences</td>
<td>(0,050)</td>
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<tr>
<td>RMN20XB</td>
<td>Research Methodology: Natural Sciences: Biotechnology</td>
<td>(0,050)</td>
</tr>
<tr>
<td>RMN20YB</td>
<td>Research Methodology: Natural Sciences: Statistics</td>
<td>(0,050)</td>
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</table>

TOTAL CREDITS FOR THE FIRST YEAR: 0,350

SECOND YEAR

FIRST SEMESTER (2008)

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
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<tbody>
<tr>
<td>EMB401T</td>
<td>Environmental Biotechnology IV</td>
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<tr>
<td>EPS101T</td>
<td>Entrepreneurial Skills</td>
<td>(0,100)</td>
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<tr>
<td>RSP401T</td>
<td>Research Project IV (offered in both semesters)</td>
<td>(0,300)</td>
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<tr>
<td>RSP401R</td>
<td>Research Project IV (re-registration)</td>
<td>(0,000)</td>
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</table>
SECOND SEMESTER (2008)

MBB401T Microbial Biochemistry IV (0,125)

TOTAL CREDITS FOR THE SECOND YEAR: 0,650

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

3.3 MAGISTER TECHNOLOGIAE: BIOTECHNOLOGY
Course code: MTBT96

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Biotechnology or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. These procedures will be fully explained to each candidate during the personal interview.

c. Duration: A minimum of one year and a maximum of three years. Students must re-register annually for this programme.

d. Structure: This programme consists of a research project that must be recorded in the form of a dissertation. Before the dissertation will be accepted for examination, a draft article, based on the research (approved by the supervisor), must be ready for submission to a peer-evaluated accredited journal. The student must also present a colloquium before submitting the dissertation. In addition, he or she must successfully complete a programme in Research Methodology in the first year of the magister technologiae if it was not done as part of a previous qualification.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
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<tbody>
<tr>
<td>BTY500T</td>
<td>Dissertation: Biotechnology</td>
<td>(1,000)</td>
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<tr>
<td>BTY500R</td>
<td>Dissertation: Biotechnology</td>
<td>(0,000)</td>
</tr>
<tr>
<td></td>
<td>(re-registration)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000
3.4 Doctor Technologiae: Biotechnology

Course code: DTBT96

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Biotechnology or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. Procedures will be fully explained to each candidate during the personal interview.

c. Duration: A minimum of two years and a maximum of five years. Students must re-register annually for this programme.

d. Structure: This course consists of a research project that must be recorded in the form of a thesis. Before the thesis will be accepted for examination, at least two articles, based on the research (approved by the supervisor), must have been submitted to a peer-evaluated accredited journal (or a patent or artefact must have been successful). One of the two articles must already have been accepted for publication, and written proof of it must be submitted as part of the requirements of the degree. The student must also present a colloquium before submitting the thesis. In addition, he or she must successfully defend the thesis before the degree will be awarded.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
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<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
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<tbody>
<tr>
<td>BTY700T</td>
<td>Thesis: Biotechnology</td>
<td>(2,000)</td>
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<tr>
<td>BTY700R</td>
<td>Thesis: Biotechnology (re-registration)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 2,000

3.5 National Diploma: Food Technology

Course code: NDFT03

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Senior Certificate or an equivalent qualification, with D symbols at Standard Grade or E symbols at Higher Grade for Mathematics and Physical Sciences, and a pass in English.
b. Selection criteria: Admission is subject to evaluation and applicants will have to take a potential test and an additional entrance examination. Based on their results in the above, they will either be admitted directly to their programme of choice, or to a foundation programme linked to that programme. The latter would result in an extension of the minimum period of study. Prospective students currently in Grade 12 will be provisionally selected on their Grade 11 results.

c. Recommended subject(s): Biology.

d. Minimum duration: Three years.

e. Presentation: Four semesters of day classes and two semesters of experiential learning.

f. Intake for the course: January only.

g. Registration for the subjects of this course: January and July.

h. Practical: It is compulsory to attend 100% of practicals. Students must pass the practical component of a subject to obtain permission to sit for the examination.

i. Textbooks: Textbooks and other educational material may be required.

j. Safety wear: Specific safety wear is compulsory (where applicable) and must be purchased by the student. The approximate cost is **R500**.

k. Projects and assignments: Students will be expected to undertake projects and assignments in some of the subjects.

l. Experiential Learning I and II: See Chapter 5 of Students’ Rules and Regulations.

m. Readmission: See Chapter 3 of Students’ Rules and Regulations.

n. Subject credits: Subject credits are shown in brackets after every subject.

Key to asterisks:
* Information does not correspond with information in Report 151.

(Deviations approved by the Senate in August 2005.)

**FIRST YEAR**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
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<th>PREREQUISITE SUBJECT(S)</th>
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<tbody>
<tr>
<td>CAL101T</td>
<td>Calculations and Statistics</td>
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<tr>
<td>CHE141C</td>
<td>Chemistry IB</td>
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<td>FPE101T</td>
<td>Food Process Engineering I</td>
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<tr>
<td>PHU161C</td>
<td>Physics IB</td>
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<td>FPE10YT</td>
<td>Food Process Engineering: Computer Skills I</td>
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TOTAL CREDITS FOR THE SEMESTER: 0,427
### SECOND SEMESTER

<table>
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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACI201T</td>
<td>Analytical Chemistry: Biological II</td>
<td>(0,125)</td>
</tr>
<tr>
<td>BCH221B</td>
<td>Biochemistry II</td>
<td>(0,125)</td>
</tr>
<tr>
<td>FTN111T</td>
<td>Food Technology I</td>
<td>(0,150)</td>
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<tr>
<td>MBI101T</td>
<td>Microbiology I</td>
<td>(0,148)</td>
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**TOTAL CREDITS FOR THE SEMESTER:** 0,548

**TOTAL CREDITS FOR THE FIRST YEAR:** 0,975

### SECOND YEAR

#### FIRST SEMESTER

<table>
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<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>FBI301T</td>
<td>Food Biochemistry III</td>
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<td>FQA101T</td>
<td>Food Quality Assurance I</td>
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<tr>
<td>FTN211T</td>
<td>Food Technology II</td>
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<td>MBI241T</td>
<td>Microbiology II</td>
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**TOTAL CREDITS FOR THE SEMESTER:** 0,525

#### SECOND SEMESTER

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<td>FDC301T</td>
<td>Food Production III</td>
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<tr>
<td>FMB311T</td>
<td>Food Microbiology III</td>
<td>(0,140)</td>
</tr>
<tr>
<td>FPE101T</td>
<td>Food Process Engineering I</td>
<td>(0,075)</td>
</tr>
<tr>
<td>FPE10XT</td>
<td>Food Process Engineering: Calculations and Statistics</td>
<td>(0,075)</td>
</tr>
<tr>
<td>FTN301T</td>
<td>Food Technology III</td>
<td>(0,160)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,500

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

#### THIRD YEAR

After the completion of all first- and second-year subjects.

### FIRST AND SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP1FDT</td>
<td>Experiential Learning I</td>
<td>(0,500)</td>
</tr>
<tr>
<td>EXP2FDT</td>
<td>Experiential Learning II</td>
<td>(0,500)</td>
</tr>
</tbody>
</table>

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

### 3.6 BACCALAUREUS TECHNOLOGIAE: FOOD TECHNOLOGY

**Course code: BTFT02**

**Campus where offered:** Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

### REMARKS

a. Admission requirement(s): A National Diploma: Food Technology or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.
b. Selection criteria: A personal interview with a departmental selection panel may be required.

c. Minimum duration: One year.

d. Presentation: Block course offered over a period of two years.

e. Intake for the course: January and July.

f. Registration for the subjects of this course: January and July.

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

h. Subject credits: Subject credits are shown in brackets after every subject.

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

**FIRST YEAR**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>VPO401T</td>
<td>Food Product Development IV</td>
<td>(0,160)*</td>
</tr>
</tbody>
</table>

**SECOND SEMESTER (2007)**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCP401T</td>
<td>Food Components IV</td>
<td>(0,168)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE FIRST YEAR: 0,328

**SECOND YEAR**

**FIRST SEMESTER (2008)**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDC401T</td>
<td>Food Production IV</td>
<td>(0,168)</td>
</tr>
<tr>
<td>FMA401T</td>
<td>Food Microbial Assurance IV</td>
<td>(0,168)</td>
</tr>
<tr>
<td>FPJ401T</td>
<td>Food Project IV (offered in both semesters)</td>
<td>(0,168)</td>
</tr>
<tr>
<td>FPJ401R</td>
<td>Food Project IV (re-registration)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

**SECOND SEMESTER (2008)**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTN411T</td>
<td>Food Technology IV</td>
<td>(0,168)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SECOND YEAR: 0,672

TOTAL CREDITS FOR THE QUALIFICATION: 1,000
3.7 MAGISTER TECHNOLOGIAE: FOOD TECHNOLOGY
Course code: MTFT96

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Food Technology or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. These procedures will be fully explained to each candidate during the personal interview.

c. Duration: A minimum of one year and a maximum of three years. Students must re-register annually for this programme.

d. Structure: This programme consists of a research project that must be recorded in the form of a dissertation. Before the dissertation will be accepted for examination, a draft article, based on the research (approved by the supervisor), must be ready for submission to a peer-evaluated accredited journal. The student must also present a colloquium before submitting the dissertation. In addition, he or she must successfully complete a programme in Research Methodology in the first year of the magister technologiae if it was not done as part of a previous qualification.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTN500T</td>
<td>Dissertation: Food Technology</td>
<td>(1,000)</td>
</tr>
<tr>
<td>FTN500R</td>
<td>Dissertation: Food Technology (re-registration)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

3.8 DOCTOR TECHNOLOGIAE: FOOD TECHNOLOGY
Course code: DTFT96

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Food Technology or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.
b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. Procedures will be fully explained to each candidate during the personal interview.

c. Duration: A minimum of two years and a maximum of five years. Students must re-register annually for this programme.

d. Structure: This course consists of a research project that must be recorded in the form of a thesis. Before the thesis will be accepted for examination, at least two articles, based on the research (approved by the supervisor), must have been submitted to a peer-evaluated accredited journal (or a patent or artefact must have been successful). One of the two articles must already have been accepted for publication, and written proof of it must be submitted as part of the requirements of the degree. The student must also present a colloquium before submitting the thesis. In addition, he or she must successfully defend the thesis before the degree will be awarded.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTN700T</td>
<td>Thesis: Food Technology</td>
<td>(2,000)</td>
</tr>
<tr>
<td>FTN700R</td>
<td>Thesis: Food Technology (re-registration)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 2,000

3.9 SUBJECT INFORMATION

SUBJECT NAME: ANALYTICAL BIOCHEMISTRY III
SUBJECT CODE: ALB301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS: Chromatography, spectrophotometry, spectroscopy, polarimetry, refractometry.

SUBJECT NAME: ANALYTICAL CHEMISTRY: BIOLOGICAL II
SUBJECT CODE: ACI201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS: Chromatographic and spectrophotometric techniques and instrumentation.

SUBJECT NAME: BIOCHEMISTRY II
SUBJECT CODE: BCH221B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
SUBJECT NAME: BIOPROCESSING III
SUBJECT CODE: BPS301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Products of fermentation technology, biotransformation, enzyme technology, domestic and industrial wastewater treatment.

SUBJECT NAME: CALCULATIONS AND STATISTICS
SUBJECT CODE: CAL101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: CHEMISTRY IB
SUBJECT CODE: CHE141C
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Inorganic chemistry: atoms, molecules, periodic table, mole concept, chemical calculations, chemistry and elements of groups 1A, 4A, 5A, 6A. Organic chemistry: introduction, alkanes, alkenes, aromates, alkanols, phenols, halogen compounds, alkanoates, alkynes, aldehydes, ketones and alkanolic acids.

SUBJECT NAME: DISEASE AND IMMUNE RESPONSE II
SUBJECT CODE: DIR201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Important diseases of man, animals and plants. Control strategies. Immune system, vaccination, monoclonal and polyclonal antibody, plant and animal tissue culture, diagnostic techniques.

SUBJECT NAME: ENTREPRENEURIAL SKILLS
SUBJECT CODE: EPS101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Entrepreneurship: core business strategies, marketing strategies, operational strategies, financial planning and management, human resource planning.

SUBJECT NAME: ENVIRONMENTAL BIOTECHNOLOGY IV
SUBJECT CODE: EMB401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Environmental protection and waste disposal, industrial wastewater treatment processes, biodegradation of xenobiotic compounds, bioleaching and biosorption, soil bioremediation, bioremediation of oil spills.

SUBJECT NAME: EXPERIENTIAL LEARNING I
SUBJECT CODE: EXP1BIO
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Practical experience in a relevant industry, which covers at least two of the following: research and development, quality control, safety management, stock control, marketing.
SUBJECT NAME: EXPERIENTIAL LEARNING I
SUBJECT CODE: EXP1FDT
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Practical experience in a relevant industry, which covers at least two of the following: research and product development, production, processing or manufacturing, quality assurance or quality control, stock control, marketing.

SUBJECT NAME: EXPERIENTIAL LEARNING II
SUBJECT CODE: EXP2BIO
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Practical experience in a relevant industry, which covers at least two of the following: research and development, quality control, safety management, stock control, marketing.

SUBJECT NAME: EXPERIENTIAL LEARNING II
SUBJECT CODE: EXP2FDT
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Practical experience in a relevant industry, which covers at least two of the following: research and product development, production, processing or manufacturing, quality assurance or quality control, stock control, marketing.

SUBJECT NAME: FERMENTATION TECHNOLOGY II
SUBJECT CODE: FMT201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Isolation of micro-organisms, preparation of media, microbial growth, primary and secondary screening, setting up a fermentation laboratory: instrumentation, stirred tank reactor design, other types of bioreactors, sterilisation of media, sterility and aseptic conditions, inoculum development, batch and continuous cultures, product recovery, economics of fermentation.

SUBJECT NAME: FOOD BIOCHEMISTRY III
SUBJECT CODE: FBI301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Study of the major chemical components of food, the chemical changes they undergo during processing and storage, and methods used to analyse them.

SUBJECT NAME: FOOD COMPONENTS IV
SUBJECT CODE: FCP401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Food ingredients and functionality, food additives, legislation and labelling, interaction between food ingredients in a particular product, principles of analytical methods.

SUBJECT NAME: FOOD MICROBIAL ASSURANCE IV
SUBJECT CODE: FMA401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Quality control and quality assurance, good manufacturing practices and HACCP, microbiological changes in food before, during and after processing, Codex Alimentarius, food biotechnology, risk analysis.
SUBJECT NAME: FOOD MICROBIOLOGY III
SUBJECT CODE: FMB311T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Importance of food microbiology, microbial and mycological spoilage of food, factors influencing microbial spoilage of foods, microbiological aspects of food preservation, microbial food poisoning and food-transmitted infection, the isolation and identification of pathogens from food products, the use of micro-organisms in the production of food, microbiology of the air.

SUBJECT NAME: FOOD PROCESS ENGINEERING: COMPUTER SKILLS I
SUBJECT CODE: FPE10YT
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Microcomputer hardware and software.

SUBJECT NAME: FOOD PROCESS ENGINEERING: FOOD ENGINEERING I
SUBJECT CODE: FPE10XT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Units and dimensions, energy and mass balance, combined energy and mass balances, steam tables, basics of heat transfer, heat exchangers, refrigeration, drying, humidifying, evaporation equipment, mechanical separation, gas laws, fluid motion.

SUBJECT NAME: FOOD PRODUCT DEVELOPMENT IV
SUBJECT CODE: VPO401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Marketing principles. Introduction to the food product development process. Idea generation, screening of ideas, from concept to product, sensory and safety analysis, and launching the new product. Retrospection: problems and constraints during the development process. Future trends and intellectual property.

SUBJECT NAME: FOOD PRODUCTION III
SUBJECT CODE: FDC301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: FOOD PRODUCTION IV
SUBJECT CODE: FDC401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Management: definition, principles and practices of management, management planning, Gantt and Load charts, project management, decision-making, budgeting, customer and human relations and operational management.

SUBJECT NAME: FOOD PROJECT IV
SUBJECT CODE: FPJ401T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Food industry management: definition, principles and practices of management, management planning, Gantt and Load charts. Project management, decision-making, budgeting, customer and human relations and operational management. Entrepreneurship.
SUBJECT NAME: FOOD QUALITY ASSURANCE I
SUBJECT CODE: FQA101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Introduction to quality, quality control and quality assurance, HACCP and microbiological control, organisation and management, product specifications, packaging, labelling and shelf life, manufacturing, plant inspection, kosher certification and halal foods, customer services, product and safety data sheets, complaint handling, ISO 9000 & 1400.

SUBJECT NAME: FOOD TECHNOLOGY I
SUBJECT CODE: FTN111T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: FOOD TECHNOLOGY II
SUBJECT CODE: FTN211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: FOOD TECHNOLOGY III
SUBJECT CODE: FTN301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Technology of fats and oils, dairy products, meat, fish, poultry and eggs, beverages (alcoholic and non-alcoholic), chocolate and sugar confectionery.

SUBJECT NAME: FOOD TECHNOLOGY IV
SUBJECT CODE: FTN411T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
New developments in food packaging, selected food technologies, chemical and physical changes in foods, nutritional and nutraceutical properties of food, fortification and enrichment, legislation regarding claims made for nutritional and nutraceutical properties of food.

SUBJECT NAME: INDUSTRIAL BIOTECHNOLOGY IV
SUBJECT CODE: IBI401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: MEDICAL BIOTECHNOLOGY IV
SUBJECT CODE: MBT401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Mammalian cell culture, application of normal and cancerous cell cultures, recombinant DNA technology in cell cultures, applications of recombinant cell cultures.
SUBJECT NAME: MICROBIAL BIOCHEMISTRY III
SUBJECT CODE: MBB301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Genetic code and protein synthesis, restriction enzymes, polymerase chain reaction, glycolysis, glucogenesis, pentose phosphate pathway, glycogen degradation and synthesis, control of glycogen metabolism, fatty acid breakdown, fatty acid synthesis, metabolism of triacylglycerols, citric acid cycle, electron transport and oxidative phosphorylation, anaerobic and aerobic metabolism, nitrogen fixation and assimilation, amino acid metabolism, urea cycle.

SUBJECT NAME: MICROBIAL BIOCHEMISTRY IV
SUBJECT CODE: MBB401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: MICROBIOLOGY I
SUBJECT CODE: MBI101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Microbial diversity, bacteria, fungi, protozoa, viruses, microbial growth and culture techniques, microscopy, staining techniques, sterilisation, disinfection and control, enumeration of bacteria and fungi.

SUBJECT NAME: MICROBIOLOGY II
SUBJECT CODE: MBI241T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
SYLLABUS:
Advanced composition and structure of the eucaryotic cell. Metabolism for energy production - pathways for the production of ATP. Introduction to genetics of micro-organisms, the genetic code, mutations and recombinant DNA technology. Taxonomy, principles and characteristics/schemes used. Bergey's Manual - groups of bacteria, their characteristics and importance.

SUBJECT NAME: MICROBIOLOGY: BIOLOGICAL III
SUBJECT CODE: MBG301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: PHYSICS IB
SUBJECT CODE: PHU161C
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Remedial mathematics, fundamental units, vectors and scalars, kinetics, mechanics, dynamics, momentum, moments, work, energy and power, fluids, temperature and heat, gas laws, waves and sound, optics, electricity, magnetism, radio-activity. Practical: experiments related to the theory.
SUBJECT NAME: PROCESS TECHNOLOGY AND MANAGEMENT: COMPUTER SKILLS I
SUBJECT CODE: PTM10YT
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Microcomputer hardware and software.

SUBJECT NAME: PROCESS TECHNOLOGY AND MANAGEMENT: THEORY I
SUBJECT CODE: PTM10XT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Units and dimensions, energy and mass balances, steam tables, basics of heat transfer. Introduction to general management: planning, organising, leading, controlling, communication and interpersonal skills, transcultural management.

SUBJECT NAME: RESEARCH METHODOLOGY: NATURAL SCIENCES: BIOTECHNOLOGY
SUBJECT CODE: RMN20XB
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Introduction, tools of research, problem identification and development, review of related literature, planning of research proposals, instrumentation, writing proposals, presenting results of research, statistics, working with a supervisor.

SUBJECT NAME: RESEARCH METHODOLOGY: NATURAL SCIENCES: STATISTICS
SUBJECT CODE: RMN20YB
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Statistical methods for the preparation and working of data, including descriptive statistical methods.

SUBJECT NAME: RESEARCH PROJECT IV
SUBJECT CODE: RSP401T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Students will be guided in choosing an applicable practical project. A protocol and a final report must be submitted and orally presented.

SUBJECT NAME: SANITATION, SAFETY AND HYGIENE I
SUBJECT CODE: SSH101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
## 4. DEPARTMENT OF CHEMISTRY AND PHYSICS

### 4.1 NATIONAL DIPLOMA: ANALYTICAL CHEMISTRY

**Course Code:** NDAC03

<table>
<thead>
<tr>
<th>Campus where offered:</th>
<th>Arcadia Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ga-Rankuwa Campus (Pipeline students only - no new first-years/new intake)</td>
</tr>
<tr>
<td></td>
<td>Soshanguve Campus (Pipeline students only - no new first-years/new intake)</td>
</tr>
</tbody>
</table>

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

### REMARKS

- **a. Admission requirement(s):** A Senior Certificate or an equivalent qualification, with D symbols at Standard Grade or E symbols at Higher Grade for Mathematics and Physical Science and a pass in English.
- **b. Recommended subject(s):** None.
- **c. Selection criteria:** Admission is subject to evaluation and applicants will have to take a potential test and an additional entrance examination. Based on their results in the above, they will either be admitted directly to their programme of choice, or to a foundation programme linked to that programme. The latter would result in an extension of the minimum period of study. Prospective students currently in Grade 12 will be provisionally selected on their Grade 11 results.
- **d. Minimum duration:** Three years.
- **e. Presentation:** Day classes and experiential learning.
- **f. Intake for the course:** January only.
- **g. Registration for the subjects of this course:** January and July.
- **h. Practicals:** It is compulsory for students to attend 100% of practicals. Students must pass the practical component of a subject to be admitted to sit for the examination.
- **i. Textbooks:** Textbooks and other educational material will be required.
- **j. Safety wear:** Specific safety wear is compulsory (where applicable) and students must purchase it themselves.
- **k. Experiential Learning:** See Chapter 5 of Students’ Rules and Regulations.
- **l. Readmission:** See Chapter 3 of Students’ Rules and Regulations.
- **m. Subject credits:** Subject credits are shown in brackets after every subject.

Key to asterisks:

* Information does not correspond with information in Report 151. (Deviations approved by the Senate in August 2005.)
## OPTION A: ARCADIA CAMPUS

### FIRST YEAR

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC101T</td>
<td>Analytical Chemistry I</td>
<td>(0,125) Analytical Chemistry I</td>
</tr>
<tr>
<td>CHE141B</td>
<td>Chemistry IA</td>
<td>(0,125)</td>
</tr>
<tr>
<td>CSK101B</td>
<td>Computer Skills I</td>
<td>(0,083)</td>
</tr>
<tr>
<td>MAT141B</td>
<td>Mathematics I</td>
<td>(0,083)</td>
</tr>
<tr>
<td>PHU161B</td>
<td>Physics IA</td>
<td>(0,084)*</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

#### SECOND SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHP201T</td>
<td>Analytical Chemistry: Practical II</td>
<td>(0,100) Analytical Chemistry I</td>
</tr>
<tr>
<td>ANC251T</td>
<td>Analytical Chemistry II</td>
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<tr>
<td>ICH231T</td>
<td>Inorganic Chemistry II</td>
<td>(0,100) Inorganic Chemistry II</td>
</tr>
<tr>
<td>OCH221T</td>
<td>Organic Chemistry II</td>
<td>(0,100) Organic Chemistry II</td>
</tr>
<tr>
<td>PCB221T</td>
<td>Physical Chemistry II</td>
<td>(0,100) Physical Chemistry II</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE FIRST YEAR: 1,000

### SECOND YEAR

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI201T</td>
<td>Chemical Process Industries II</td>
<td>(0,100) Chemistry IA</td>
</tr>
<tr>
<td>ICH321T</td>
<td>Inorganic Chemistry III</td>
<td>(0,139) Inorganic Chemistry II</td>
</tr>
<tr>
<td>OCH321T</td>
<td>Organic Chemistry III</td>
<td>(0,139) Organic Chemistry II</td>
</tr>
<tr>
<td>PCB321T</td>
<td>Physical Chemistry III</td>
<td>(0,139) Physical Chemistry II</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,517

#### SECOND SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHP311T</td>
<td>Analytical Chemistry: Practical III</td>
<td>(0,200) Analytical Chemistry II</td>
</tr>
<tr>
<td>ANC321T</td>
<td>Analytical Chemistry III</td>
<td>(0,200) Analytical Chemistry II</td>
</tr>
<tr>
<td>CQA201T</td>
<td>Chemical Quality Assurance</td>
<td>(0,100) Chemistry IA</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE SECOND YEAR: 1,017
THIRD YEAR
(Subjects will be offered in both semesters.)

One of the following options:

Option 1

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Credits</th>
<th>Related Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENC201T</td>
<td>Environmental Chemistry II</td>
<td>0.083*</td>
<td>Chemistry IA</td>
</tr>
<tr>
<td>EPS101B</td>
<td>Entrepreneurial Skills</td>
<td>0.100</td>
<td></td>
</tr>
<tr>
<td>EXP1ACH</td>
<td>Experiential Learning</td>
<td>0.500</td>
<td>Analytical Chemistry II</td>
</tr>
<tr>
<td></td>
<td>(this subject may not be taken</td>
<td></td>
<td>Analytical Chemistry: Practical II</td>
</tr>
<tr>
<td></td>
<td>with any other subject during the</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>same semester)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBA201T</td>
<td>Industrial Chemical Analysis</td>
<td>0.100</td>
<td></td>
</tr>
<tr>
<td>MAT251B</td>
<td>Mathematics II</td>
<td>0.100</td>
<td>Mathematics I</td>
</tr>
<tr>
<td>PHU201T</td>
<td>Physics II</td>
<td>0.100</td>
<td>Physics IA</td>
</tr>
</tbody>
</table>

Option 2

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Credits</th>
<th>Related Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP1ACH</td>
<td>Experiential Learning</td>
<td>0.500</td>
<td>Analytical Chemistry II</td>
</tr>
<tr>
<td></td>
<td>(this subject and Chemistry Project III may not be taken during the same semester)</td>
<td></td>
<td>Analytical Chemistry: Practical II</td>
</tr>
<tr>
<td>CPJ311T</td>
<td>Chemistry Project III</td>
<td>0.483*</td>
<td>Analytical Chemistry I</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Chemistry IA</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE YEAR: **0.983**

OPTION B: GA-RANKUWA CAMPUS

NO NEW REGISTRATIONS FOR THIS CAMPUS OPTION ARE ACCEPTED AS FROM 2007. STUDENTS WHO ARE CURRENTLY REGISTERED AT THIS CAMPUS WILL HAVE UNTIL 2011 TO OBTAIN THE QUALIFICATION, SUBJECT TO THE STIPULATIONS OF REGULATION 3.1.1(a) ON THE MAXIMUM DURATION OF STUDY.

Phase-out date: 31 December 2011

FIRST YEAR

FIRST SEMESTER

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Credits</th>
<th>Related Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC101T</td>
<td>Analytical Chemistry I</td>
<td>0.125</td>
<td></td>
</tr>
<tr>
<td>CHE141B</td>
<td>Chemistry IA</td>
<td>0.125</td>
<td></td>
</tr>
<tr>
<td>CSK101B</td>
<td>Computer Skills I</td>
<td>0.083</td>
<td></td>
</tr>
<tr>
<td>MAT141B</td>
<td>Mathematics I</td>
<td>0.083</td>
<td></td>
</tr>
<tr>
<td>PHU161B</td>
<td>Physics IA</td>
<td>0.084*</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: **0.500**

SECOND SEMESTER

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Credits</th>
<th>Related Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHP201T</td>
<td>Analytical Chemistry: Practical II</td>
<td>0.100</td>
<td>Analytical Chemistry I</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Chemistry IA</td>
</tr>
<tr>
<td>ANC251T</td>
<td>Analytical Chemistry II</td>
<td>0.100</td>
<td>Analytical Chemistry I</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Chemistry IA</td>
</tr>
<tr>
<td>ICH231T</td>
<td>Inorganic Chemistry II</td>
<td>0.100</td>
<td>Chemistry IA</td>
</tr>
<tr>
<td>OCH221T</td>
<td>Organic Chemistry II</td>
<td>0.100</td>
<td>Chemistry IA</td>
</tr>
<tr>
<td>PCB221T</td>
<td>Physical Chemistry II</td>
<td>0.100</td>
<td>Chemistry IA</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: **0.500**

TOTAL CREDITS FOR THE FIRST YEAR: **1.000**
### SECOND YEAR
#### FIRST SEMESTER
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHP311T</td>
<td>Analytical Chemistry: Practical III</td>
<td>0.200</td>
</tr>
<tr>
<td>ANC321T</td>
<td>Analytical Chemistry III</td>
<td>0.200</td>
</tr>
<tr>
<td>CQA201T</td>
<td>Chemical Quality Assurance</td>
<td>0.100</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL CREDITS FOR THE SEMESTER:</strong></td>
<td><strong>0.500</strong></td>
</tr>
</tbody>
</table>

#### SECOND SEMESTER
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENC201T</td>
<td>Environmental Chemistry II</td>
<td>0.083</td>
</tr>
<tr>
<td>ICH321T</td>
<td>Inorganic Chemistry III</td>
<td>0.139</td>
</tr>
<tr>
<td>OCH321T</td>
<td>Organic Chemistry III</td>
<td>0.139</td>
</tr>
<tr>
<td>PCB321T</td>
<td>Physical Chemistry III</td>
<td>0.139</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL CREDITS FOR THE SEMESTER:</strong></td>
<td><strong>0.500</strong></td>
</tr>
</tbody>
</table>

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

### THIRD YEAR
(Subjects will be offered in both semesters.)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI201T</td>
<td>Chemical Process Industries II</td>
<td>0.100</td>
</tr>
<tr>
<td>EPS101B</td>
<td>Entrepreneurial Skills</td>
<td>0.100</td>
</tr>
<tr>
<td>EXP1ACH</td>
<td>Experiential Learning (this subject may not be taken with any other subject during the same semester)</td>
<td>0.500</td>
</tr>
<tr>
<td>IBA201T</td>
<td>Industrial Chemical Analysis</td>
<td>0.100</td>
</tr>
<tr>
<td>MAT251B</td>
<td>Mathematics II</td>
<td>0.100</td>
</tr>
<tr>
<td>PHU201T</td>
<td>Physics II</td>
<td>0.100</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL CREDITS FOR THE THIRD YEAR:</strong></td>
<td><strong>1,000</strong></td>
</tr>
</tbody>
</table>

### OPTION C: SOSHANGUVE CAMPUS

NO NEW REGISTRATIONS FOR THIS CAMPUS OPTION ARE ACCEPTED AS FROM 2007. STUDENTS WHO ARE CURRENTLY REGISTERED ON THIS CAMPUS WILL HAVE UNTIL 2011 TO OBTAIN THE QUALIFICATION, SUBJECT TO THE STIPULATIONS OF REGULATION 3.1.1(a) ON THE MAXIMUM DURATION OF STUDY.

Phase-out date: **31 December 2011**

### FIRST YEAR
#### FIRST SEMESTER
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC101T</td>
<td>Analytical Chemistry I</td>
<td>0.125</td>
</tr>
<tr>
<td>CHE141B</td>
<td>Chemistry IA</td>
<td>0.125</td>
</tr>
<tr>
<td>CSK101B</td>
<td>Computer Skills I</td>
<td>0.083</td>
</tr>
<tr>
<td>MAT141B</td>
<td>Mathematics I</td>
<td>0.083</td>
</tr>
<tr>
<td>PHU161B</td>
<td>Physics IA</td>
<td>0.084*</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL CREDITS FOR THE SEMESTER:</strong></td>
<td><strong>0.500</strong></td>
</tr>
</tbody>
</table>

---

82 CHEMISTRY AND PHYSICS
### SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHP201T</td>
<td>Analytical Chemistry: Practical II</td>
<td>0,100</td>
<td>Analytical Chemistry I</td>
</tr>
<tr>
<td>ANC251T</td>
<td>Analytical Chemistry II</td>
<td>0,100</td>
<td>Analytical Chemistry I</td>
</tr>
<tr>
<td>ICH231T</td>
<td>Inorganic Chemistry II</td>
<td>0,100</td>
<td>Chemistry IA</td>
</tr>
<tr>
<td>OCH221T</td>
<td>Organic Chemistry II</td>
<td>0,100</td>
<td>Chemistry IA</td>
</tr>
<tr>
<td>PCB221T</td>
<td>Physical Chemistry II</td>
<td>0,100</td>
<td>Chemistry IA</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,500

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

### SECOND YEAR

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENC201T</td>
<td>Environmental Chemistry II</td>
<td>0,083*</td>
<td>Chemistry IA</td>
</tr>
<tr>
<td>ICH321T</td>
<td>Inorganic Chemistry III</td>
<td>0,139</td>
<td>Inorganic Chemistry II</td>
</tr>
<tr>
<td>OCH321T</td>
<td>Organic Chemistry III</td>
<td>0,139</td>
<td>Organic Chemistry II</td>
</tr>
<tr>
<td>PCB321T</td>
<td>Physical Chemistry III</td>
<td>0,139</td>
<td>Physical Chemistry II</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,500

### SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHP311T</td>
<td>Analytical Chemistry: Practical III</td>
<td>0,200</td>
<td>Analytical Chemistry II</td>
</tr>
<tr>
<td>ANC321T</td>
<td>Analytical Chemistry III</td>
<td>0,200</td>
<td>Analytical Chemistry: Practical II</td>
</tr>
<tr>
<td>CQA201T</td>
<td>Chemical Quality Assurance</td>
<td>0,100</td>
<td>Chemistry IA</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,500

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

### THIRD YEAR

(Subjects will be offered in both semesters.)

**Option 1**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI201T</td>
<td>Chemical Process Industries II</td>
<td>0,100</td>
<td></td>
</tr>
<tr>
<td>ENC301T</td>
<td>Environmental Chemistry III</td>
<td>0,100</td>
<td></td>
</tr>
<tr>
<td>EPS101B</td>
<td>Entrepreneurial Skills</td>
<td>0,100</td>
<td></td>
</tr>
<tr>
<td>EXP1ACH</td>
<td>Experiential Learning</td>
<td>0,500</td>
<td>Analytical Chemistry II</td>
</tr>
</tbody>
</table>

**Exp. Learning (this subject may not be taken with any other subject during the same semester)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT251B</td>
<td>Mathematics II</td>
<td>0,100</td>
<td>Mathematics I</td>
</tr>
<tr>
<td>PHU201T</td>
<td>Physics II</td>
<td>0,100</td>
<td>Physics IA</td>
</tr>
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</table>

**Option 2**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP1ACH</td>
<td>Experiential Learning</td>
<td>0,500</td>
<td>Analytical Chemistry II</td>
</tr>
</tbody>
</table>

**Exp. Learning (this subject and Chemistry Project III may not be taken during the same semester)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPJ311T</td>
<td>Chemistry Project III</td>
<td>0,500</td>
<td>Analytical Chemistry I</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE THIRD YEAR:** 1,000
4.2 BACCALAUREUS TECHNOLOGIAE: CHEMISTRY
Course code: BTCH02

Campus where offered: Arcadia Campus
Ga-Rankuwa Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Analytical Chemistry with Mathematics II and Physics II or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: A personal interview with a departmental selection panel.

c. Minimum duration: One year.

d. Presentation: Block course.

e. Intake for the course: January and July.

f. Registration for the subjects of this course: January and July.

 g. Practicals: It is compulsory for students to attend 100% of practicals. Students must pass the practical component of a subject to be admitted 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 students must purchase it themselves.

j. Readmission: See Chapter 3 of Students’ Rules and Regulations.

k. Subject credits: Subject credits are shown in brackets after every subject.

OPTION A: ARCADIA CAMPUS

ATTENDANCE

FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC411T</td>
<td>Analytical Chemistry IV</td>
<td>(0,200)</td>
<td>Analytical Chemistry III</td>
</tr>
<tr>
<td>CPJ401T</td>
<td>Chemistry Project IV (offered in both semesters)</td>
<td>(0,200)</td>
<td>Analytical Chemistry III</td>
</tr>
<tr>
<td>CPJ401R</td>
<td>Chemistry Project IV (re-registration)</td>
<td>(0,000)</td>
<td></td>
</tr>
<tr>
<td>OCH421T</td>
<td>Organic Chemistry IV</td>
<td>(0,200)</td>
<td>Organic Chemistry III</td>
</tr>
<tr>
<td></td>
<td>TOTAL CREDITS FOR THE SEMESTER:</td>
<td>0,600</td>
<td></td>
</tr>
</tbody>
</table>
SECOND SEMESTER
ICH421T  Inorganic Chemistry IV  (0,200)  Inorganic Chemistry III
PCB421T  Physical Chemistry IV  (0,200)  Physical Chemistry III
TOTAL CREDITS FOR THE SEMESTER:  0,400
TOTAL CREDITS FOR THE QUALIFICATION:  1,000

OPTION B: GA-RANKUWA CAMPUS

FIRST YEAR

FIRST SEMESTER
ANC411T  Analytical Chemistry IV  (0,200)  Analytical Chemistry III
CPJ401T  Chemistry Project IV  (0,200)  Analytical Chemistry III
(offered in both semesters)
CPJ401R  Chemistry Project IV  (0,000)  (re-registration)
TOTAL CREDITS FOR THE SEMESTER:  0,400

SECOND SEMESTER
OCH421T  Organic Chemistry IV  (0,200)  Organic Chemistry III
TOTAL CREDITS FOR THE SEMESTER:  0,200
TOTAL CREDITS FOR THE FIRST YEAR:  0,600

SECOND YEAR

FIRST SEMESTER
PCB421T  Physical Chemistry IV  (0,200)  Physical Chemistry III
TOTAL CREDITS FOR THE SEMESTER:  0,200

SECOND SEMESTER
ICH421T  Inorganic Chemistry IV  (0,200)  Inorganic Chemistry III
TOTAL CREDITS FOR THE SEMESTER:  0,200
TOTAL CREDITS FOR THE QUALIFICATION:  1,000

4.3 MAGISTER TECHNOLOGIAE: CHEMISTRY
Course code: MTCH95

Campus where offered:  Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s):  A Baccalaureus Technologiae: Chemistry or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.
b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. These procedures will be fully explained to each prospective student during the personal interview.

c. Duration: A minimum of one year and a maximum of three years. Students must re-register annually for this programme.

d. Structure: This programme consists of a research project that must be recorded in the form of a dissertation. Before the dissertation will be accepted for examination, a draft article, based on the research and approved by the supervisor, must be ready for submission to a peer-evaluated accredited journal. The student must present a colloquium before submitting the dissertation. In addition, he or she must successfully complete a programme in Research Methodology in the first year of the Magister Technologiae if it was not done as part of a previous qualification.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE500T</td>
<td>Dissertation: Chemistry</td>
<td>(1,000)</td>
</tr>
<tr>
<td>CHE500R</td>
<td>Dissertation: Chemistry (re-registration)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

4.4 DOCTOR TECHNOLOGIAE: CHEMISTRY  
Course code: DTCH96  
Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Chemistry or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. Procedures will be fully explained to each prospective student during the personal interview.

c. Duration: A minimum of two years and a maximum of five years. Students must re-register annually for this programme.

d. Structure: This course consists of a research project that must be recorded in the form of a thesis. Before the thesis will be accepted for examination, at least two articles, based on the research and approved by the supervisor, must have been submitted to a peer-evaluated accredited journal (or a patent or artefact must
have been successful). One of the two articles must already have been accepted for publication, and written proof of it must be submitted as part of the requirements of the degree. The student must present a colloquium before submitting the thesis. He or she must also successfully defend the thesis before the degree will be awarded.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE700T</td>
<td>Thesis: Chemistry</td>
<td>(2,000)</td>
</tr>
<tr>
<td>CHE700R</td>
<td>Thesis: Chemistry (re-registration)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 2,000

### 4.5 BACCALAUREUS TECHNOLOGIAE: LABORATORY MANAGEMENT

Course code: BTLA01

<table>
<thead>
<tr>
<th>Campus where offered:</th>
<th>Arcadia Campus</th>
</tr>
</thead>
</table>

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

**REMARKS**

a. Admission requirement(s): Any relevant three-year tertiary qualification.

b. Selection criteria: A personal interview with a departmental selection panel.

c. Minimum duration: One year.

d. Presentation: Block course and multimode offered over a period of two years.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January and July.

g. Textbooks: Additional textbooks and other educational material will be required.

h. Readmission: See Chapter 3 of Students’ Rules and Regulations.

i. Subject credits: Subject credits are shown in brackets after every subject.

**ATTENDANCE**

Subjects will be offered in semesters as determined by the Department.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEL401T</td>
<td>General Laboratory Management IV</td>
<td>(0,200)</td>
</tr>
<tr>
<td>LBM401T</td>
<td>Laboratory Personnel Management IV</td>
<td>(0,200)</td>
</tr>
<tr>
<td>LFM401T</td>
<td>Laboratory Financial Management IV</td>
<td>(0,200)</td>
</tr>
<tr>
<td>LMP401T</td>
<td>Laboratory Management Project IV</td>
<td>(0,200)</td>
</tr>
<tr>
<td>LMP401R</td>
<td>Laboratory Management Project IV (re-registration)</td>
<td>(0,000)</td>
</tr>
<tr>
<td>QAP401T</td>
<td>Quality and Productivity IV</td>
<td>(0,200)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000
### 4.6 MAGISTER TECHNOLOGIAE: CERAMICS TECHNOLOGY

**Course code: MTCK98**

<table>
<thead>
<tr>
<th>Campus where offered:</th>
<th>Arcadia Campus</th>
</tr>
</thead>
</table>

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

**REMARKS:**

a. Admission requirement(s): A Baccalaureus Technologiae: Ceramics Technology or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. These procedures will be fully explained to each prospective student during the personal interview.

c. Duration: A minimum of one year and a maximum of three years. Students must re-register annually for this programme.

d. Structure: This programme consists of a research project that must be recorded in the form of a dissertation. Before the dissertation will be accepted for examination, a draft article, based on the research and approved by the supervisor, must be ready for submission to a peer-evaluated accredited journal. The student must present a colloquium before submitting the dissertation. In addition, he or she must successfully complete a programme in Research Methodology in the first year of the Magister Technologiae if it was not done as part of a previous qualification.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CST500T</td>
<td>Dissertation: Ceramics Technology</td>
<td>(1,000)</td>
</tr>
<tr>
<td>CST500R</td>
<td>Dissertation: Ceramics Technology (re-registration)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

### 4.7 DOCTOR TECHNOLOGIAE: CERAMICS TECHNOLOGY

**Course code: DTCK98**

<table>
<thead>
<tr>
<th>Campus where offered:</th>
<th>Arcadia Campus</th>
</tr>
</thead>
</table>

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

**REMARKS**

a. Admission requirement(s): A Magister Technologiae: Ceramics Technology or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.
b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. Procedures will be fully explained to each prospective student during the personal interview.

c. Duration: A minimum of two years and a maximum of five years. Students must re-register annually for this programme.

d. Structure: This course consists of a research project that must be recorded in the form of a thesis. Before the thesis will be accepted for examination, at least two articles, based on the research and approved by the supervisor, must have been submitted to a peer-evaluated accredited journal (or a patent or artefact must have been successful). One of the two articles must already have been accepted for publication, and written proof of it must be submitted as part of the requirements of the degree. The student must present a colloquium before submitting the thesis. He or she must also successfully defend the thesis before the degree will be awarded.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CST700T</td>
<td>Thesis: Ceramics Technology</td>
<td>(2,000)</td>
</tr>
<tr>
<td>CST700R</td>
<td>Thesis: Ceramics Technology (re-registration)</td>
<td>(0,000)</td>
</tr>
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</table>

TOTAL CREDITS FOR THE QUALIFICATION: 2,000

4.8 MAGISTER TECHNOLOGIAE: EXPLOSIVES TECHNOLOGY

Course code: MTEX01

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Explosives Technology or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. These procedures will be fully explained to each prospective student during the personal interview.

c. Duration: A minimum of one year and a maximum of three years. Students must re-register annually for this programme.

d. Structure: This programme consists of a research project that must be recorded in the form of a dissertation. Before the dissertation will be accepted for examination, a draft article, based on the research
and approved by the supervisor, must be ready for submission to a peer-evaluated accredited journal. The student must present a colloquium before submitting the dissertation. In addition, he or she must successfully complete a programme in Research Methodology in the first year of the Magister Technologiae if it was not done as part of a previous qualification.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXL510T</td>
<td>Dissertation: Explosives Technology</td>
<td>(1,000)</td>
</tr>
<tr>
<td>EXL510R</td>
<td>Dissertation: Explosives Technology (re-registration)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

4.9 DOCTOR TECHNOLOGIAE: EXPLOSIVES TECHNOLOGY
Course code: DTEX01

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Explosives Technology or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. Procedures will be fully explained to each prospective student during the personal interview.

c. Duration: A minimum of two years and a maximum of five years. Students must re-register annually for this programme.

d. Structure: This course consists of a research project that must be recorded in the form of a thesis. Before the thesis will be accepted for examination, at least two articles, based on the research and approved by the supervisor, must have been submitted to a peer-evaluated accredited journal (or a patent or artefact must have been successful). One of the two articles must already have been accepted for publication, and written proof of it must be submitted as part of the requirements of the degree. The student must present a colloquium before submitting the thesis. He or she must also successfully defend the thesis before the degree will be awarded.

e. Subject credits: Subject credits are shown in brackets after every subject.
### CODE    SUBJECT                          CREDIT
EXL720T   Thesis: Explosives Technology  (2,000)
EXL720R   Thesis: Explosives Technology  (0,000)
(re-registration)

TOTAL CREDITS FOR THE QUALIFICATION: 2,000

#### 4.10 SUBJECT INFORMATION

**SUBJECT NAME:** ANALYTICAL CHEMISTRY I
**SUBJECT CODE:** ANC101T
**EVALUATION METHOD:** 1 X 3-HOUR PAPER
**TOTAL TUITION TIME:** Not available
**OVERVIEW OF SYLLABUS:**

**SUBJECT NAME:** ANALYTICAL CHEMISTRY II
**SUBJECT CODE:** ANC251T
**EVALUATION METHOD:** 1 X 3-HOUR PAPER
**TOTAL TUITION TIME:** Not available
**OVERVIEW OF SYLLABUS:**

**SUBJECT NAME:** ANALYTICAL CHEMISTRY III
**SUBJECT CODE:** ANC321T
**EVALUATION METHOD:** 2 X 2-HOUR PAPER
**TOTAL TUITION TIME:** Not available
**OVERVIEW OF SYLLABUS:**

**SUBJECT NAME:** ANALYTICAL CHEMISTRY IV
**SUBJECT CODE:** ANC411T
**EVALUATION METHOD:** 2 X 3-HOUR PAPER
**TOTAL TUITION TIME:** Not available
**OVERVIEW OF SYLLABUS:**

**SUBJECT NAME:** ANALYTICAL CHEMISTRY: PRACTICAL II
**SUBJECT CODE:** AHP201T
**EVALUATION METHOD:** CONTINUOUS ASSESSMENT
**TOTAL TUITION TIME:** Not available
**OVERVIEW OF SYLLABUS:**
"Wet" chemical analysis. Basic instrumental analysis.

**SUBJECT NAME:** ANALYTICAL CHEMISTRY: PRACTICAL III
**SUBJECT CODE:** AHP311T
**EVALUATION METHOD:** PRACTICAL
**TOTAL TUITION TIME:** Not available
**OVERVIEW OF SYLLABUS:**
Practical atomic spectroscopy, molecular spectroscopy, chromatographic analysis, electroanalysis. Introductory experiments in thermal analysis.
SUBJECT NAME: CHEMICAL PROCESS INDUSTRIES II
SUBJECT CODE: CPI201T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: CHEMICAL QUALITY ASSURANCE
SUBJECT CODE: CQA201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Advanced statistical treatment of data in analytical chemistry. Optimisation and calibration of analytical instruments. Quality assurance systems. Laboratory accreditation.

SUBJECT NAME: CHEMISTRY IA
SUBJECT CODE: CHE141B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: CHEMISTRY PROJECT III
SUBJECT CODE: CPJ311T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Practical experience in experiential techniques in a chemical laboratory.

SUBJECT NAME: CHEMISTRY PROJECT IV
SUBJECT CODE: CPJ401T
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
This project should be conducted with the cooperation of the student's employer (or a suitable alternative, in the case of private students). The project must, as far as possible, be of an applied nature. Introduction to research methodology.

SUBJECT NAME: COMPUTER SKILLS I
SUBJECT CODE: CSK101B
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Components of a microcomputer. Applications of software. Managing personal computers.

SUBJECT NAME: ENTREPRENEURIAL SKILLS
SUBJECT CODE: EPS101B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
OVERVIEW OF SYLLABUS:
History of the earth and chemical cycles. Major elements found in living matter. Major elements in
the crust of the earth. Minor elements and environmental problems. Aquatic chemistry, including

OVERVIEW OF SYLLABUS:
Toxicology, nature and sources of waste, waste minimisation at source, disposal of waste, hazardous
waste, nuclear waste, agricultural chemicals, projects and practicals.

OVERVIEW OF SYLLABUS:
This project should be conducted with the cooperation of the student's employer and must include
one or more of the following: the pharmaceutical industry, soaps and detergents, pulp and paper,
sugar and starch, dyestuffs, Portland cement, calcium and magnesium compounds, surface coating,
fermentation, petroleum and petrochemicals, agrichemicals, chemicals and chemical processes
in ore processing, applications of analytical techniques, mining, iron and steel, water and sewage
treatment.

OVERVIEW OF SYLLABUS:
Instrument, procurement, preventative maintenance, replacement, disposal and materials
management, grading of materials, procurement, storage and disposal, methodology, management,
validation, standard operating procedure (SOP), information management, introduction to LIMS,
safety management.

OVERVIEW OF SYLLABUS:
Any five of the following: chemical analysis in complex matrices, drug analysis in biological fluids,
analysis in the brewing industry, air pollution analysis, sealants and adhesives, chemical analysis
of animal feed and human food, water, metallurgical, polymer and sugar analyses.

OVERVIEW OF SYLLABUS:
Introduction to chemical bonding and an advanced study of ionic bonding. Chemical reactions in
aqueous and non-aqueous solutions. Redox chemistry. Interpretation of oxidation state diagrams.
Descriptive inorganic chemistry. Practical inorganic chemistry.
SUBJECT NAME: INORGANIC CHEMISTRY III
SUBJECT CODE: ICH321T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: INORGANIC CHEMISTRY IV
SUBJECT CODE: ICH421T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Theoretical inorganic chemistry. Organometallic chemistry. Descriptive industrial chemistry. Practical: experiments related to the theory.

SUBJECT NAME: LABORATORY FINANCIAL MANAGEMENT IV
SUBJECT CODE: LFM401T
EVALUATION METHOD: 1 X 3-HOUR PAPER (OPEN BOOK)
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Concepts of fixed, variable, capital and current costs, concepts of depreciation, profit and loss, assets and liabilities, pricing, financial control, budgets, development of a business plan, market management, knowledge of existing markets and market trends, development of new markets.

SUBJECT NAME: LABORATORY MANAGEMENT PROJECT IV
SUBJECT CODE: LMP401T
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
A project of limited scope in which students apply their knowledge in practice.

SUBJECT NAME: LABORATORY PERSONNEL MANAGEMENT IV
SUBJECT CODE: LBM401T
EVALUATION METHOD: 1 X 3-HOUR PAPER (OPEN BOOK)
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Selection and appointment of staff members, interview management, training, development, motivation, delegation, participative management, communication, leadership, job descriptions, performance management, internationalisation.

SUBJECT NAME: MATHEMATICS I
SUBJECT CODE: MAT141B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: MATHEMATICS II
SUBJECT CODE: MAT251B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
SUBJECT NAME: ORGANIC CHEMISTRY II
SUBJECT CODE: OCH221T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ORGANIC CHEMISTRY III
SUBJECT CODE: OCH321T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ORGANIC CHEMISTRY IV
SUBJECT CODE: OCH421T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: PHYSICAL CHEMISTRY II
SUBJECT CODE: PCB221T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: PHYSICAL CHEMISTRY III
SUBJECT CODE: PCB321T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: PHYSICAL CHEMISTRY IV
SUBJECT CODE: PCB421T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: PHYSICS IA
SUBJECT CODE: PHU161B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Introduction to vectors. Mechanics, heat, optics, electricity and magnetism, wave motion. Practical: experiments related to the theory.
SUBJECT NAME: PHYSICS II
SUBJECT CODE: PHU201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Electronics, nuclear physics, electric and magnetic fields and forces, spectroscopy, properties of electro-magnetic waves, quantum mechanics. Practical: Experiments related to the theory.

SUBJECT NAME: QUALITY AND PRODUCTIVITY IV
SUBJECT CODE: QAP401T
EVALUATION METHOD: 1 X 3-HOUR PAPER (OPEN BOOK)
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Quality: basic principles (quality plan, model, objectives, programme, protocol), productivity, creativity. Innovation: basic principles, laboratory structure, laboratory organogram, identification of key staff and functions, accreditation, basic principles.
5. DEPARTMENT OF CROP SCIENCES

5.1 NATIONAL DIPLOMA: AGRICULTURAL MANAGEMENT

Course code: NDAM02

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

NO NEW REGISTRATIONS FOR THIS COURSE ARE ACCEPTED AS FROM 2005. STUDENTS WHO ARE CURRENTLY REGISTERED FOR THIS QUALIFICATION WILL HAVE UNTIL 2009 TO OBTAIN IT, SUBJECT TO THE STIPULATIONS OF REGULATION 3.1.1(a) ON THE MAXIMUM DURATION OF STUDY.

Phase-out date: 31 December 2009

Subject credits are shown in brackets after every subject.

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

FIRST YEAR

FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSK101T</td>
<td>Computer Skills I</td>
<td>(0,084)*</td>
<td></td>
</tr>
<tr>
<td>DPS101T</td>
<td>Animal Production I</td>
<td>(0,084)*</td>
<td></td>
</tr>
<tr>
<td>POT101T</td>
<td>Production and Operational Techniques I</td>
<td>(0,084)*</td>
<td></td>
</tr>
<tr>
<td>PPU101T</td>
<td>Plant Production I</td>
<td>(0,084)*</td>
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</tr>
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</table>

TOTAL CREDITS FOR THE SEMESTER: 0,336

SECOND SEMESTER

<table>
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<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMN101T</td>
<td>Agricultural Management I</td>
<td>(0,083)</td>
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<tr>
<td>ASC101T</td>
<td>Agricultural Soil Science I</td>
<td>(0,083)</td>
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<tr>
<td>PMI101T</td>
<td>Personnel Management: Agriculture I</td>
<td>(0,200)</td>
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<tr>
<td>PSC121T</td>
<td>Pasture Science I</td>
<td>(0,083)</td>
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TOTAL CREDITS FOR THE SEMESTER: 0,449

TOTAL CREDITS FOR THE FIRST YEAR: 0,785

SECOND YEAR

FIRST SEMESTER

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<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ALA101T</td>
<td>Agricultural Law I</td>
<td>(0,200)</td>
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</tr>
<tr>
<td>AMN201T</td>
<td>Agricultural Management II</td>
<td>(0,083)</td>
<td>Agricultural Management I</td>
</tr>
<tr>
<td>DPS201T</td>
<td>Animal Production II</td>
<td>(0,083)</td>
<td>Animal Production I</td>
</tr>
<tr>
<td>PPU201T</td>
<td>Plant Production II</td>
<td>(0,083)</td>
<td>Plant Production I</td>
</tr>
<tr>
<td>SCL201T</td>
<td>Soil Classification II</td>
<td>(0,083)</td>
<td>Agricultural Soil Science I</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,532
SECOND SEMESTER

AEG101T Agricultural Engineering I (0,200)
AMN301T Agricultural Management III (0,200) Agricultural Management II
CAA201T Computer Applications: Agriculture II (0,083) Computer Skills I

plus one of the following subjects:

DPS301T Animal Production III (0,200) Animal Production II
PPU301T Plant Production III (0,200) Plant Production II

TOTAL CREDITS FOR THE SEMESTER: 0,683
TOTAL CREDITS FOR THE SECOND YEAR: 1,215

THIRD YEAR

Students must pass all the above subjects in order to continue with the following subjects:

FIRST OR SECOND SEMESTER

AGQ201T Agricultural Production Techniques II (0,100)
AGD201T Agricultural Production Management II (0,100)
AGG301T Agricultural Practice III (0,800) Agricultural Management III

TOTAL CREDITS FOR THE THIRD YEAR: 1,000

5.2 NATIONAL DIPLOMA: AGRICULTURE
Course code: NDAL02

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

NO NEW REGISTRATIONS FOR THIS COURSE ARE ACCEPTED AS FROM 2005. STUDENTS WHO ARE CURRENTLY REGISTERED FOR THIS QUALIFICATION WILL HAVE UNTIL 2009 TO OBTAIN IT, SUBJECT TO THE STIPULATIONS OF REGULATION 3.1.1(a) ON THE MAXIMUM DURATION OF STUDY.

Phase-out date: 31 December 2009

Subject credits are shown in brackets after every subject.

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

FIRST YEAR
FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
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</thead>
<tbody>
<tr>
<td>AAP101T</td>
<td>Agricultural Anatomy and Physiology I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>AGE111T</td>
<td>Agricultural Economics I</td>
<td>(0,100)</td>
<td></td>
</tr>
</tbody>
</table>
CRO101T  Crop Production I  (0,100)
NPT101T  Natural Pastures I  (0,100)
SSC111T  Soil Science I  (0,100)

TOTAL CREDITS FOR THE SEMESTER:  0,500

SECOND SEMESTER

AEX101C  Agricultural Extension I  (0,100)
AGA111T  Agricultural Calculations I  (0,100)
ANU201T  Animal Nutrition II  (0,100)
CVT101T  Cultivated Pastures I  (0,100)
SSV201T  Soil Surveys II  (0,100)

TOTAL CREDITS FOR THE SEMESTER:  0,500

TOTAL CREDITS FOR THE FIRST YEAR:  1,000

SECOND YEAR

FIRST SEMESTER

AGN201T  Agronomy II  (0,100)
AGR201T  Agricultural Marketing II  (0,100)
BPD201T  Beefer Production II  (0,100)
SSP201T  Small Stock Production II  (0,100)
VEG101T  Vegetable Production I  (0,100)

TOTAL CREDITS FOR THE SEMESTER:  0,500

SECOND SEMESTER

AGN301T  Agronomy III  (0,100)
BPD301T  Beefer Production III  (0,100)
FMP101T  Farm Planning I  (0,100)
OBS101T  Crop Protection I  (0,100)
SSP301T  Small Stock Production III  (0,100)

TOTAL CREDITS FOR THE SEMESTER:  0,500

TOTAL CREDITS FOR THE SECOND YEAR:  1,000

THIRD YEAR

Students must pass all the above subjects in order to continue with the following subjects:

FIRST OR SECOND SEMESTER

AGQ101T  Agricultural Production Techniques I  (0,500)
AGQ201B  Agricultural Production Techniques II  (0,500)

TOTAL CREDITS FOR THE THIRD YEAR:  1,000
## 5.3 NATIONAL DIPLOMA: AGRICULTURE: CROP PRODUCTION

Course code: NDAR02

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

NO NEW REGISTRATIONS FOR THIS COURSE ARE ACCEPTED AS FROM 2005. STUDENTS WHO ARE CURRENTLY REGISTERED FOR THIS QUALIFICATION WILL HAVE UNTIL 2009 TO OBTAIN IT, SUBJECT TO THE STIPULATIONS OF REGULATION 3.1.1(a) ON THE MAXIMUM DURATION OF STUDY.

Phase-out date: 31 December 2009

Subject credits are shown in brackets after every subject.

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

### FIRST YEAR

#### FIRST SEMESTER

<table>
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<tr>
<th>CODE</th>
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<tbody>
<tr>
<td>AGA111T</td>
<td>Agricultural Calculations I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>AGB101T</td>
<td>Agricultural Botany I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>AGE111T</td>
<td>Agricultural Economics I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>AGH101T</td>
<td>Agricultural Mechanisation I</td>
<td>(0,100)</td>
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</tr>
<tr>
<td>SSC111T</td>
<td>Soil Science I</td>
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</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

#### SECOND SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
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<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
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<tbody>
<tr>
<td>AEX101C</td>
<td>Agricultural Extension I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>CRO101T</td>
<td>Crop Production I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>OBS101T</td>
<td>Crop Protection I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>SSV201T</td>
<td>Soil Surveys II</td>
<td>(0,100)</td>
<td>Soil Science I</td>
</tr>
<tr>
<td>VEG101T</td>
<td>Vegetable Production I</td>
<td>(0,100)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE FIRST YEAR: 1,000

### SECOND YEAR

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECTS</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGN201T</td>
<td>Agronomy II</td>
<td>(0,100)</td>
<td>Crop Production I</td>
</tr>
<tr>
<td>AGR201T</td>
<td>Agricultural Marketing II</td>
<td>(0,100)</td>
<td>Agricultural Economics I</td>
</tr>
<tr>
<td>FPR201T</td>
<td>Fruit Production II</td>
<td>(0,100)</td>
<td>Crop Production I</td>
</tr>
<tr>
<td>OBS201T</td>
<td>Crop Protection II</td>
<td>(0,100)</td>
<td>Crop Protection I</td>
</tr>
<tr>
<td>SSC301T</td>
<td>Soil Science III</td>
<td>(0,100)</td>
<td>Soil Surveys II</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500
SECOND SEMESTER

AGN301T Agronomy III (0,100) Agronomy II
CRB301T Crop Breeding III (0,100) Agronomy II
or Fruit Production II
FMP101T Farm Planning I (0,100) Fruit Production II
FPR301T Fruit Production III (0,100) Fruit Production II
OBS301T Crop Protection III (0,100) Crop Protection II

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE SECOND YEAR: 1,000

THIRD YEAR

Students must pass all the above subjects in order to continue with the following subjects:

FIRST OR SECOND SEMESTER

AGQ101T Agricultural Production Techniques I (0,500)
AGQ201B Agricultural Production Techniques II (0,500) Agricultural Production Techniques I

TOTAL CREDITS FOR THE THIRD YEAR: 1,000

5.4 NATIONAL DIPLOMA: AGRICULTURE: MIXED FARMING

Course code: NDMF02

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

NO NEW REGISTRATIONS FOR THIS COURSE ARE ACCEPTED AS FROM 2005. STUDENTS WHO ARE CURRENTLY REGISTERED FOR THIS QUALIFICATION WILL HAVE UNTIL 2009 TO OBTAIN IT, SUBJECT TO THE STIPULATIONS OF REGULATION 3.1.1(a) ON THE MAXIMUM DURATION OF STUDY.

Phase-out date: 31 December 2009

Subject credits are shown in brackets after every subject.

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

FIRST YEAR

FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAP101T</td>
<td>Agricultural Anatomy and Physiology I</td>
<td>(0,100)</td>
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</tr>
<tr>
<td>AGA111T</td>
<td>Agricultural Calculations I</td>
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</tr>
<tr>
<td>AGE111T</td>
<td>Agricultural Economics I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>AGH101T</td>
<td>Agricultural Mechanisation I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>SSC111T</td>
<td>Soil Science I</td>
<td>(0,100)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500
SECOND SEMESTER

AEX101C Agricultural Extension I (0,100)  
ANU201T Animal Nutrition II (0,100)  
CRO101T Crop Production I (0,100)  
CVT101T Cultivated Pastures I (0,100)  
SSV201T Soil Surveys II (0,100)  

TOTAL CREDITS FOR THE SEMESTER: 0,500

SECOND YEAR

FIRST SEMESTER

Five of the following subjects:

AGN201T Agronomy II (0,100)  
AGR201T Agricultural Marketing II (0,100)  
BPD201T Beefer Production II (0,100)  
FPR201T Fruit Production II (0,100)  
SSC301T Soil Science III (0,100)  
SSP201T Small Stock Production II (0,100)  

TOTAL CREDITS FOR THE SEMESTER: 0,500

SECOND SEMESTER

Five of the following subjects:

AGN301T Agronomy III (0,100)  
BPD301T Beefer Production III (0,100)  
FMP101T Farm Planning I (0,100)  
FPR301T Fruit Production III (0,100)  
NPT101T Natural Pastures I (0,100)  
SSP301T Small Stock Production III (0,100)  

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE SECOND YEAR: 1,000

THIRD YEAR

Students must pass all the above subjects in order to continue with the following subjects:

FIRST OR SECOND SEMESTER

AGQ101T Agricultural Production Techniques I (0,500)  
AGQ201B Agricultural Production Techniques II (0,500)  

TOTAL CREDITS FOR THE THIRD YEAR: 1,000
5.5 NATIONAL DIPLOMA: AGRICULTURE: RURAL DEVELOPMENT AND EXTENSION  
Course code: NDRD02

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

NO NEW REGISTRATIONS FOR THIS COURSE ARE ACCEPTED AS FROM 2005. STUDENTS WHO ARE CURRENTLY REGISTERED FOR THIS QUALIFICATION WILL HAVE UNTIL 2009 TO OBTAIN IT, SUBJECT TO THE STIPULATIONS OF REGULATION 3.1.1(a) ON THE MAXIMUM DURATION OF STUDY.

Phase-out date: 31 December 2009

Subject credits are shown in brackets after every subject.

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

FIRST YEAR

FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAP101T</td>
<td>Agricultural Anatomy and Physiology I</td>
<td>(0,100)</td>
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</tr>
<tr>
<td>AGA111T</td>
<td>Agricultural Calculations I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>AGE111T</td>
<td>Agricultural Economics I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>AGH101T</td>
<td>Agricultural Mechanisation I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>SSC111T</td>
<td>Soil Science I</td>
<td>(0,100)</td>
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</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

SECOND SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEX101C</td>
<td>Agricultural Extension I</td>
<td>(0,100)</td>
<td>Agricultural Extension I</td>
</tr>
<tr>
<td>CRO101T</td>
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<tr>
<td>OBS101T</td>
<td>Crop Protection I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>SSV201T</td>
<td>Soil Surveys II</td>
<td>(0,100)</td>
<td>Soil Science I</td>
</tr>
<tr>
<td>VEG101T</td>
<td>Vegetable Production I</td>
<td>(0,100)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE FIRST YEAR: 1,000

SECOND YEAR

FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEX201C</td>
<td>Agricultural Extension II</td>
<td>(0,100)</td>
<td>Agricultural Extension I</td>
</tr>
<tr>
<td>AGR201T</td>
<td>Agricultural Marketing II</td>
<td>(0,100)</td>
<td>Agricultural Economics I</td>
</tr>
</tbody>
</table>
plus three of the following subjects:

AGN201T Agronomy II (0,100) Crop Production I
BPD201T Beefer Production II (0,100) Agricultural Anatomy and Physiology I
FPR201T Fruit Production II (0,100) Crop Production I
SSP201T Small Stock Production II (0,100) Agricultural Anatomy and Physiology I

TOTAL CREDITS FOR THE SEMESTER: 0,500

SECOND SEMESTER

AEX301C Agricultural Extension III (0,100) Agricultural Extension II
FMP101T Farm Planning I (0,100)

plus three of the following subjects:

AGN301T Agronomy III (0,100) Agronomy II
BPD301T Beefer Production III (0,100) Beefer Production II
FPR301T Fruit Production III (0,100) Fruit Production II
SSP301T Small Stock Production III (0,100) Small Stock Production II

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE SECOND YEAR: 1,000

THIRD YEAR
Students must pass all the above subjects in order to continue with the following subjects:

FIRST OR SECOND SEMESTER

AGQ101T Agricultural Production Techniques I (0,500)
AGQ201B Agricultural Production Techniques II (0,500)

TOTAL CREDITS FOR THE THIRD YEAR: 1,000

5.6 NATIONAL DIPLOMA: AGRICULTURE
Course code: NDAL04

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Senior Certificate or an equivalent qualification.
b. Selection criteria: Prospective students are assessed by means of the following formula for academic merit, based on scholastic performance:

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>HG</th>
<th>SG</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>B</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>C</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>D</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>E</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Applicants earn two additional points for the following subjects (SG or HG):

- Physical Science
- Computer Principles
- Computer Studies
- Mathematics
- Statistics
- Chemistry
- Geography
- Field Husbandry
- Agricultural Science
- Practical Agriculture
- Agriculture
- Biology
- Agricultural Economics
- Physics

Applicants who score 20 or more points (for a maximum of six subjects) according to the formula for academic merit determination are accepted. The maximum first-year intake is, however, limited by a predetermined number.

Applicants who score below 20 points will be subjected to a series of tests. Prospective students will be informed in writing of the procedures pertaining to these tests.

c. Recommended subject(s): Physical Science, Mathematics, Biology, agricultural and accounting subjects.

d. Minimum duration: Three years.

e. Presentation: Two years (four semesters) of day classes, followed by one year (two semesters) of experiential learning.

f. Intake for the course: January only.

g. Registration for the subjects of this course: January and July.

h. Choice of subjects: Where a choice must be made between subjects, the subject chosen depends on the successful completion of the indicated prerequisite subject.

i. General: The nature of the training involves a degree of risk, although all reasonable precautions are taken by the University and the Department to prevent accidents and injuries. It is recommended that students invest in insurance. Further information is obtainable during registration.

j. Experiential Learning I and II: See Chapter 5 of Students’ Rules and Regulations.
k. Readmission: See Chapter 3 of Students’ Rules and Regulations.

I. Subject credits: Subject credits are shown in brackets after every subject.

**FIRST YEAR**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAP101T</td>
<td>Agricultural Anatomy and Physiology I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>AGA111T</td>
<td>Agricultural Calculations I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>AGB101T</td>
<td>Agricultural Botany I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>AGH101T</td>
<td>Agricultural Mechanisation I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>SSC111T</td>
<td>Soil Science I</td>
<td>(0,100)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEX101C</td>
<td>Agricultural Extension I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>AGE111T</td>
<td>Agricultural Economics I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>CRO101T</td>
<td>Crop Production I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>OBS101T</td>
<td>Crop Protection I</td>
<td>(0,100)</td>
<td>Soil Science I</td>
</tr>
<tr>
<td>SSV201T</td>
<td>Soil Surveys II</td>
<td>(0,100)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE FIRST YEAR: 1,000

**SECOND YEAR**

One of the following subject groups:

**SUBJECT GROUP 1: CROP PRODUCTION**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGN201T</td>
<td>Agronomy II</td>
<td>(0,100)</td>
<td>Crop Production I</td>
</tr>
<tr>
<td>AGR201T</td>
<td>Agricultural Marketing II</td>
<td>(0,100)</td>
<td>Agricultural Economics I</td>
</tr>
<tr>
<td>FPR201T</td>
<td>Fruit Production II</td>
<td>(0,100)</td>
<td>Crop Production I</td>
</tr>
<tr>
<td>OBS201T</td>
<td>Crop Protection II</td>
<td>(0,100)</td>
<td>Crop Protection I</td>
</tr>
<tr>
<td>SSC301T</td>
<td>Soil Science III</td>
<td>(0,100)</td>
<td>Soil Surveys II</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGN301T</td>
<td>Agronomy III</td>
<td>(0,100)</td>
<td>Agronomy II</td>
</tr>
<tr>
<td>APN301T</td>
<td>Agricultural Production Management III</td>
<td>(0,100)</td>
<td>Agricultural Marketing II</td>
</tr>
<tr>
<td>FPR301T</td>
<td>Fruit Production III</td>
<td>(0,100)</td>
<td>Fruit Production II</td>
</tr>
<tr>
<td>OBS301T</td>
<td>Crop Protection III</td>
<td>(0,100)</td>
<td>Crop Protection II</td>
</tr>
<tr>
<td>VEG101T</td>
<td>Vegetable Production I</td>
<td>(0,100)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE SECOND YEAR: 1,000
SUBJECT GROUP 2: COMMERCIAL MIXED FARMING

FIRST SEMESTER

AGR201T  Agricultural Marketing II (0,100)  Agricultural Economics I
NPT101T  Natural Pastures I (0,100)

plus one of the following subjects:

AGN201T  Agronomy II (0,100)  Crop Production I
FPR201T  Fruit Production II (0,100)  Crop Production I

plus one of the following subjects:

BPD201T  Beefer Production II (0,100)  Agricultural Anatomy and Physiology I
SSP201T  Small Stock Production II (0,100)  Agricultural Anatomy and Physiology I

plus one of the following subjects:

OBS201T  Crop Protection II (0,100)  Crop Protection I
SSC301T  Soil Science III (0,100)  Soil Surveys II

TOTAL CREDITS FOR THE SEMESTER: 0,500

SECOND SEMESTER

APN301T  Agricultural Production Management III (0,100)  Agricultural Marketing II
FMP101T  Farm Planning I (0,100)
VEG101T  Vegetable Production I (0,100)

plus one of the following subjects:

AGN301T  Agronomy III (0,100)  Agronomy II
FPR301T  Fruit Production III (0,100)  Fruit Production II

plus one of the following subjects:

BPD301T  Beefer Production III (0,100)  Beefer Production II
SSP301T  Small Stock Production III (0,100)  Small Stock Production II

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE SECOND YEAR: 1,000

SUBJECT GROUP 3: DEVELOPMENT AND EXTENSION

FIRST SEMESTER

AEX201C  Agricultural Extension II (0,100)  Agricultural Extension I
AGR201T  Agricultural Marketing II (0,100)  Agricultural Economics I
NPT101T  Natural Pastures I (0,100)

plus one of the following subjects:

AGN201T  Agronomy II (0,100)  Crop Production I
FPR201T  Fruit Production II (0,100)  Crop Production I
plus one of the following subjects:

BPD201T  Beefer Production II  
SSP201T  Small Stock Production II  

TOTAL CREDITS FOR THE SEMESTER:  0,500

SECOND SEMESTER

AEX301C  Agricultural Extension III  
FMP101T  Farm Planning I  
VEG101T  Vegetable Production I  

plus one of the following subjects:

AGN301T  Agronomy III  
FPR301T  Fruit Production III  

plus one of the following subjects:

BPD301T  Beefer Production III  
SSP301T  Small Stock Production III  

TOTAL CREDITS FOR THE SEMESTER:  0,500

TOTAL CREDITS FOR THE SECOND YEAR:  1,000

THIRD YEAR
After completion of all the above subjects.

FIRST OR SECOND SEMESTER

EXP1AGR  Experiential Learning I  
EXP2AGR  Experiential Learning II  

TOTAL CREDITS FOR THE THIRD YEAR:  1,000

---

5.7 BACCALAUREUS TECHNOLOGIAE: AGRICULTURE
Course code: BTAL05

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Agriculture or an equivalent qualification. However, this does not apply to students who registered for the National Diploma for the first time before 2006 and who have not since interrupted their studies.
b. Selection criteria: Admission is subject to selection and approval by the Department. This comprises two steps:
   i. Initial screening:
      For this purpose the following documents must be presented:
      • Curriculum vitae
      • Certified copy of the National Diploma or equivalent qualification
      • Certified copy of the full study record
   ii. Testing:
      Applicants will be required to complete a series of tests to determine their potential. The results of these tests will determine whether candidates will be accepted or not. Prospective students will be informed in writing of the procedures pertaining to these tests.

c. Minimum duration: One year.

d. Presentation: Offered on a block basis over a period of two years, with only two subjects per year.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January only.

g. Readmission: See Chapter 3 of Students’ Rules and Regulations.

h. Subject credits: Subject credits are shown in brackets after every subject.

### YEAR SUBJECTS

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>SUBJECT GROUP 1: CROP PRODUCTION</strong></td>
<td></td>
</tr>
<tr>
<td>AGC100T</td>
<td>Agricultural Communication I</td>
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<tr>
<td>CRO400T</td>
<td>Crop Production IV</td>
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</tr>
<tr>
<td>PJG400B</td>
<td>Project Management: Agriculture IV</td>
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</tr>
<tr>
<td>RMD100C</td>
<td>Research Methodology</td>
<td>(0,250)</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL CREDITS FOR THE QUALIFICATION:</strong> 1,000</td>
<td></td>
</tr>
</tbody>
</table>

|        | **SUBJECT GROUP 2: DEVELOPMENT AND EXTENSION**                        |
| AEX400T | Agricultural Extension IV      | (0,250) |
| AGC100T | Agricultural Communication I   | (0,250) |
| RMD100C | Research Methodology           | (0,250) |
|        | plus one of the following subjects:                                    |
| CRO400T | Crop Production IV             | (0,250) |
| DPS400T | Animal Production IV           | (0,250) |
|        | **TOTAL CREDITS FOR THE QUALIFICATION:** 1,000                         |
5.8 BACCALAUREUS TECHNOLOGIAE: AGRICULTURE: AGRICULTURAL MANAGEMENT
Course code: BTAM05

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Agriculture or an equivalent qualification.

b. Selection criteria: Admission is subject to selection and approval by the Department. This comprises two steps:

i Initial screening:
   For this purpose the following documents must be presented:
   • Curriculum vitae
   • Certified copy of the National Diploma or equivalent qualification
   • Certified copy of the full study record

ii Testing:
   Applicants will be required to complete a series of tests to determine their potential. The results of these tests will determine whether candidates will be accepted or not. Prospective students will be informed in writing of the procedures pertaining to these tests.

c. Minimum duration: One year.

d. Presentation: Offered on a block basis over a period of two years with only two subjects per year.

e. Intake for the course: January only.

f. Registration for the subjects of this course:
   January only.

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

h. Subject credits: Subject credits are shown in brackets after every subject.

YEAR SUBJECTS

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
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<td>LDV200T</td>
<td>Leadership Development II</td>
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</tr>
<tr>
<td>SBL400T</td>
<td>Strategic Management: Agriculture IV</td>
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plus one of the following subjects:

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<tbody>
<tr>
<td>CRO400T</td>
<td>Crop Production IV</td>
<td>(0,250)</td>
</tr>
<tr>
<td>DPS400T</td>
<td>Animal Production IV</td>
<td>(0,250)</td>
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TOTAL CREDITS FOR THE QUALIFICATION: 1,000
5.9 MAGISTER TECHNOLOGIAE: AGRICULTURE
Course code: MTAL98

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Agriculture or Agricultural Management or an equivalent qualification. Prospective students must apply in good time for status to be awarded for equivalent qualifications. Research proposals must be approved by the Department before final registration for the course. Details of the requirements of research proposals are available on request. The final registration and re-registration dates are usually at the end of February and at the end of August.

b. Promotion requirement(s): In the dissertation, the student must show proof of his or her understanding of a specific problem in the agricultural field studied. He or she must also demonstrate an ability to order and analyse it logically and make logical deductions or diagnoses, and then propose improvements or ways to solve the problem. Dissertations must comply with the norms set by the University.

The Magister Technologiae: Agriculture will be conferred on a student who -

• is in possession of a Baccalaureus Technologiae: Agriculture or Agricultural Management or an equivalent qualification;
• has completed an approved research project of at least one year's duration on obtaining the required degree;
• has submitted an acceptable dissertation, accompanied by an article of a standard suitable for publication;
• has passed the prescribed examination (an additional oral examination or academic discourse may be required after the dissertation has been evaluated); and
• has presented a colloquium of at least 40 minutes' duration on the research project, for non-examination purposes.

c. Duration: A minimum of one year and a maximum of three years.

d. Subject credits: Subject credits are shown in brackets after every subject.

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<td>PPC500R</td>
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<td></td>
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TOTAL CREDITS FOR THE QUALIFICATION: 1,000
5.10 DOCTOR TECHNOLOGIAE: AGRICULTURE
Course code: DTAL98

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Agriculture or an equivalent qualification. Prospective students must apply in good time for status to be awarded for equivalent qualifications. Research proposals must be approved by the Department before final registration for the course. Details of the requirements of research proposals are available on request. The final registration and re-registration dates are usually at the end of February and at the end of August.

b. Promotional requirement(s): In the thesis, the student must show proof of creative and original thinking and problem-solving abilities, and that he or she is making a significant contribution towards the solution of a specific problem in the work situation relating to the particular agricultural study field.

The Doctor Technologiae: Agriculture will be conferred on a student who:

• is in possession of a Magister Technologiae: Agriculture or an equivalent qualification;
• has completed an approved research project of at least two years' duration on obtaining the required degree;
• has submitted an acceptable thesis, accompanied by two articles of a standard suitable for publication;
• has passed the prescribed examination (an additional oral examination or academic discourse may be required after the thesis has been evaluated); and
• has presented a colloquium of at least 40 minutes on the research project, for non-examination purposes.

c. Duration: A minimum of two years and a maximum of five years.

d. Subject credits: Subject credits are shown in brackets after every subject.

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<tr>
<td>PPC700R</td>
<td>Thesis: Agriculture (re-registration)</td>
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TOTAL CREDITS FOR THE QUALIFICATION: 2,000
5.11 SUBJECT INFORMATION

SUBJECT NAME: AGRICULTURAL ANATOMY AND PHYSIOLOGY I
SUBJECT CODE: AAP101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
A systematic, summarised study of the skeleton, muscular system, organs and organ systems of the different farm animals, as well as the physiology of digestion, milk production and endocrinology.

SUBJECT NAME: AGRICULTURAL BOTANY I
SUBJECT CODE: AGB101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
MODULE 1
Crop morphology: a review of the importance of plants in general and crop plants in particular. The morphology of crop plants.
MODULE 2
Crop anatomy and classification: anatomy of crop plants, common and botanical names, development of the botanical classification, plant identification and nomenclature.
MODULE 3
Crop physiology: physiology of crop plants, photosynthesis, respiration, translocation, vegetative growth and development, reproductive growth and development, growth regulators.

SUBJECT NAME: AGRICULTURAL CALCULATIONS I
SUBJECT CODE: AGA111T
EVALUATION METHOD: 1 X 2-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
Quantifying information through applied mathematics. Elaboration on and presentation of information through appropriate computer programs. Computer literacy.
MODULE 1
Agricultural calculations: the use of pocket calculators, fractions, decimals, formulas, exponents, ratios, length, circumference, area, volume, mass, time, percentages and graphs.
MODULE 2
Computer literacy: the extension and presentation of information by means of applied computer programs.

SUBJECT NAME: AGRICULTURAL COMMUNICATION I
SUBJECT CODE: AGC100T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
The importance of group forming in the work sphere. Productive leadership and participation in democratic groups. The functioning of groups within the dynamic environment. The use of groups for solving problems and increasing productivity. The management of groups with various group techniques. Defining aims and evaluations in groups. Leadership types and styles and their management implications.

SUBJECT NAME: AGRICULTURAL ECONOMICS I
SUBJECT CODE: AGE111T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
A study of agricultural economics with the emphasis on microeconomics of production as part of farming management. Functional general management process with internal management information system and enterprise functions, applied to farm labour management and financial management for farmers under conditions of risk and uncertainty.
MODULE 1
General agricultural economics: background to general economics and business economics and management with emphasis on agricultural economics and management.
MODULE 2
Production economics: principles of the microeconomics of production, the management of the production factors in agricultural context and the production operational system.

MODULE 3
Farming management: general management process and internal management information system with enterprise functions, applied to farm labour management and financial management for the farmer under agricultural conditions of risk and uncertainty.

SUBJECT NAME: AGRICULTURAL ENGINEERING I
SUBJECT CODE: AEG101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours

OVERVIEW OF SYLLABUS:
The planning and conservation of resources with mechanisation by applying the principles and working of basic power units used in agriculture.

MODULE 1
Surveying conservation and hydraulics: introduction to surveying and hydraulics to apply conservation work to the natural resources.

MODULE 2
Tractor performance: types of tractors with their system components, performance and maintenance.

MODULE 3
Agricultural implements (agronomy): soil preparation implements as applicable to agronomy, adjustments, working and maintenance.

MODULE 4
Agricultural implements (animal production): soil preparation implements as applicable to animal production, harvesting and preparation of crops with specialised equipment.

MODULE 5
Mechanisation planning: planning of specific systems for purchasing and the management of a farming practice.

SUBJECT NAME: AGRICULTURAL EXTENSION I
SUBJECT CODE: AEX101C
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours

OVERVIEW OF SYLLABUS:

MODULE 1

MODULE 2
Agricultural extension methods: individual methods, group methods, mass media methods, written methods, electronic methods.

MODULE 3
Introduction to communication and extension programmes: elements of communication, practical communication, using different channels, principles of programme construction, importance of programmes.

SUBJECT NAME: AGRICULTURAL EXTENSION II
SUBJECT CODE: AEX201C
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours

OVERVIEW OF SYLLABUS:
MODULE 1
The concept agricultural extension: agricultural extension as part of community development, an appropriate and effective approach to agricultural development.

MODULE 2
Principles of agricultural extension communications: the meaning and importance of the communication process, reasons why people communicate, the transactional principles of communication, communication models, communication arenas.

MODULE 3
Agricultural extension methods: individual methods, group methods, mass media methods, written methods, electronic methods.

SUBJECT NAME: AGRICULTURAL EXTENSION III
SUBJECT CODE: AEX301C
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:

MODULE 1
Group dynamics and leadership: formal and informal groups, internal and external group dynamics, characteristics of efficient groups, democratic, autocratic and laissez-faire leadership styles, the implications of leadership for management.

MODULE 2
Behavioural change: needs, perception, the attributes of innovation.

MODULE 3
Communication of innovation: five-step adoption model, categories of adoption of innovation, innovation-decision model.

SUBJECT NAME: AGRICULTURAL EXTENSION IV
SUBJECT CODE: AEX400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 50 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: AGRICULTURAL LAW I
SUBJECT CODE: ALA101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
An introduction to law, labour laws applicable to agriculture, law of contracts, applicable laws and other legal aspects relating to agriculture.

SUBJECT NAME: AGRICULTURAL MANAGEMENT I
SUBJECT CODE: AMN101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
Introduction to agricultural management with the emphasis on the functional management process and the role of management information during decision-making under conditions of risk and uncertainty in production systems.

MODULE 1
General management: introduction to the general management process and management of the enterprise functions within a managerial philosophy of management by objectives applied to agribusiness and farming enterprises, rational decision-making process and scientific problem-solving.
MODULE 2
Information management: introduction to information management, concentrating on the internal management of information of a commercial farming undertaking. Emphasis is placed on management accounting and financial management principles, risk and uncertainty management, as applied to agricultural situations.

MODULE 3
Agricultural systems management: the management of agricultural production operational systems, emphasising the principles of production management and the elements of the microeconomics of production.

SUBJECT NAME: AGRICULTURAL MANAGEMENT II
SUBJECT CODE: AMN201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours

OVERVIEW OF SYLLABUS:
A follow-up on the study of agricultural enterprise management, with greater emphasis on agricultural marketing, requisite supplies and public relations functions in the broad agricultural industry.

MODULE 1
Marketing management: the supply and demand mechanism of price formation and change relating to non-controlled markets for agricultural products, integrated marketing management and the marketing of economically important agricultural products.

MODULE 2
Purchasing management: the purchasing function and the task of purchasing management in an agricultural context, with reference to the purchasing grid and cycle. Integrated management of the major purchasing activities and aids to purchasing involved in the procurement of farming requisites.

MODULE 3
Public relations management: the module provides a comprehensive perspective on public relations as a crucial management function. Public relations functions, the task of public relations management, the principles and conditions, procedures and process are examined within the agricultural context.

SUBJECT NAME: AGRICULTURAL MANAGEMENT III
SUBJECT CODE: AMN301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours

OVERVIEW OF SYLLABUS:
More advanced study of financial management in agricultural enterprises, with the emphasis on budgeting methodology and commercial farming practice, as well as reference to tax and estate planning for farmers.

MODULE 1
Financial management: in-depth study of the purpose, structure and process of the internal farming management information system, from compilation of physical and financial records to analysis and interpretation of financial statements for effective financial management of the farming undertaking.

MODULE 2
Budgeting methodology: in-depth study of the budgeting process in farming business management, with the emphasis on the various suitable types of budgets for the farmer as financial manager of a commercial farming enterprise.

MODULE 3
Agrifinancing and tax management: in-depth study of the financing decision-making process within a rational financing policy and balanced financing plan for a healthy commercial farming enterprise. Introduction to the elements and principles of effective tax and estate planning for commercial farmers.

SUBJECT NAME: AGRICULTURAL MARKETING II
SUBJECT CODE: AGR201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours

OVERVIEW OF SYLLABUS:
Principles of price-forming theory and agricultural marketing, with the emphasis on the marketing function from the enterprise point of view. Purchasing and public relations in agricultural undertakings (especially farm firms and cooperatives).
MODULE 1
Price theory: principles and elements of price theory for agricultural markets and the marketing of agricultural products with their own peculiar problems.

MODULE 2
Agribusiness management: enterprise management of the purchasing, marketing and public relations functions in agricultural context with an integrated market-orientated marketing approach.

MODULE 3
Cooperative theory: fundamental principles and basic functions of agricultural cooperatives with the emphasis on South African conditions.

SUBJECT NAME:  AGRICULTURAL MECHANISATION I
SUBJECT CODE: AGH101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
Principles and operation of the basic power units applicable to agriculture.

MODULE 1
Tractor performance: types of tractors with their system components, performance and maintenance.

MODULE 2
Agricultural implements (agronomy): soil preparation implements as applicable to agronomy, adjustments, working and maintenance.

MODULE 3
Agricultural implements (animal production): soil preparation as applicable to animal production, harvesting and preparation of fodder crops with specialised implements.

MODULE 4
Mechanisation planning: planning of specific systems for purchasing and the management of a farming practice.

SUBJECT NAME:  AGRICULTURAL PRACTICE III
SUBJECT CODE: AGG301T
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: 6 months
OVERVIEW OF SYLLABUS:
A practical internship of one semester in an approved agriculture-related enterprise. A report on the internship plus tasks related to the student's specialised study field. An oral examination.

SUBJECT NAME:  AGRICULTURAL PRODUCTION MANAGEMENT II
SUBJECT CODE: AGD201T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: 6 months
OVERVIEW OF SYLLABUS:
Students are required to undertake a practical study of one of the following managerial competencies, and submit a written report:
• Crop production planning and implementation
• Animal production planning and implementation
• Pasture production planning and implementation

SUBJECT NAME:  AGRICULTURAL PRODUCTION MANAGEMENT III
SUBJECT CODE: APN301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
An in-depth study of labour relations and labour unionism in agriculture. Production operation systems management for the farming enterprise. Introduction to mechanisation management, especially machinery management. Financial management and the management of information systems. Agricultural cooperation management, especially the management of enterprise functions.
SUBJECT NAME: AGRICULTURAL PRODUCTION TECHNIQUES I
SUBJECT CODE: AGQ101T
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: 6 months
OVERVIEW OF SYLLABUS:
A practical internship of one semester with an approved agriculture-related enterprise. A report on the internship plus tasks relating to the student’s specialised study field. An oral examination.

SUBJECT NAME: AGRICULTURAL PRODUCTION TECHNIQUES II
SUBJECT CODE: AGQ201T, AGQ201B
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: 6 months
OVERVIEW OF SYLLABUS:
A practical internship of one semester with an approved agriculture-related enterprise. A report on the internship plus tasks relating to the student’s specialised study field. An oral examination.

SUBJECT NAME: AGRICULTURAL SOIL SCIENCE I
SUBJECT CODE: ASC101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 100 hours
OVERVIEW OF SYLLABUS:
The physical, chemical and biological properties of soil and their importance regarding soil fertility and fertility use.
MODULE 1
Introduction and chemical soil properties: principles of plant growth, composition of soil, plant nutrients, colloids, pH and brackish conditions.
MODULE 2
Physical and chemical soil properties: soil texture, soil structure, aeration, soil water, soil temperature, soil organisms, organic material and biological decomposition.
MODULE 3
Fertilisation: properties of plant nutrients and fertilisers, fertiliser recommendations and calculations.

SUBJECT NAME: AGRONOMY II
SUBJECT CODE: AGN201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
The cultivation of field crops, with the emphasis on grain crops and potatoes. This includes the extent of the industry, the growth and development of crops and cultivation practices.
MODULE 1
Potatoes: the cultivation of potatoes; the extent of the industry; stages of development and the relevant cultivation practices.
MODULE 2
Maize and grain sorghum: the cultivation of maize and grain sorghum and the extent of the industrial stages of development of maize, a comparison of the two crops and the relevant cultivation practices.
MODULE 3
Small grains: the cultivation of small grains, the extent of the industry, stages of development and the relevant cultivation practices.

SUBJECT NAME: AGRONOMY III
SUBJECT CODE: AGN301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
The cultivation of field crops, with the emphasis on oil seeds and protein seeds, industrial crops and fodder crops. This includes the extent of the industry, the growth and development of crops and cultivation practices.
MODULE 1
Industrial crops: the cultivation of tobacco, cotton and lucern, the extent of the industry, development of these crops and relevant cultivation practices.
MODULE 2
Oil seeds and protein seeds: cultivation of different crops in this group, as well as their growth and development.

SUBJECT NAME: ANIMAL NUTRITION II
SUBJECT CODE: ANU201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
The maintenance and production requirements of ruminants and monogastric animals. The nutrients in feed, namely protein, energy, vitamins, minerals and fats. Feed components and chemical feed additives.

SUBJECT NAME: ANIMAL PRODUCTION I
SUBJECT CODE: DPS101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
An introduction to animal production in South Africa. The use of resources, including potential planning and veld knowledge, nutrition and small stock.

SUBJECT NAME: ANIMAL PRODUCTION II
SUBJECT CODE: DPS201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
Breeding, herd management, risk management, economic principles regarding the marketing boards and feed lots.

SUBJECT NAME: ANIMAL PRODUCTION III
SUBJECT CODE: DPS301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
Important aspects of milk production, meat production and fibre production (wool and mohair), stud breeding.

SUBJECT NAME: ANIMAL PRODUCTION IV
SUBJECT CODE: DPS400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 50 hours
OVERVIEW OF SYLLABUS:
A comprehensive study of one or more animal production systems. The preparation and presentation of a contemporary production and management guide for a specific livestock production system. A comprehensive case study of an animal production unit aimed at identifying viable economic practices. A critical evaluation of a research publication in the specific field of study, as well as preparatory work for a seminar.

SUBJECT NAME: BEEFER PRODUCTION II
SUBJECT CODE: BPD201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
An introductory study of beefer production, with the emphasis on the beefer industry, breeds, breeding, reproduction, equipment, marketing, diseases and nutrition.

SUBJECT NAME: BEEFER PRODUCTION III
SUBJECT CODE: BPD301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
An in-depth study of management programmes, marketing, seminars, applied nutrition, the efficiency of farming, judging, farm planning, beefer production and computer application.
SUBJECT NAME: COMPUTER APPLICATIONS: AGRICULTURE II
SUBJECT CODE: CAA201T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
Advanced electronic spreadsheets, linear planning, the application of agriculture-orientated software.

SUBJECT NAME: COMPUTER SKILLS I
SUBJECT CODE: CSK101T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
An introduction to computer hardware and software and their application in agriculture. Buying, evaluation and operation of computers.

SUBJECT NAME: CROP BREEDING III
SUBJECT CODE: CRB301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
MODULE 1
Basic genetic principles: asexual and sexual reproduction in crop plants, mitosis and meiosis, basic Mendelian heredity, extensions of Mendelian heredity.
MODULE 2
In vitro methods and their use in crop breeding, breeding methods and techniques.

SUBJECT NAME: CROP PRODUCTION I
SUBJECT CODE: CRO101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
An introduction to crop production. Factors influencing the adaptability of crops. The principles of different cultivation practices and crop improvement. Calculations regarding planting dates, crop potential, fertilisation, plant population, yields, calibration of implements.
MODULE 1
Crops and their environment: introduction to crop production, criteria of efficiency, environmental factors that influence production, moisture-sensitive periods.
MODULE 2
Cultivation practices: principles of different cultivation practices and crop improvement.
MODULE 3
Agronomic calculations: calculations regarding planting dates, plant population, crop potential, fertilisation, yields, calibration of implements.

SUBJECT NAME: CROP PRODUCTION IV
SUBJECT CODE: CRO400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 50 hours
OVERVIEW OF SYLLABUS:
An in-depth study of the botany and production of a crop or groups of crops that are cultivated on a commercial scale. These include agronomic crops, vegetable crops, fruit crops and other crops.

SUBJECT NAME: CROP PROTECTION I
SUBJECT CODE: OBS101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
MODULE 1
Basic entomology: a review of the morphology, development, reproduction, biology and classification of insects and mites, and collection and mounting of insect specimens.
MODULE 2
Plant pathology: a review of symptoms and the classification of plant diseases, the classification and biology of the different groups of plant pathogens, the disease cycle, the dissemination of plant pathogens.
MODULE 3

SUBJECT NAME: CROP PROTECTION II
SUBJECT CODE: OBS201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
MODULE 1
Pest control: a review of various pesticides, the use of standard reference material, a review of various pest control methods, the biology and control of known South African agricultural pests.
MODULE 2
Disease control: a review of different disease management strategies, separation of host and pathogen, reduction of inoculum, immunisation and resistance, and direct plant protection with appropriate examples.
MODULE 3
Application: a review of the different types of application equipment and the principles of application, calibration of application equipment.
MODULE 4

SUBJECT NAME: CROP PROTECTION III
SUBJECT CODE: OBS301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
MODULE 1
Pest control: a review of insect ecology relevant to pest control in agriculture, a comprehensive explanation of the principles of biological and integrated control, insect pest management (IPM).
MODULE 2
Plant pathology: a study of various epidemics and the disease management strategies they require, the influence of environmental factors on the development of epidemics, development of integrated disease management strategies through applicable case studies.

SUBJECT NAME: CULTIVATED PASTURES I
SUBJECT CODE: CVT101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
Broadening the field of pasture science by studying the following: the role of cultivated pastures, soil and veld management, radical veld improvement, irrigation, fodder conservation, grass and legume pastures, grazing mixtures, drought feeding and fodder-flow planning.

SUBJECT NAME: EXPERIENTIAL LEARNING I
SUBJECT CODE: EXP1AGR
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: 6 months
OVERVIEW OF SYLLABUS:
A practical internship of one semester at an approved agriculture-related enterprise. A report on the internship, as well as tasks relating to the specialisation field of the student.

SUBJECT NAME: EXPERIENTIAL LEARNING II
SUBJECT CODE: EXP2AGR
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: 6 months
OVERVIEW OF SYLLABUS:
A practical internship of one semester with an approved agriculture-related enterprise. A report on the internship plus tasks relating to the specialisation field of the student. An oral examination.
SUBJECT NAME: FARM PLANNING I
SUBJECT CODE: FMP101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
The planning of a farm to satisfy the principles of optimal resource utilisation.

MODULE 1
Optimal resource utilisation: supplying the user of the resources with information to identify the potential limitations and application possibilities of natural resources.

MODULE 2
Resources for planners to enhance their skills in using the instruments, maps and related resources.

MODULE 3
Procedure for the planning of a farming unit: systematic planning of a farm unit and its overheads with physical control.

SUBJECT NAME: FINANCIAL MANAGEMENT: AGRICULTURE IV
SUBJECT CODE: FBL400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
A discussion about the most recent investment options. Drawing up, evaluation and interpretation of financial statements for farming. Guidelines for an operational and strategic farming plan. Diagnosis of farming problems. Farming taxation. Analysis of a complete, economical farming unit.

SUBJECT NAME: FRUIT PRODUCTION II
SUBJECT CODE: FPR201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
An introduction to the fruit industry and the classification of fruit. The establishment and maintenance of an orchard. Structure, growth, development and production of tree fruit, with the emphasis on temperate fruit.

MODULE 1
Introduction to fruit production: the fruit industry of South Africa in perspective, introduction to the environment and production practices for fruit trees.

MODULE 2
Pruning and training of fruit trees: the principles and practices of fruit tree pruning and training.

MODULE 3
Production of temperate fruit: the structure, growth, development and production of temperate fruit.

SUBJECT NAME: FRUIT PRODUCTION III
SUBJECT CODE: FPR301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
Introduction to a nursery practice. Use of growth regulators of tree fruit and the harvest and post-harvest control of fruit. The structure, growth, development and production of tree fruit with the emphasis on subtropical and tropical fruit.

MODULE 1
Propagation, growth regulators and fruit physiology: introduction to propagation of fruit trees, fruit physiology and the use of growth regulators in tree fruit.

MODULE 2
Citrus production: the structure, growth, development and production of citrus.

MODULE 3
Tropical and subtropical fruit production: the structure, growth, development and production of other tropical and subtropical fruit.
SUBJECT NAME: LEADERSHIP DEVELOPMENT II  
SUBJECT CODE: LDV200T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 70 hours  
OVERVIEW OF SYLLABUS:  
The development of the farmer as an entrepreneur who will be able to manage his agricultural-industrial enterprise effectively. Negotiation skills in relation to personnel management and handling conflict. Agricultural extension services to less knowledgeable farmers, as well as successful public speaking.

SUBJECT NAME: NATURAL PASTURES I  
SUBJECT CODE: NPT101T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 70 hours  
OVERVIEW OF SYLLABUS:  
The importance of veld pastures. The morphology, physiology and composition of grasses. Ecological and grazing concepts. The production characteristics of the main grazing areas of South Africa. Growth and production. Veld evaluation. The animal as a factor in veld management. Methods and principles of veld management.

SUBJECT NAME: PASTURE SCIENCE I  
SUBJECT CODE: PSC121T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 70 hours  
OVERVIEW OF SYLLABUS:  
Intensive and extensive pasture management, fodder-flow planning, drought-tolerant fodder crops.

SUBJECT NAME: PERSONNEL MANAGEMENT: AGRICULTURE I  
SUBJECT CODE: PMI101T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 70 hours  
OVERVIEW OF SYLLABUS:  
An introduction to personnel management, personnel planning and utilisation, communication, labour relations.  
MODULE 1  
Introduction to personnel management: the principles of personnel management, the role of personnel management, personnel management in context, the national and local personnel strategy recruitment procedure.  
MODULE 2  
Introduction to communication: interpersonal communication, communication in groups, communication in organisations, mass communication and media skills.  
MODULE 3  
Labour relations: the South African labour relations system, labour legislation, workplace ethics, labour unions, grievance procedures.

SUBJECT NAME: PLANT PRODUCTION I  
SUBJECT CODE: PPU101T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 70 hours  
OVERVIEW OF SYLLABUS:  
Introduction to crop production. Factors influencing the adaptability of crops. Principles of different cultivation practices and crop improvement. Calculations regarding planting dates, plant population, crop potential, fertilisation, yields, calibration of implements.  
MODULE 1  
Crops and their environment: introduction to crop production, criteria of efficiency, environmental factors that influence production, moisture-sensitive periods.  
MODULE 2  
Cultivation practices: principles of different cultivation practices and crop improvement.  
MODULE 3  
Agronomic calculations: calculations regarding planting dates, plant population, crop potential, fertilisation, yields, calibration of implements.
SUBJECT NAME: PLANT PRODUCTION II
SUBJECT CODE: PPU201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:

MODULE 1
Basic entomology: a review of the morphology, development, reproduction, biology and classification of insects and mites.

MODULE 2
Pest control: a review of various pest control methods, the biology and control of known South African agricultural pests.

MODULE 3
Plant pathology: a review of symptoms and the classification of plant diseases, the classification and biology of the different groups of plant pathogens, the disease cycle, the dissemination of plant pathogens, methods of disease control.

SUBJECT NAME: PLANT PRODUCTION III
SUBJECT CODE: PPU301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
The cultivation of field crops, with the emphasis on oil seeds and protein seeds, industrial crops and fodder crops. This includes the extent of the industry, the growth and development of these crops and cultivation practices.

MODULE 1
Industrial crops: the cultivation of tobacco, cotton and lucern, the extent of the industry, development of these crops and relevant cultivation practices.

MODULE 2
Oil seeds and protein seeds: cultivation of different crops in this group, as well as their growth development.

SUBJECT NAME: PRODUCTION AND OPERATIONAL TECHNIQUES I
SUBJECT CODE: POT101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
Strategic and operational management process with management functions and enterprise functions distinguished within farming management. Emphasis is placed on management of the production function according to principles of the microeconomics of production. Production operation systems management with the main production operational techniques as aids.

MODULE 1
Agricultural management: study field of agricultural management at strategic, tactical and operational levels with emphasis on the general management process, coordinating the enterprise functions and, especially, production management and economics in the farming enterprise.

MODULE 2
Production operations systems management: principles of production operations systems management with the application of the functional model in agricultural context and production systems in the farming undertaking.

MODULE 3
Production operational techniques: the major production operational models and techniques as aids for the agricultural production manager, as applied to the farming practice.

SUBJECT NAME: PROJECT MANAGEMENT: AGRICULTURE IV
SUBJECT CODE: PJG400B
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 50 hours
OVERVIEW OF SYLLABUS:
The development and evaluation of a control or development strategy and/or programme regarding a selected diversification or specialist field in agriculture by means of existing literature. Internal evaluation on the basis of preparation for and the presentation of a seminar by means of a colloquium.
SUBJECT NAME: RESEARCH METHODOLOGY  
SUBJECT CODE: RMD100C  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 70 hours  
OVERVIEW OF SYLLABUS: Research in agriculture, scientific research, theoretical concepts. Practising a science. Defining problems, motivation, literature studies, aims, sampling, the preliminary investigation, the research report, interpretation and discussion of scientific data, the planning of a research project. Statistical processing or biometry.

SUBJECT NAME: SMALL STOCK PRODUCTION II  
SUBJECT CODE: SSP201T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 70 hours  
OVERVIEW OF SYLLABUS: Introduction to small stock production with the emphasis on the small stock industry, small stock races, breeding, reproduction, diseases, nutrition and production systems.

SUBJECT NAME: SMALL STOCK PRODUCTION III  
SUBJECT CODE: SSP301T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 70 hours  
OVERVIEW OF SYLLABUS: Introduction to small stock production with the emphasis on the small stock industry, small stock races, breeding, reproduction, diseases, nutrition and production systems.

SUBJECT NAME: SOIL CLASSIFICATION II  
SUBJECT CODE: SCL201T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 100 hours  
OVERVIEW OF SYLLABUS: The systematic investigation, description, classification and mapping of soils. The agricultural potential of the most important soils. 
MODULE 1 Soil morphology: the terminology, principles and procedures for the description of soil profile morphology, soil-forming factors and processes. 
MODULE 2 The taxonomic system for South Africa: the principles and procedures for classifying soils into soil forms and soil families according to the taxonomic system for South Africa. 
MODULE 3 Soil resource data and crop requirements: the agricultural potential of the most important soil forms with their most important advantages and limitations regarding a variety of crops. 
MODULE 4 Physics: an introduction to physics with the emphasis on practical applications regarding the international metric system, areas and volumes, temperature, heat energy, water vapour in the atmosphere, density, pressure, electricity, light and properties of liquids.

SUBJECT NAME: SOIL SCIENCE I  
SUBJECT CODE: SSC111T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 100 hours  
OVERVIEW OF SYLLABUS: The physical, chemical and biological properties of soil and their importance regarding soil fertility. Agrometeorology and chemistry. 
MODULE 1 Introduction and chemical properties of soil: principles of plant growth, composition of soil, plant nutrients, colloids, pH and brackish conditions. 
MODULE 2 Physical and biological properties of soil: soil texture, soil structure, aeration, soil water, soil temperature, soil organisms, organic material and biological decomposition.
MODULE 3
Agrometeorology: the importance of weather and climate in agricultural production, climate and agriculture in South Africa, important meteorological parameters, meteorological stations and their instruments.

MODULE 4
Chemistry: basic concepts in chemistry and nomenclature, chemistry of water and colloidal particles, acids and bases, fertilisers.

SUBJECT NAME: SOIL SCIENCE III
SUBJECT CODE: SSC301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours

OVERVIEW OF SYLLABUS:
MODULE 1
Plant nutrition and the properties of fertilisers: properties of plant nutrients and their role in plant growth, properties of fertilisers.

MODULE 2
Fertiliser recommendations and methods of application: sampling soil and leaf analysis, calculations, fertiliser recommendations, factors that influence placing, methods of placing and calibration of equipment.

MODULE 3
Irrigation scheduling: soil-water relationships, classification of soil water, measurement of water content, infiltration water movement in soils, evapotranspiration, plant-water relationships, irrigation scheduling.

SUBJECT NAME: SOIL SURVEYS II
SUBJECT CODE: SSV201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 100 hours

OVERVIEW OF SYLLABUS:
The systematic investigation, description, classification and mapping of soils. The agricultural potential of the most important soils.

MODULE 1
Soil morphology: the terminology, principles and procedures for the description of soil profile morphology, soil-forming factors and processes.

MODULE 2
The taxonomic system for South Africa: the principles and procedures for classifying soils into soil forms and soil families according to the taxonomic system for South Africa.

MODULE 3
Soil resource data and crop requirements: the agricultural potential of the most important soil forms with their most important advantages and limitations regarding a variety of crops.

MODULE 4
Physics: an introduction to physics, with the emphasis on practical applications regarding the international metric system, areas and volumes, temperature, heat energy, water vapour in the atmosphere, density, pressure, electricity, light and properties of liquids.

SUBJECT NAME: STRATEGIC MANAGEMENT: AGRICULTURE IV
SUBJECT CODE: SBL400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 50 hours

OVERVIEW OF SYLLABUS:
Formulating a mission for a farming enterprise. Evaluation of the internal and external environment, formulating long-term goals and farming strategies. Formulating annual goals, developing policy, procedures and a budget. Control and evaluation of this process. Planning, implementation and control of agricultural marketing at an advanced strategic level.
OVERVIEW OF SYLLABUS:
An introduction to the vegetable industry. The structure, growth, development and production of important vegetable crops in South Africa.

MODULE 1
Introduction to vegetable production: vegetables and vegetable production in perspective, principles of cultivation practices and alternative production systems, quality control.

MODULE 2
Leaf- and fruit-bearing vegetables, the botany and cultivation of leaf- and fruit-bearing vegetables (e.g. cabbage, lettuce, tomato).

MODULE 3
Subterranean and pod-bearing vegetables: the botany and cultivation of subterranean and pod-bearing vegetables (e.g. carrot, beetroot, onion, sweet potato, pea, bean).
6. DEPARTMENT OF DENTAL SCIENCES

6.1 NATIONAL CERTIFICATE: DENTAL ASSISTING
Course code: NCDS91

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Senior Certificate or an equivalent qualification with a pass of 50% in one of the following subjects at Standard Grade: Biology, Physiology, Mathematics or Science.

b. Selection criteria: A Potential Assessment test and a personal interview. Prospective students should arrange a selection interview with the Head of the Department.

c. Recommended subject(s): Biology, Mathematics, Physical Science and Physiology.

d. Minimum duration: One year.

e. Presentation One year: day classes or two years: part-time (only applicable to students already employed in a dental practice).

f. Intake for the course: January only.

g. Registration for the subjects of this course: January only.


i. Other requirements: A valid first-aid certificate. First-aid courses are arranged by the University. Immunisation against Hepatitis B is compulsory.

j. Experiential Learning I: See Chapter 5 of Students’ Rules and Regulations.

k. Readmission: See Chapter 3 of Students’ Rules and Regulations.

l. Subject credits: Subject credits are shown in brackets after every subject.

YEAR SUBJECTS

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
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<tbody>
<tr>
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<td>Dental Assisting Practical I</td>
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<td>DAT110T</td>
<td>Dental Assisting Theory I</td>
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<td>DAT11PT</td>
<td>Dental Assisting Theory: Dental Assisting I</td>
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<td>DAT11QT</td>
<td>Dental Assisting Theory: Dental Radiography I</td>
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<td>DPM100T</td>
<td>Dental Practice Management I</td>
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<td>EXP1DET</td>
<td>Experiential Learning I</td>
<td>(0,300)</td>
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<tr>
<td>OAP100T</td>
<td>Oral Anatomy and Pathology I</td>
<td>(0,175)</td>
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TOTAL CREDITS FOR THE QUALIFICATION: 1,000
REMARKS

a. Admission requirement(s): A Senior Certificate or an equivalent qualification with a pass at Standard Grade in one of the following minimum combinations: Mathematics and Physical Science or Mathematics and Biology or Physiology, or Physical Science and Biology or Physiology.

b. Selection criteria: Selection takes place in three steps. Students must be successful in each step before they may progress to the following one.
   Step 1: Potential Assessment
   Step 2: Dexterity test (if successful in step one)
   Step 3: Personal interview (if successful in step two)

c. Recommended subject(s): None.

d. Minimum duration: Three years.

e. Presentation: Day classes.

f. Intake for the course: January only.

g. Registration for the subjects of this course: January and July.

h. Other requirements: Immunisation against Hepatitis B is compulsory. Students should have access to computers and the Internet. Students should register with the South African Dental Technicians Council. Students must obtain approved first-aid certificates to be admitted to the third-year examinations of the National Diploma. First-aid courses are usually arranged by the Department. Faculty and statutory rules and regulations will be applicable to students who register for this course. It is the responsibility of the students to familiarise themselves with these rules and regulations. In addition to tuition fees, an amount of approximately R17 000 will be required in the first year for personal instruments. These will remain the property of the student. Students are responsible for purchasing these instruments themselves. NB: a dental technician in possession of a National Diploma may only practise his or her profession as an employee and may not supervise a dental laboratory. NB: students must be in possession of the Baccalaureus Technologiae: Dental Technology before they will be allowed to practise as dental technologists. Students with National Diplomas may be employed as dental technicians.

i. Readmission: See Chapter 3 of Students’ Rules and Regulations.

j. Subject credits: Subject credits are shown in brackets after every subject.

Key to asterisks
* Information does not correspond with information in Report 151.
(Deviations approved by the Senate in August 2005.)
## FIRST YEAR

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<tr>
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<tr>
<td>DMS100T</td>
<td>Dental Materials Science I (0,350)</td>
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<tr>
<td>DTT100T</td>
<td>Dental Technology Theory I (0,240)</td>
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plus one of the following subjects:

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<td>KOM150T</td>
<td>Kommunikasie I (0,080)</td>
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### FIRST SEMESTER

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<tbody>
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### SECOND SEMESTER

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<tbody>
<tr>
<td>TMY101T</td>
<td>Tooth Morphology I (0,080)</td>
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### TOTAL CREDITS FOR THE FIRST YEAR: 1,000

## SECOND YEAR

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<tr>
<td>ANT200T</td>
<td>Applied Dental Technology II (0,250)</td>
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<td>Applied Dental Technology I</td>
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<tr>
<td>DMS200T</td>
<td>Dental Materials Science II (0,330)*</td>
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<td>Dental Materials Science I</td>
</tr>
<tr>
<td>DTT200T</td>
<td>Dental Technology Theory II (0,250)</td>
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<td>Dental Technology Theory I</td>
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<tr>
<td>JUR100T</td>
<td>Jurisprudence I (0,170)</td>
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### TOTAL CREDITS FOR THE SECOND YEAR: 1,000

## THIRD YEAR

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<td>Applied Dental Technology II</td>
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<tr>
<td>BNP110B</td>
<td>Business Practice I (0,170)</td>
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<tr>
<td>DMS300T</td>
<td>Dental Materials Science III (0,350)</td>
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<td>Dental Materials Science II</td>
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<td>DTT300T</td>
<td>Dental Technology Theory III (0,280)</td>
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<td>Dental Technology Theory II</td>
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### TOTAL CREDITS FOR THE THIRD YEAR: 1,000

### 6.3 BACCALAUREUS TECHNOLOGIAE: DENTAL TECHNOLOGY

Course code: BTDT96

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

### REMARKS

a. Admission requirement(s): A National Diploma: Dental Technology or an equivalent qualification.

b. Selection criteria: Selection is based on academic performance, professional and ethical behaviour during the previous years of study, and an interview.

c. Minimum duration: One year.

d. Presentation: Day classes.
e. Intake for the course: January only.

f. Registration for the subjects of this course: January only.

g. Other requirements: Students should have access to computers and the Internet. Students should register as students and technicians with the South African Dental Technicians Council. Faculty and statutory rules and regulations will be applicable to students who register for this course. It is the responsibility of students to familiarise themselves with these rules and regulations. NB: students must be in possession of the Baccalaureus Technologiae: Dental Technology before they will be allowed to practise as dental technologists. Students with National Diplomas may be employed as dental technicians.

h. Readmission: See Chapter 3 of Students’ Rules and Regulations.

i. Subject credits: Subject credits are shown in brackets after every subject.

### YEAR SUBJECTS

<table>
<thead>
<tr>
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<th>SUBJECT</th>
<th>CREDIT</th>
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<td>Dental Materials Science IV</td>
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<td>DTN410T</td>
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<tr>
<td>RMQ110B</td>
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**TOTAL CREDITS FOR THE QUALIFICATION:** 1,000

### 6.4 MAGISTER TECHNOLOGIAE: DENTAL TECHNOLOGY

**Course code:** MTDT95

**Campus where offered:** Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

### REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Dental Technology or an equivalent qualification.

b. Selection criteria: All applications are subject to selection.

c. Duration: A minimum of one year and a maximum of three years.

d. Structure: The course comprises an applied or basic research project, to be submitted as a dissertation.

e. Subject credits: Subject credits are shown in brackets after every subject.

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<tr>
<td>DTN500R</td>
<td>Dissertation: Dental Technology (re-registration)</td>
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**TOTAL CREDITS FOR THE QUALIFICATION:** 1,000
6.5 DOCTOR TECHNOLOGIAE: DENTAL TECHNOLOGY

Course code: DTDT96

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Dental Technology or an equivalent qualification, evaluated by the Department of Education as M+5.

b. Selection criteria: All applications are subject to selection.

c. Duration: A minimum of two years and a maximum of five years.

d. Structure: The course comprises an advanced research project and a thesis.

e. Enquiries: Further particulars are obtainable from the Head of the Department on request.

f. Subject credits: Subject credits are shown in brackets after every subject.

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<th>SUBJECT</th>
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<tbody>
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<td>Thesis: Dental Technology</td>
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<tr>
<td>DTN700R</td>
<td>Thesis: Dental Technology (re-registration)</td>
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TOTAL CREDITS FOR THE QUALIFICATION: 2,000

6.6 SUBJECT INFORMATION

SUBJECT NAME: APPLIED DENTAL TECHNOLOGY I
SUBJECT CODE: ANT100T
EVALUATION METHOD: PRACTICAL ASSESSMENT
TOTAL TUITION TIME: Not available

OVERVIEW OF SYLLABUS:
The manufacturing of all types of full dentures. The use and handling of materials and equipment that are important in prosthetic work.

SUBJECT NAME: APPLIED DENTAL TECHNOLOGY II
SUBJECT CODE: ANT200T
EVALUATION METHOD: PRACTICAL ASSESSMENT
TOTAL TUITION TIME: Not available

OVERVIEW OF SYLLABUS:
The design and manufacture of all types of dentures, orthodontic appliances and mouth guards. These include clinical work received from the clinics. Full metal crowns, temporary crowns and posts are also constructed.

SUBJECT NAME: APPLIED DENTAL TECHNOLOGY III
SUBJECT CODE: ANT300T
EVALUATION METHOD: PRACTICAL ASSESSMENT
TOTAL TUITION TIME: Not available

OVERVIEW OF SYLLABUS:
The construction of full metal crowns and bridges with acrylic veneers, as well as metal constructions for porcelain crowns, prosthetics, orthodontics and cobalt chrome.
SUBJECT NAME: BUSINESS PRACTICE I
SUBJECT CODE: BNP110B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Basic accounting, as well as the layout of offices and the management and administration of a business.

SUBJECT NAME: BUSINESS PRACTICE II
SUBJECT CODE: BNP200B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
A study of basic management skills, how to handle conflict, marketing, personnel management, stock control and cash flow.

SUBJECT NAME: COMMUNICATION I
SUBJECT CODE: CEN150T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Basic communication skills and professionalism.

SUBJECT NAME: DENTAL ASSISTING PRACTICAL I
SUBJECT CODE: DAP110T
EVALUATION METHOD: PRACTICAL ASSESSMENT
TOTAL TUITION TIME: ± 130 hours
OVERVIEW OF SYLLABUS:
General orientation and maintenance of the dental surgery, clinical asepsis, clinical dental disciplines, the processing of X-ray film, the preparation of dental materials.

SUBJECT NAME: DENTAL ASSISTING THEORY: DENTAL ASSISTING I
SUBJECT CODE: DAT11PT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 115 hours
OVERVIEW OF SYLLABUS:
Dental terminology, disinfection and sterilisation, anaesthetics, dental principles and dental materials.

SUBJECT NAME: DENTAL ASSISTING THEORY: DENTAL RADIOGRAPHY I
SUBJECT CODE: DAT11QT
EVALUATION METHOD: 1 X 2-HOUR PAPER
TOTAL TUITION TIME: ± 65 hours
OVERVIEW OF SYLLABUS:
Basic principles of X-rays, principles of radiographic examination techniques and preventive methods.

SUBJECT NAME: DENTAL MATERIALS SCIENCE I
SUBJECT CODE: DMS100T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Dental materials, such as gypsum, wax, impression materials, acrylics and abrasive and polishing agents. Basic chemistry and physics applicable to dental materials.

SUBJECT NAME: DENTAL MATERIALS SCIENCE II
SUBJECT CODE: DMS200T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Dental materials, such as inlay materials. Dental alloys and physical properties of materials. Basic chemistry and physics that apply to dental materials.
OVERVIEW OF SYLLABUS:
A continuation of the study of dental materials. Implants, cross-infection and safety in the laboratory. Basic chemistry and physics that apply to dental materials.

OVERVIEW OF SYLLABUS:
A continuation of the study of dental materials, especially metals and precious metals used in metal constructions for porcelain crowns and bridges. Health hazards in the dental laboratory. Basic chemistry and physics that apply to dental materials.

OVERVIEW OF SYLLABUS:
Introduction to dentistry, working area, telephone technique, appointments, records and filing, mail, finance and dental stock, human relations, ethics and jurisprudence, introduction to computer literacy.

OVERVIEW OF SYLLABUS:
Theory and practice of crown and bridge work, orthodontic and surgical equipment, including full metal crowns, porcelain crowns, orthodontic apparatus and maxillary-facial prostheses.

OVERVIEW OF SYLLABUS:
Theory of the construction of full dentures.

OVERVIEW OF SYLLABUS:
Theory of the construction of orthodontic appliances, as well as partial dentures and full metal crowns and bridges, temporary crowns and posts.

OVERVIEW OF SYLLABUS:
Theory of crown and bridge work, including full metal crowns with acrylic veneers and metal constructions for porcelain crowns and bridges.

OVERVIEW OF SYLLABUS:
Practical application in a work situation of theoretical subjects in the first year.
<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>SUBJECT CODE</th>
<th>EVALUATION METHOD</th>
<th>TOTAL TUITION TIME</th>
<th>OVERVIEW OF SYLLABUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>JURISPRUENCE I</td>
<td>JUR100T</td>
<td>1 X 3-HOUR PAPER</td>
<td>Not available</td>
<td>Legal aspects of dental technology in South Africa.</td>
</tr>
<tr>
<td>KOMMUNIKASIE I</td>
<td>KOM150T</td>
<td>1 X 3-HOUR PAPER</td>
<td>Not available</td>
<td>Basic communication skills and professionalism.</td>
</tr>
<tr>
<td>ORAL ANATOMY I</td>
<td>OAT101T</td>
<td>1 X 2-HOUR PAPER</td>
<td>Not available</td>
<td>The study of the bone structures, muscles, joints and nervous system of the human skull.</td>
</tr>
<tr>
<td>ORAL ANATOMY AND PATHOLOGY I</td>
<td>OAP100T</td>
<td>1 X 3-HOUR PAPER</td>
<td>± 98 hours</td>
<td>Anatomical landmarks in dentistry, salivary glands, muscles, blood and nerve supply, development of the face and oral cavity, oral microbiology, oral pathology, elementary pharmacology, clinical emergencies.</td>
</tr>
<tr>
<td>RESEARCH METHODS AND TECHNIQUES I</td>
<td>RMQ110B</td>
<td>1 X 3-HOUR PAPER</td>
<td>Not available</td>
<td>Theory of research and statistics, as well as statistical calculations.</td>
</tr>
<tr>
<td>TOOTH MORPHOLOGY I</td>
<td>TMY101T</td>
<td>1 X 3-HOUR PAPER</td>
<td>Not available</td>
<td>The development, growth and formation of human teeth.</td>
</tr>
</tbody>
</table>
7.  DEPARTMENT OF ENVIRONMENTAL HEALTH

7.1 NATIONAL DIPLOMA: ENVIRONMENTAL HEALTH

Course code: NDEH95

Campus where offered: Pretoria Campus
Soshanguve Campus (Pipeline students only - no new first-years/new intake)

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Senior Certificate or an equivalent qualification with Biology, Mathematics and Physical Science, with E symbols at Higher Grade or D symbols at Standard Grade.

b. Selection criteria: Students are assessed by means of a formula for academic merit, based on scholastic performance.

Formula for academic merit:

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>HG</th>
<th>SG</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>E</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

The following subjects will be used to assess the application:

- English
- Biology
- Mathematics
- Science

One additional point will be added if the applicant passed Agricultural Science and/or Geography.

Applicants who score six or more points according to the formula for academic merit are accepted.

c. Recommended subject(s): Geography.

d. Minimum duration: Three years.

e. Presentation: Day classes: formal and cooperative training.

f. Intake for the course: January only.

g. Registration for the subjects of this course: January and July.

h. Professional registration: Compulsory once-only student registration in the first year with the Health Professions Council of South Africa (HPCSA). HPCSA requires students to complete community service for a period of one year after the successful completion of the National Diploma: Environmental Health or the Baccalaureus Technologiae: Environmental Health.
i. Special rules and regulations: Unless otherwise stipulated, special rules and regulations apply to students who register for this course. Students are responsible to familiarise themselves with these rules and regulations. In the second and third years of study, students are required to undergo cooperative training and to go on study tours. They should also purchase protective clothing for the subjects Food and Meat Hygiene II and III.

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

k. Subject credits: Subject credits are shown in brackets after every subject.

### FIRST YEAR

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>APY140T</td>
<td>Anatomy and Physiology I</td>
<td>(0,200)</td>
<td></td>
</tr>
<tr>
<td>COD100T</td>
<td>Community Development I</td>
<td>(0,200)</td>
<td></td>
</tr>
<tr>
<td>EPN100T</td>
<td>Environmental Planning I</td>
<td>(0,200)</td>
<td></td>
</tr>
<tr>
<td>MBI110T</td>
<td>Microbiology I</td>
<td>(0,200)</td>
<td></td>
</tr>
</tbody>
</table>

### FIRST SEMESTER

- **PCQ100T** Physics and Chemistry I
- **PCQ10XT** Physics and Chemistry: Physics I (0,100)

### SECOND SEMESTER

- **PCQ100T** Physics and Chemistry I
- **PCQ10YT** Physics and Chemistry: Chemistry I (0,100)

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

### SECOND YEAR

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COD200T</td>
<td>Community Development II</td>
<td>(0,200)</td>
<td>Community Development I</td>
</tr>
<tr>
<td>EPI210T</td>
<td>Epidemiology II</td>
<td>(0,200)</td>
<td>Microbiology I</td>
</tr>
<tr>
<td>EPW200T</td>
<td>Environmental Pollution: Waste and Water II</td>
<td>(0,200)</td>
<td>Epidemiology II</td>
</tr>
<tr>
<td>OHS200T</td>
<td>Occupational Health and Safety II</td>
<td>(0,200)</td>
<td>Anatomy and Physiology I</td>
</tr>
<tr>
<td>VWH200T</td>
<td>Food and Meat Hygiene II</td>
<td>(0,200)</td>
<td></td>
</tr>
</tbody>
</table>

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

### THIRD YEAR

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA300T</td>
<td>Environmental Pollution: Air and Noise III</td>
<td>(0,200)</td>
<td>Environmental Pollution:</td>
</tr>
<tr>
<td>EPI300T</td>
<td>Epidemiology III</td>
<td>(0,200)</td>
<td>Waste and Water II</td>
</tr>
<tr>
<td>MPT300T</td>
<td>Management Practice III</td>
<td>(0,200)</td>
<td>Epidemiology II</td>
</tr>
<tr>
<td>OHS300T</td>
<td>Occupational Health and Safety III</td>
<td>(0,200)</td>
<td>Community Development II</td>
</tr>
<tr>
<td>VWH300T</td>
<td>Food and Meat Hygiene III</td>
<td>(0,200)</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE THIRD YEAR:** 1,000
7.2 BACCALAUREUS TECHNOLOGIAE: ENVIRONMENTAL HEALTH
Course code: BTEH95

Campus where offered: Pretoria Campus
Soshanguve Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Environmental Health or an equivalent qualification. However, this does not apply to students who registered for the National Diploma for the first time before 2007 and who have not since interrupted their studies. Abridging course or modules may be prescribed for students who are already in possession of a National Diploma: Environmental Health or an equivalent qualification, depending on the academic and/or experiential profile of the applicant.

b. Selection criteria: All applications are subject to selection.

c. Minimum duration: One year.

d. Presentation: A block course over two years (Pretoria Campus) or one year of day classes (Soshanguve Campus).

e. Intake for the course: January only.

f. Registration for the subjects of this course: January only.

g. Special rules and regulations: Unless otherwise stipulated, special rules and regulations apply to students who register for this course. Students are responsible to familiarise themselves with these rules and regulations.

h. Other requirements: HPCSA requires students to complete community service for a period of one year after the successful completion of the Baccalaureus Technologiae: Environmental Health if not already done after the successful completion of the National Diploma: Environmental Health.

i. Readmission: See Chapter 3 of Students’ Rules and Regulations.

j. Subject credits: Subject credits are shown in brackets after every subject.

YEAR SUBJECTS

<table>
<thead>
<tr>
<th>Course code</th>
<th>Subject Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPT400B</td>
<td>Management Practice IV</td>
<td>(0.220)</td>
</tr>
<tr>
<td>RMD100F</td>
<td>Research Methodology</td>
<td>(0.180)</td>
</tr>
</tbody>
</table>

plus two of the following subjects - subjects will be offered on campuses as determined by the Head of the Department.

<table>
<thead>
<tr>
<th>Course code</th>
<th>Subject Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIP400T</td>
<td>Air Pollution IV</td>
<td>(0.300)</td>
</tr>
<tr>
<td>ENP400T</td>
<td>Environmental Epidemiology</td>
<td>(0.300)</td>
</tr>
<tr>
<td>FHY410T</td>
<td>Food Hygiene IV</td>
<td>(0.300)</td>
</tr>
<tr>
<td>OHS400T</td>
<td>Occupational Health and Safety IV</td>
<td>(0.300)</td>
</tr>
<tr>
<td>WMG400T</td>
<td>Waste Management IV</td>
<td>(0.300)</td>
</tr>
<tr>
<td>WQM400T</td>
<td>Water Quality Management IV</td>
<td>(0.300)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000
7.3 MAGISTER TECHNOLOGIAE: ENVIRONMENTAL HEALTH
Course code: MTEH95

Campus where offered: Pretoria Campus
Soshanguve Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Environmental Health or an equivalent qualification.

b. Selection criteria: Admission is subject to selection.

c. Duration: A minimum of one year and a maximum of three years.

d. Enquiries: Further information may be obtained on request from the Head of the Department.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>EHT500T</td>
<td>Dissertation: Environmental Health</td>
<td>(1,000)</td>
</tr>
<tr>
<td>EHT500R</td>
<td>Dissertation: Environmental Health (re-registration)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

7.4 DOCTOR TECHNOLOGIAE: ENVIRONMENTAL HEALTH
Course code: DTEH96

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Environmental Health or an equivalent qualification.

b. Selection criteria: Admission is subject to selection.

c. Duration: A minimum of two years and a maximum of five years.

d. Enquiries: Further details may be obtained from the Head of the Department on request.

e. Subject credits: Subject credits are shown in brackets after every subject.
7.5 SUBJECT INFORMATION

SUBJECT NAME: AIR POLLUTION IV
SUBJECT CODE: AIP400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 120 hours
OVERVIEW OF SYLLABUS:
Sources, control methods and apparatus, legislation, measuring of air pollutants, incinerators, climatology, colour control radio-activity, and analysis of air pollutants.

SUBJECT NAME: ANATOMY AND PHYSIOLOGY I
SUBJECT CODE: APY140T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 228 hours
OVERVIEW OF SYLLABUS:
The anatomical and physiological systems of the human body, e.g. respiration, hearing, digestion, circulation of the blood, central nervous system and endocrine system.

SUBJECT NAME: COMMUNITY DEVELOPMENT I
SUBJECT CODE: COD100T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 228 hours
OVERVIEW OF SYLLABUS:
Professionalism, ethics, communication, introduction to computers, survival skills, culture, social problems, personality, motivation, emotions and industrial psychology.

SUBJECT NAME: COMMUNITY DEVELOPMENT II
SUBJECT CODE: COD200T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 228 hours
OVERVIEW OF SYLLABUS:
Didactics, relations, community studies, community profiles, community promotions, environmental psychology.

SUBJECT NAME: ENVIRONMENTAL EPIDEMIOLOGY
SUBJECT CODE: ENP400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 120 hours
OVERVIEW OF SYLLABUS:
An introduction to ecotoxicology and risk factor analysis. Case studies, practical research project.

SUBJECT NAME: ENVIRONMENTAL PLANNING I
SUBJECT CODE: EPN100T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 228 hours
OVERVIEW OF SYLLABUS:
Planning, building and administrating housing schemes, town planning, building materials and design of buildings. Environmental surveys, impact studies, environmental auditing and basic environmental management, as well as ecology.
SUBJECT NAME: ENVIRONMENTAL POLLUTION: AIR AND NOISE III
SUBJECT CODE: EPA300T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 228 hours
OVERVIEW OF SYLLABUS:
Air pollution, combustion and its sources and occurrence, engineering control, legislation, monitoring and climatology. Environmental noise - legal requirements, sources, monitoring and control.

SUBJECT NAME: ENVIRONMENTAL POLLUTION: WASTE AND WATER II
SUBJECT CODE: EPW200T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 228 hours
OVERVIEW OF SYLLABUS:
Water quality management, sources of water pollution, principles of water quality, sewage treatment, water purification, sanitation, waste technology.

SUBJECT NAME: EPIDEMIOLOGY II
SUBJECT CODE: EPI210T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 228 hours
OVERVIEW OF SYLLABUS:
Physical, chemical and biological agents, pathogenesis, vector control and agents, host environmental exchange and control.

SUBJECT NAME: EPIDEMIOLOGY III
SUBJECT CODE: EPI300T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 228 hours
OVERVIEW OF SYLLABUS:
Epidemiological study approach and methods, biostatistics.

SUBJECT NAME: FOOD AND MEAT HYGIENE II
SUBJECT CODE: VVH200T
EVALUATION METHOD: 1 X 3-HOUR PAPER AND PRACTICAL
TOTAL TUITION TIME: ± 408 hours
OVERVIEW OF SYLLABUS:
Food poisoning, food standards, food legislation and monitoring, the hygienic production and distribution of milk, the preservation of food and general hygiene at food premises. Anatomy of food animals, primary inspection and legislation.

SUBJECT NAME: FOOD AND MEAT HYGIENE III
SUBJECT CODE: VVH300T
EVALUATION METHOD: 1 X 3-HOUR PAPER AND PRACTICAL
TOTAL TUITION TIME: ± 408 hours
OVERVIEW OF SYLLABUS:
Biochemistry, food poisoning, food preservation, contamination, spoilage and the examination of food, food processing, quality control, food microbiology (laboratory), milk, meat science, abattoir planning and construction, food animals, abattoir practice and legislation, parasitology, pathology, diseases, pathology - practical, secondary inspection and laboratory. Practical.

SUBJECT NAME: FOOD HYGIENE IV
SUBJECT CODE: FHY410T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 128 hours
OVERVIEW OF SYLLABUS:
Biochemistry, food poisoning, food preservation, processing, contamination, spoilage and inspection. Food microbiology, food engineering (design and apparatus), planning of food premises, evaluation and laboratory. Practical.
SUBJECT NAME: MANAGEMENT PRACTICE III  
SUBJECT CODE: MPT300T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 228 hours  
OVERVIEW OF SYLLABUS:  
Introduction to administrative practice, dynamics of administrative processes, study of central, regional and local administration, management techniques and office practice.

SUBJECT NAME: MANAGEMENT PRACTICE IV  
SUBJECT CODE: MPT400B  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 228 hours  
OVERVIEW OF SYLLABUS:  
Rendering of health services, advanced financial management, advanced personnel management, public relations and contemporary health matters.

SUBJECT NAME: MICROBIOLOGY I  
SUBJECT CODE: MBI110T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 248 hours  
OVERVIEW OF SYLLABUS:  
General microbiology, chemical and physical control, environmental microbiology, food microbiology, occupational microbiology and microbiology ecology. Practical microbiological techniques.

SUBJECT NAME: OCCUPATIONAL HEALTH AND SAFETY II  
SUBJECT CODE: OHS200T  
EVALUATION METHOD: 1 X 3-HOUR PAPER AND PRACTICAL  
TOTAL TUITION TIME: ± 408 hours  
OVERVIEW OF SYLLABUS:  
Basic principles of occupational health and safety, legislation, physical, biological and psychological environmental stresses.

SUBJECT NAME: OCCUPATIONAL HEALTH AND SAFETY III  
SUBJECT CODE: OHS300T  
EVALUATION METHOD: 1 X 3-HOUR PAPER AND PRACTICAL  
TOTAL TUITION TIME: ± 408 hours  
OVERVIEW OF SYLLABUS:  
Chemical stress factors, ergonomic environmental factors, safety systems, occupational health and safety programmes and statistics.

SUBJECT NAME: OCCUPATIONAL HEALTH AND SAFETY IV  
SUBJECT CODE: OHS400T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 168 hours  
OVERVIEW OF SYLLABUS:  
Control and physical, biological, psychological, chemical and ergonomic stresses. Occupational health and safety audit, legislation and management.

SUBJECT NAME: PHYSICS AND CHEMISTRY: CHEMISTRY I  
SUBJECT CODE: PCQ10YT  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 124 hours  
OVERVIEW OF SYLLABUS:  
Chemical comparison and stoichiometry. Solutions, acids, basis and salts, chemical reactions, chemical balance. Electrochemistry and redox theory, inorganic chemistry, organic chemistry, wet chemical analysis, basic instrumental analysis. Practical inorganic chemistry.
<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>PHYSICS AND CHEMISTRY: PHYSICS I</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>PCQ10XT</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>± 124 hours</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Remedial mathematics, units and conversion, vectors and scalar, statics. Kinetics, applied mechanics, density and relative density, pressure thermodynamics, waves, sound, optics. Electricity, magnetism, electromagnetic induction, radioactivity, matter and energy.</td>
</tr>
<tr>
<td>SUBJECT NAME</td>
<td>RESEARCH METHODOLOGY</td>
</tr>
<tr>
<td>SUBJECT CODE</td>
<td>RMD100F</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>CONTINUOUS ASSESSMENT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>Not available</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Methodology: methods, data collection, reporting, interaction between study leader and student, writing of research articles. Statistical methods: measurement scales, graphic representation, correlation and regression, arrangement of data testing, hypotheses, variance analysis.</td>
</tr>
<tr>
<td>SUBJECT NAME</td>
<td>WASTE MANAGEMENT IV</td>
</tr>
<tr>
<td>SUBJECT CODE</td>
<td>WMG400T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>± 120 hours</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Sources of waste, composition and analysis, quantification of waste, nuisance, dumping, method for treatment of waste, indicators to determine health risks, techno-economical studies, safety, the health risks of waste to humans, legislation.</td>
</tr>
<tr>
<td>SUBJECT NAME</td>
<td>WATER QUALITY MANAGEMENT IV</td>
</tr>
<tr>
<td>SUBJECT CODE</td>
<td>WQM400T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>± 120 hours</td>
</tr>
</tbody>
</table>
8. DEPARTMENT OF ENVIRONMENTAL SCIENCES

8.1 BACCALAUREUS TECHNOLOGIAE: ENVIRONMENTAL MANAGEMENT

Course code: BTEV96

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

NO NEW REGISTRATIONS FOR THIS COURSE WILL BE ACCEPTED AS FROM 2002. STUDENTS WHO ARE CURRENTLY REGISTERED FOR THIS QUALIFICATION WILL HAVE UNTIL 2008 TO OBTAIN IT, SUBJECT TO THE STIPULATIONS OF REGULATION 3.1.1(a) ON THE MAXIMUM DURATION OF STUDY.

Phase-out date: 31 December 2008

Subject credits are shown in brackets after every subject.

### FIRST YEAR

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMG100T</td>
<td>Environmental Management I</td>
<td>(0,200)</td>
<td></td>
</tr>
<tr>
<td>ERS100T</td>
<td>Environmental Resources I</td>
<td>(0,200)</td>
<td></td>
</tr>
</tbody>
</table>

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAL101T</td>
<td>Calculations and Statistics</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>CHE141B</td>
<td>Chemistry IA</td>
<td>(0,115)</td>
<td></td>
</tr>
<tr>
<td>COS101T</td>
<td>Communication Skills I</td>
<td>(0,085)</td>
<td></td>
</tr>
</tbody>
</table>

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE201T</td>
<td>Chemistry II</td>
<td>(0,100)</td>
<td>Chemistry IA</td>
</tr>
<tr>
<td>CSK101B</td>
<td>Computer Skills I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>MBI101T</td>
<td>Microbiology I</td>
<td>(0,100)</td>
<td></td>
</tr>
</tbody>
</table>

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

### SECOND YEAR

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGE201T</td>
<td>Environmental Geology II</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>ELE201T</td>
<td>Environmental Legislation</td>
<td>(0,110)</td>
<td></td>
</tr>
<tr>
<td>EMG201T</td>
<td>Environmental Management II</td>
<td>(0,200)</td>
<td>Environmental Management I</td>
</tr>
<tr>
<td>ENC201T</td>
<td>Environmental Chemistry II</td>
<td>(0,100)</td>
<td>Chemistry II</td>
</tr>
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</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,510

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEC201T</td>
<td>Environmental Economy</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>EMB201T</td>
<td>Environmental Biotechnology II</td>
<td>(0,100)</td>
<td>Microbiology I</td>
</tr>
<tr>
<td>EMS201T</td>
<td>Environmental Management Systems</td>
<td>(0,090)</td>
<td>Environmental Management II</td>
</tr>
<tr>
<td>ERS201T</td>
<td>Environmental Resources II</td>
<td>(0,200)</td>
<td>Environmental Resources I</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,490

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

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMG301T</td>
<td>Environmental Management III</td>
<td>(0,200)</td>
</tr>
<tr>
<td>ENC301T</td>
<td>Environmental Chemistry III</td>
<td>(0,200)</td>
</tr>
<tr>
<td>EPS101T</td>
<td>Entrepreneurial Skills</td>
<td>(0,100)</td>
</tr>
<tr>
<td>ERS301T</td>
<td>Environmental Resources III</td>
<td>(0,200)</td>
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</table>

TOTAL CREDITS FOR THE SEMESTER: 0,700

**SECOND SEMESTER**

<table>
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</thead>
<tbody>
<tr>
<td>EXP1EVM</td>
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<td>(0,300)</td>
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</table>

(offered in both semesters)

<table>
<thead>
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<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Environmental Chemistry III</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Environmental Management III</td>
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</tr>
<tr>
<td></td>
<td>Environmental Resources III</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,300

TOTAL CREDITS FOR THE THIRD YEAR: 1,000

**FOURTH YEAR**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMG400T</td>
<td>Environmental Management IV</td>
<td>(0,250)</td>
</tr>
<tr>
<td>ERH200T</td>
<td>Environmental Rehabilitation</td>
<td>(0,100)</td>
</tr>
<tr>
<td>ERS400T</td>
<td>Environmental Resources IV</td>
<td>(0,250)</td>
</tr>
<tr>
<td>PJN400T</td>
<td>Project: Environmental Technology</td>
<td>(0,300)</td>
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<tr>
<td>PJN400R</td>
<td>Project: Environmental Technology</td>
<td>(0,000)</td>
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(re-registration)

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>RMN201T</td>
<td>Research Methodology: Natural Sciences</td>
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</tr>
<tr>
<td>RMN20XE</td>
<td>Research Methodology: Natural Sciences: Environmental Management</td>
<td>(0,050)</td>
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**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>RMN201T</td>
<td>Research Methodology: Natural Sciences</td>
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</tr>
<tr>
<td>RMN20YE</td>
<td>Research Methodology: Natural Sciences: Statistics</td>
<td>(0,050)</td>
</tr>
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</table>

TOTAL CREDITS FOR THE FOURTH YEAR: 1,000

---

8.2 **NATIONAL DIPLOMA: ENVIRONMENTAL SCIENCES**

Course code: NDEV02

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

**REMARKS**

a. Admission requirement(s): A Senior Certificate or an equivalent qualification, with D symbols at Standard Grade or E symbols at Higher Grade for Mathematics and Physical Sciences and a pass in English.
b. **Recommended subject(s):** Geography and Biology.

c. **Selection criteria:** Admission is subject to evaluation and applicants will have to take a potential test and an additional entrance examination. Based on their results in the above, they will either be admitted directly to their programme of choice, or to a foundation programme linked to that programme. The latter would result in an extension of the minimum period of study. Prospective students currently in Grade 12 will be provisionally selected on their Grade 11 results.

d. **Minimum duration:** Three years.

e. **Presentation:** Five semesters of day classes and one semester of experiential learning.

f. **Intake for the course:** January only.

g. **Registration for the subjects of this course:** January and July.

h. **Practical:** It is compulsory for students to attend 100% of practicals. Students must pass the practical component of a subject to be admitted to the examination.

i. **Textbooks:** Additional textbooks and other educational material may be required.

j. **Safety wear:** Specific safety wear is compulsory (where applicable) and students must purchase it themselves.

k. **Projects and assignments:** Students will be expected to undertake projects and assignments in some of the subjects.

l. **Industrial Environmental Practice III** (experiential learning): See Chapter 5 of Students’ Rules and Regulations.

m. **Readmission:** See Chapter 3 of Students’ Rules and Regulations.

n. **Subject credits:** Subject credits are shown in brackets after every subject.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT CREDIT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRST SEMESTER</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHE141B</td>
<td>Chemistry IA</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>COS101T</td>
<td>Communication Skills I</td>
<td>(0,050)</td>
<td></td>
</tr>
<tr>
<td>EMG101T</td>
<td>Environmental Management I</td>
<td>(0,075)</td>
<td></td>
</tr>
<tr>
<td>EMG10XT</td>
<td>Environmental Management: General I</td>
<td>(0,075)</td>
<td></td>
</tr>
<tr>
<td>ERS101T</td>
<td>Environmental Resources I</td>
<td>(0,075)</td>
<td></td>
</tr>
<tr>
<td>ERS10XT</td>
<td>Environmental Resources: Ecosystem Ecology I</td>
<td>(0,075)</td>
<td></td>
</tr>
<tr>
<td>GEO141T</td>
<td>Geology I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>MAT141B</td>
<td>Mathematics I</td>
<td>(0,100)</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,500
SECOND SEMESTER

AGL111B  Applied Geology I (0,100)  Geology I
CSK101B  Computer Skills I (0,050)
EMG101T  Environmental Management I (0,075)  Environmental Management: Applied I
EMG10YT  Environmental Management: General I
EPS111T  Entrepreneurial Skills (0,050)
ERS101T  Environmental Resources I (0,075)  Environmental Resources: Population Ecology I
ERS10YT  Environmental Resources: Ecosystem Ecology I
GTH101T  Geotechnology I (0,100)  Geology I
MBI101T  Microbiology I (0,100)

TOTAL CREDITS FOR THE SEMESTER: 0,550

SECOND YEAR

FIRST SEMESTER

AGL211B  Applied Geology II (0,100)  Applied Geology I
ELE201T  Environmental Legislation (0,100)
EMG201T  Environmental Management II (0,100)  Environmental Management I
ENC201T  Environmental Chemistry II (0,100)  Chemistry I A
GTH201B  Geotechnology II (0,100)  Geotechnology I

TOTAL CREDITS FOR THE SEMESTER: 0,500

SECOND SEMESTER

EEC201T  Environmental Economy (0,100)
EGE201T  Environmental Geology II (0,100)  Applied Geology II
EMB201T  Environmental Biotechnology II (0,100)  Microbiology I
EMS201T  Environmental Management (0,100)  Environmental Management II Systems
ERS201T  Environmental Resources II (0,100)  Environmental Resources I

TOTAL CREDITS FOR THE SEMESTER: 0,500

THIRD YEAR

FIRST SEMESTER

EMG301T  Environmental Management III (0,150)  Environmental Management II
ENV301T  Environmental Geohydrology III (0,150)  Environmental Geology II
ERS301T  Environmental Resources III (0,150)  Environmental Resources II

plus two of the following subjects:

EGE301T  Environmental Geology III (0,150)  Environmental Geology II
ENC301T  Environmental Chemistry III (0,150)  Environmental Chemistry II
GTH301T  Geotechnology III (0,150)  Geotechnology II
IPO301T  Industrial Processes III (0,150)

TOTAL CREDITS FOR THE SEMESTER: 0,750
SECOND SEMESTER

After the completion of all the subjects in the first and second year.

INV301T   Industrial Environmental Practice III (0,200)
           (offered in both semesters)

TOTAL CREDITS FOR THE SEMESTER:  0,200
TOTAL CREDITS FOR THE THIRD YEAR:  0,950

8.3 BACCALAUREUS TECHNOLOGIAE: ENVIRONMENTAL SCIENCES
Course code: BTEV02

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Environmental Sciences or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: A personal interview with a departmental selection panel.

c. Minimum duration: One year.

d. Presentation: Block course. This course is presented as a package. The Head of the Department reserves the right to limit or alter the selection and clustering of subjects, for example, in the case of uneconomical class groups.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January only.

g. Re-registration: A student must register for the project within the above time and will be allowed to re-register for it only once.

h. Readmission: See Chapter 3 of Students’ Rules and Regulations.

i. Subject credits: Subject credits are shown in brackets after every subject.

ATTENDANCE

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PJN410T</td>
<td>Project: Environmental Technology IV</td>
<td>(0,200)</td>
</tr>
<tr>
<td>PJN410R</td>
<td>Project: Environmental Technology IV (re-registration)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>
plus four of the following subjects:

- EMG400T Environmental Management IV (0,200)
- ENC400T Environmental Chemistry IV (0,200)
- ENV400T Environmental Geohydrology IV (0,200)
- ERE400T Environmental Rehabilitation IV (0,200)
- ERS410T Environmental Resources IV (0,200)
- GTH400T Geotechnology IV (0,200)

**FIRST SEMESTER**

- WQM411T Water Quality Management IV (0,200)

**SECOND SEMESTER**

- IMA401T Integrated Catchment Management IV (0,200)

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

### 8.4 MAGISTER TECHNOLOGIAE: ENVIRONMENTAL MANAGEMENT (Structured)

**Course code:** MTEVS0

**Campus where offered:** Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

### REMARKS

**a. Admission requirement(s):** Any relevant four-year tertiary qualification. Depending on the qualification, completion of certain additional subjects may be required.

**Please note:** This programme is recommended for students with a relevant four-year tertiary qualification other than the Baccalaureus Technologiae: Environmental Management or the Baccalaureus Technologiae: Environmental Sciences.

**b. Selection criteria:** Selection is based on a personal interview with a departmental selection panel. Procedures will be fully explained to each candidate during the personal interview.

**c. Recommended subject(s):** Relevant environmental subjects passed during undergraduate studies and/or environment-related short courses are highly recommended.

**d. Duration:** A minimum of two years and a maximum of three years. Students must re-register annually for this programme.

**e. Structure:** This programme consists of subjects offered on a block basis and a research project that must be recorded in the form of a research report. In order to be awarded a structured magister technologiae, the candidate has to pass all the relevant subjects and the research report. In addition, he or she must successfully complete a programme in Research Methodology in the first year of the magister technologiae if it was not done as part of a previous qualification.

**f. Subject credits:** Subject credits are shown in brackets after every subject.
ATTENDANCE

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELE500T</td>
<td>Environmental Legislation V</td>
<td>(0,125)</td>
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<tr>
<td>EMG500T</td>
<td>Environmental Management V</td>
<td>(0,125)</td>
</tr>
<tr>
<td>EMG501T</td>
<td>Research Report: Environmental Management V</td>
<td>(0,500)</td>
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<tr>
<td>EMG501R</td>
<td>Research Report: Environmental Management V (re-registration)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

plus two of the following subjects:

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECC500T</td>
<td>Environmental Accounting V</td>
<td>(0,125)</td>
</tr>
<tr>
<td>ENC500T</td>
<td>Environmental Chemistry V</td>
<td>(0,125)</td>
</tr>
<tr>
<td>ERA500T</td>
<td>Environmental Risk Assessment V</td>
<td>(0,125)</td>
</tr>
<tr>
<td>GEH500T</td>
<td>Geohydrology V</td>
<td>(0,125)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

8.5 MAGISTER TECHNOLOGIAE: ENVIRONMENTAL MANAGEMENT

Course code: MTEV99

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Environmental Management, Environmental Sciences or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. These procedures will be fully explained to each prospective student during the personal interview.

c. Duration: A minimum of one year and a maximum of three years. Students must re-register annually for this programme.

d. Structure: This programme consists of a research project that must be recorded in the form of a dissertation. Before the dissertation will be accepted for evaluation, a draft article, based on the research carried out and approved by the supervisor, must be ready for submission to a peer-evaluated accredited journal. The student must present a colloquium before submitting the dissertation. In addition, he or she must successfully complete a programme in Research Methodology in the first year of the magister technologiae if it was not done as part of a previous qualification.

e. Subject credits: Subject credits are shown in brackets after every subject.
8.6 **DOCTOR TECHNOLOGIAE: ENVIRONMENTAL MANAGEMENT**

Course code: DTEV99

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

**REMARKS**

**a. Admission requirement(s):** A Magister Technologiae: Environmental Management, Environmental Sciences or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

**b. Selection criteria:** Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. Procedures will be fully explained to each candidate during the personal interview.

**c. Duration:** A minimum of two years and a maximum of five years. Students must re-register annually for this programme.

**d. Structure:** This course consists of a research project that must be recorded in the form of a thesis. Before the thesis will be accepted for evaluation, at least two articles, based on the research carried out and approved by the supervisor, must have been submitted to a peer-evaluated accredited journal (or a patent or artefact must have been successful). One of the two articles must already have been accepted for publication, and written proof of it must be submitted as part of the requirements of the degree. The candidate must present a colloquium before submitting the thesis. In addition, he or she must successfully defend the thesis before the degree will be awarded.

**e. Subject credits:** Subject credits are shown in brackets after every subject.

<table>
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<tr>
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<th>CREDIT</th>
</tr>
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<tbody>
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<td>EMG700T</td>
<td>Thesis: Environmental Management</td>
<td>(2,000)</td>
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<tr>
<td>EMG700R</td>
<td>Thesis: Environmental Management (re-registration)</td>
<td>(0,000)</td>
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</tbody>
</table>

**TOTAL CREDITS FOR THE QUALIFICATION:** 2,000
8.7 NATIONAL DIPLOMA: GEOLOGY
Course code: NDGE04

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

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

b. Selection criteria: Admission is subject to evaluation and applicants will have to take a potential test and an additional entrance examination. Based on their results in the above, they will either be admitted directly to their programme of choice, or to a foundation programme linked to that programme. The latter would result in an extension of the minimum period of study. Prospective students currently in Grade 12 will be provisionally selected on their Grade 11 results.

c. Recommended subject(s): Geography.

d. Minimum duration: Three years.

e. Presentation: Five semesters of day classes and one semester of experiential learning.

f. Intake for the course: January only.

g. Registration for the subjects of this course: January and July.

h. Practical: It is compulsory for students to attend 100% of practicals. Students must pass the practical component of a subject to be admitted to the examination.

i. Textbooks: Additional textbooks and other educational material may be required.

j. Safety wear: Specific safety wear is compulsory (where applicable) and students must purchase it themselves.

k. Projects and assignments: Students will be expected to undertake projects and assignments in some of the subjects.

l. Industrial Geology (experiential learning): See Chapter 5 of Students’ Rules and Regulations.

m. Readmission: See Chapter 3 of Students’ Rules and Regulations.

n. Subject credits: Subject credits are shown in brackets after every subject.
### FIRST YEAR

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE141B</td>
<td>Chemistry IA</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>CSK101B</td>
<td>Computer Skills I</td>
<td>(0,050)</td>
<td></td>
</tr>
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<td>GEO151T</td>
<td>Geology I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>MAT141B</td>
<td>Mathematics I</td>
<td>(0,100)</td>
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<tr>
<td>PHU161B</td>
<td>Physics IA</td>
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TOTAL CREDITS FOR THE SEMESTER: 0,450

#### SECOND SEMESTER

<table>
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<th>PREREQUISITE SUBJECT(S)</th>
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<tr>
<td>AGL111T</td>
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<td>(0,100)</td>
<td>Geology I</td>
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<tr>
<td>GET111T</td>
<td>Geotechniques I</td>
<td>(0,100)</td>
<td>Geology I</td>
</tr>
<tr>
<td>MRL101T</td>
<td>Mineralogy I</td>
<td>(0,100)</td>
<td>Geology I</td>
</tr>
<tr>
<td>SGE101T</td>
<td>Structural Geology I</td>
<td>(0,100)</td>
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<tr>
<td>STA111B</td>
<td>Statistics I</td>
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plus one of the following subjects:

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<th>CREDIT</th>
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<tbody>
<tr>
<td>EPS131T</td>
<td>Entrepreneurial Skills I</td>
<td>(0,075)</td>
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<tr>
<td>MAT251B</td>
<td>Mathematics II</td>
<td>(0,075)</td>
<td>Mathematics I</td>
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TOTAL CREDITS FOR THE SEMESTER: 0,550

TOTAL CREDITS FOR THE FIRST YEAR: 1,000

### SECOND YEAR

#### FIRST SEMESTER

<table>
<thead>
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<td>GEO251T</td>
<td>Geology II</td>
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<td>Geotechniques I</td>
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<td>GET211T</td>
<td>Geotechniques II</td>
<td>(0,100)</td>
<td>Structural Geology I</td>
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<td>GPH211T</td>
<td>Geophysics II</td>
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<td>PET211T</td>
<td>Petrology II</td>
<td>(0,100)</td>
<td>Mineralogy I</td>
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TOTAL CREDITS FOR THE SEMESTER: 0,500

#### SECOND SEMESTER

<table>
<thead>
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<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
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<td>Geophysics II</td>
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<td></td>
<td>Geotechniques II</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>Petrology II</td>
</tr>
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TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE SECOND YEAR: 1,000
### THIRD YEAR

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
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<td>Industrial Geology I</td>
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</tbody>
</table>

(offered in both semesters)

**TOTAL CREDITS FOR THE SEMESTER:** 0,500

#### SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG301T</td>
<td>Engineering Geology III</td>
<td>0.125</td>
</tr>
<tr>
<td>GPH311T</td>
<td>Geophysics III</td>
<td>0.125</td>
</tr>
<tr>
<td>HGE301T</td>
<td>Hydrogeology III</td>
<td>0.125</td>
</tr>
<tr>
<td>MEG301T</td>
<td>Mining and Exploration Geology III</td>
<td>0.125</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,500

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

### 8.8 BACCALAUREUS TECHNOLOGIAE: GEOLOGY

**Course code:** BTGE03

**Campus where offered:** Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

### REMARKS

a. Admission requirement(s): A National Diploma: Geology or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: A personal interview with a departmental selection panel.

c. Minimum duration: One year.

d. Presentation: Block course. This course is presented as a package. The Head of the Department reserves the right to limit or alter the selection and clustering of subjects, for example, in the case of uneconomical class groups.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January and July.

g. Re-registration: A student must register for the project within the above time and will be allowed to re-register for it only once.

h. Readmission: See Chapter 3 of Students’ Rules and Regulations.

i. Subject credits: Subject credits are shown in brackets after every subject.
FIRST YEAR

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG401T</td>
<td>Engineering Geology IV</td>
<td>(0,175)</td>
</tr>
<tr>
<td>HGE401T</td>
<td>Hydrogeology IV</td>
<td>(0,175)</td>
</tr>
</tbody>
</table>

SECOND SEMESTER

<table>
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<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
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<tbody>
<tr>
<td>BMN121C</td>
<td>Business Management I</td>
<td>(0,175)</td>
</tr>
<tr>
<td>GTH401T</td>
<td>Geotechnology IV</td>
<td>(0,300)</td>
</tr>
<tr>
<td>GTH401R</td>
<td>Geotechnology IV (re-registration)</td>
<td>(0,000)</td>
</tr>
<tr>
<td>MEG401T</td>
<td>Mining and Exploration Geology IV</td>
<td>(0,175)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

8.9 MAGISTER TECHNOLOGIAE: GEOLOGY

Course code: MTGE96

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Geology or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. These procedures will be fully explained to each candidate during the personal interview.

c. Duration: A minimum of one year and a maximum of three years. Students must re-register annually for this programme.

d. Structure: This programme consists of a research project that must be recorded in the form of a dissertation. Before the dissertation will be accepted for evaluation, a draft article based on the research carried out and approved by the supervisor, must be ready for submission to a peer-evaluated accredited journal. The candidate must present a colloquium before submitting the dissertation. In addition, he or she must successfully complete a programme in Research Methodology in the first year of the magister technologiae if it was not done as part of a previous qualification.

e. Subject credits: Subject credits are shown in brackets after every subject.
**DOCTOR TECHNOLOGIAE: GEOLOGY**

Course code: DTGE96

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

**REMARKS**

a. Admission requirement(s): A Magister Technologiae: Geology or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. These procedures will be fully explained to each candidate during the personal interview.

c. Duration: A minimum of two years and a maximum of five years. Students must re-register annually for this programme.

d. Structure: This course consists of a research project that must be recorded in the form of a thesis. Before the thesis will be accepted for examination, at least two articles, based on the research carried out and approved by the supervisor, must have been submitted to a peer-evaluated accredited journal (or a patent or artefact must have been successful). One of the two articles must already have been accepted for publication, and written proof of it must be submitted as part of the requirements of the degree. The candidate must present a colloquium before submitting the thesis. He or she must subsequently successfully defend the thesis before the degree will be awarded.

e. Subject credits: Subject credits are shown in brackets after every subject.
8.11 SUBJECT INFORMATION

SUBJECT NAME: APPLIED GEOLOGY I
SUBJECT CODE: AGL111B, AGL111T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Introductory geophysics. Introductory hydrogeology. Introductory engineering geology.

SUBJECT NAME: APPLIED GEOLOGY II
SUBJECT CODE: AGL211B, AGL211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
South African stratigraphy and mineral deposits.

SUBJECT NAME: BUSINESS MANAGEMENT I
SUBJECT CODE: BMN121C
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: CALCULATIONS AND STATISTICS
SUBJECT CODE: CAL101T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: CHEMISTRY IA
SUBJECT CODE: CHE141B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: CHEMISTRY II
SUBJECT CODE: CHE201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Introduction to thermodynamics, the properties of gases, liquids, solids and solutions. Descriptive chemistry of the main group of elements, organic and bio-organic chemistry.

SUBJECT NAME: COMMUNICATION SKILLS I
SUBJECT CODE: COS101T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
SUBJECT NAME: COMPUTER SKILLS I
SUBJECT CODE: CSK101B
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Components of a microcomputer. Applications of software. Handling of personal computers.

SUBJECT NAME: ENGINEERING GEOLOGY III
SUBJECT CODE: ENG301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Rock material and rock mass, engineering geology of soils, introduction to rock mechanics, introduction to soil mechanics, engineering-geological investigation methods, the engineering geology of South African rock types.

SUBJECT NAME: ENGINEERING GEOLOGY IV
SUBJECT CODE: ENG401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENTREPRENEURIAL SKILLS
SUBJECT CODE: EPS111T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
The various types of businesses, management functions, budgeting, accounting, administration, banking, personnel management, customer relations, and entrepreneurship versus intrapreneurship.

SUBJECT NAME: ENTREPRENEURIAL SKILLS
SUBJECT CODE: EPS101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENTREPRENEURIAL SKILLS I
SUBJECT CODE: EPS131T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENVIRONMENTAL ACCOUNTING V
SUBJECT CODE: ECC500T
EVALUATION METHOD: 1 X 4-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENVIRONMENTAL BIOTECHNOLOGY II
SUBJECT CODE: EMB201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Treatment processes of, inter alia, industrial wastewater, as well as soil and oil-spill bioremediation.
SUBJECT NAME: ENVIRONMENTAL CHEMISTRY II
SUBJECT CODE: ENC201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENVIRONMENTAL CHEMISTRY III
SUBJECT CODE: ENC301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
The transport of pollutants in the environment, stratospheric chemistry and the ozone layer, ground-level air chemistry, principles of toxicology and ecotoxicology and environmental chemistry of natural waters. Environmental chemistry of hazardous substances, techniques for modelling land pollution, pollution abatement technology.

SUBJECT NAME: ENVIRONMENTAL CHEMISTRY IV
SUBJECT CODE: ENC400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENVIRONMENTAL CHEMISTRY V
SUBJECT CODE: ENC500T
EVALUATION METHOD: 1 X 4-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENVIRONMENTAL ECONOMY
SUBJECT CODE: EEC201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENVIRONMENTAL GEOHYDROLOGY III
SUBJECT CODE: ENV301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENVIRONMENTAL GEOHYDROLOGY IV
SUBJECT CODE: ENV400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENVIRONMENTAL GEOLOGY II
SUBJECT CODE: EGE201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Natural disasters. Human impact on geological environment.
SUBJECT NAME: ENVIRONMENTAL GEOLOGY III
SUBJECT CODE: EGE301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Environmental geophysics, environmental geohydrology and environmental engineering geology.

SUBJECT NAME: ENVIRONMENTAL LEGISLATION
SUBJECT CODE: ELE201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENVIRONMENTAL LEGISLATION V
SUBJECT CODE: ELE500T
EVALUATION METHOD: 1 X 4-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENVIRONMENTAL MANAGEMENT I
SUBJECT CODE: EMG100T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Introduction to environmental management. Key environmental issues, cultural-historical environment and human factors. Strategic management and implementation of the strategy. Personnel management.

SUBJECT NAME: ENVIRONMENTAL MANAGEMENT II
SUBJECT CODE: EMG201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENVIRONMENTAL MANAGEMENT III
SUBJECT CODE: EMG301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENVIRONMENTAL MANAGEMENT IV
SUBJECT CODE: EMG400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENVIRONMENTAL MANAGEMENT V
SUBJECT CODE: EMG500T
EVALUATION METHOD: 1 X 4-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Applied environmental management concepts and applications.
SUBJECT NAME: ENVIRONMENTAL MANAGEMENT: APPLIED I
SUBJECT CODE: EMG10YT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Introduction to environmental management. Key environmental issues, cultural-historical environment and human factors. Strategic management and implementation of the strategy. Personnel management.

SUBJECT NAME: ENVIRONMENTAL MANAGEMENT: GENERAL I
SUBJECT CODE: EMG10XT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Introduction to environmental management. Key environmental issues, cultural-historical environment and human factors. Strategic management and implementation of the strategy. Personnel management.

SUBJECT NAME: ENVIRONMENTAL MANAGEMENT SYSTEMS
SUBJECT CODE: EMS201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Environmental management philosophy. Formal management resources. Various uses of environmental systems. ISO 14000, BS 7750 and ERA.

SUBJECT NAME: ENVIRONMENTAL REHABILITATION
SUBJECT CODE: ERH200T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
General overview of resources in the mining sector. The impact of the activities on the environment. Rehabilitation methods.

SUBJECT NAME: ENVIRONMENTAL REHABILITATION IV
SUBJECT CODE: ERE400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
General overview of resources in the mining sector. The impact of the activities on the environment. Rehabilitation methods.

SUBJECT NAME: ENVIRONMENTAL RESOURCES I
SUBJECT CODE: ERS100T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENVIRONMENTAL RESOURCES II
SUBJECT CODE: ERS201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
OVERVIEW OF SYLLABUS:
Climate studies: the South African climate, urban climate, factors that have an impact on climate. Particular environmental features: mountains, rivers, the coastal zone. Indications of environmental concerns: unofficial indicators, official indicators.

OVERVIEW OF SYLLABUS:

OVERVIEW OF SYLLABUS:

OVERVIEW OF SYLLABUS:
Assessment of risk, hazard identification, risk characterisation. Management of risk, consideration of management option, risk communication, control decision, monitoring.

OVERVIEW OF SYLLABUS:
Experiential learning in the industry.

OVERVIEW OF SYLLABUS:

OVERVIEW OF SYLLABUS:
SUBJECT NAME: GEOLGY II
SUBJECT CODE: GEO251T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Deformation process.

SUBJECT NAME: GEOPHYSICS II
SUBJECT CODE: GPH211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
The use of electrical resistivity, gravitation, the radiometric and electromagnetic methods in exploration and engineering geology.

SUBJECT NAME: GEOPHYSICS III
SUBJECT CODE: GPH311T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
The use of borehole geophysics, induced polarisation methods and seismic methods in exploration and engineering geology.

SUBJECT NAME: GEOTECHNIQUES I
SUBJECT CODE: GET111T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Maps, map projections and map scales, South African map series, the compilation of geological profiles, compass mapping and field mapping.

SUBJECT NAME: GEOTECHNIQUES II
SUBJECT CODE: GET211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
The solving of three-dimensional structural problems, photogeology, field mapping with aerial photography, field mapping of intrusive and metamorphic rocks, the identification of minerals and rocks.

SUBJECT NAME: GEOTECHNOLOGY I
SUBJECT CODE: GTH101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
The use of maps, aerial photographs and other satellite images in the earth sciences. Introduction to section drawings. Mapping techniques.

SUBJECT NAME: GEOTECHNOLOGY II
SUBJECT CODE: GTH201T
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: GEOTECHNOLOGY II
SUBJECT CODE: GTH201B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Petrology of igneous, metamorphic and sedimentary rocks.
SUBJECT NAME: GEOTECHNOLOGY III
SUBJECT CODE: GTH301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Geological exploration. Mining.

SUBJECT NAME: GEOTECHNOLOGY IV
SUBJECT CODE: GTH400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Project and report.

SUBJECT NAME: GEOTECHNOLOGY IV
SUBJECT CODE: GTH401T
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Research project and report.

SUBJECT NAME: HYDROGEOLOGY III
SUBJECT CODE: HGE301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: HYDROGEOLOGY IV
SUBJECT CODE: HGE401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: INDUSTRIAL ENVIRONMENTAL PRACTICE III
SUBJECT CODE: INV301T
EVALUATION METHOD: REPORTS AND MINI-PROJECT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Students do practical application of basic theory on a structural basis.

SUBJECT NAME: INDUSTRIAL GEOLOGY I
SUBJECT CODE: IGE101T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Experiential learning in the industry.

SUBJECT NAME: INDUSTRIAL PROCESSES III
SUBJECT CODE: IPO301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: INTEGRATED CATCHMENT MANAGEMENT IV
SUBJECT CODE: IMA401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
SUBJECT NAME: MATHEMATICS I
SUBJECT CODE: MAT141B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: MATHEMATICS II
SUBJECT CODE: MAT251B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: MICROBIOLOGY I
SUBJECT CODE: MBI101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: MINERALOGY I
SUBJECT CODE: MRL101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Crystallography. Crystal chemistry, crystal physics and crystal optics. Systematical and descriptive mineralogy. Practical.

SUBJECT NAME: MINING AND EXPLORATION GEOLOGY III
SUBJECT CODE: MEG301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Terrestrial natural resources, ore petrology, economic geology of South African ore occurrences, mining and exploration geology. Remote sensing and GIS.

SUBJECT NAME: MINING AND EXPLORATION GEOLOGY IV
SUBJECT CODE: MEG401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Ore resources calculations and financial evaluation of resources.

SUBJECT NAME: PETROLOGY II
SUBJECT CODE: PET211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: PHYSICS IA
SUBJECT CODE: PHU161B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Remedial mathematics. Basic units, vectors and scalars, kinetics, mechanics, momentum, labour, energy and actuation, pressure, density, heat, optics, waves and sound, frequency, electricity. Magnetism and radioactivity. Physics practicals. Practical: experiments related to theory.

ENVIROMENTAL SCIENCES
<table>
<thead>
<tr>
<th>SUBJECT NAME:</th>
<th>PROJECT: ENVIRONMENTAL TECHNOLOGY</th>
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<tbody>
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<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Research methodology. Students plan and implement an applied environmental project. They must also submit a final report.</td>
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<tr>
<th>SUBJECT NAME:</th>
<th>PROJECT: ENVIRONMENTAL TECHNOLOGY IV</th>
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<tbody>
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<td>SUBJECT CODE:</td>
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</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Research methodology. Students plan and implement an applied environmental project. They must also submit a final report.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBJECT NAME:</th>
<th>RESEARCH METHODOLOGY: NATURAL SCIENCES: ENVIRONMENTAL MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE:</td>
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<th>RESEARCH METHODOLOGY: NATURAL SCIENCES: STATISTICS</th>
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<td>EVALUATION METHOD:</td>
<td>1 X 3-HOUR PAPER</td>
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<table>
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<td>SUBJECT CODE:</td>
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<td>1 X 3-HOUR PAPER</td>
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<thead>
<tr>
<th>SUBJECT NAME:</th>
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<td>TOTAL TUITION TIME:</td>
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</table>
# 9. DEPARTMENT OF HORTICULTURE

## 9.1 NATIONAL DIPLOMA: HORTICULTURE

**Course code: NDHO04**

| Campus where offered: | Pretoria Campus |

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

### REMARKS

a. **Admission requirement(s):** A Senior Certificate or an equivalent qualification.

b. **Selection criteria:** All applications are subject to a selection process based on academic potential. Applicants will be invited to sit for a series of tests to determine their potential for horticultural studies. The results of these tests will determine whether candidates will proceed with the mainstream or will be required to complete alternative additional courses.

c. **Recommended subject(s):** Biology and Physical Science.

d. **Minimum duration:** Three years.

e. **Presentation:** First year: formal training (day classes). Second year: experiential learning at Booyens and Hartbeeshoek training centres. Third year: formal training (day classes).

f. **Intake for the course:** January only.

g. **Registration for the subjects of this course:** January and July.

h. **Experiential Learning:** See Chapter 5 of Students’ Rules and Regulations.

i. **Readmission:** See Chapter 3 of Students’ Rules and Regulations.

j. **Subject credits:** Subject credits are shown in brackets after every subject.

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**Key to asterisks**

* Information does not correspond with information in Report 151.

(Deviations approved by the Senate in August 2005.)

### FIRST YEAR

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
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<th>PREREQUISITE SUBJECT(S)</th>
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</thead>
<tbody>
<tr>
<td>ERT111T</td>
<td>Environmental Studies I</td>
<td>(0,090)</td>
<td></td>
</tr>
<tr>
<td>GMT101T</td>
<td>Growth Media Technology I</td>
<td>(0,070)</td>
<td></td>
</tr>
<tr>
<td>HOR111T</td>
<td>Horticulture I</td>
<td>(0,090)</td>
<td></td>
</tr>
<tr>
<td>PLR101T</td>
<td>Plant Material Studies I</td>
<td>(0,090)</td>
<td></td>
</tr>
<tr>
<td>SMN101T</td>
<td>Supervisory Management I</td>
<td>(0,090)</td>
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</tr>
<tr>
<td>TEB101T</td>
<td>Site Planning I</td>
<td>(0,070)</td>
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**TOTAL CREDITS FOR THE SEMESTER:** 0,500
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<thead>
<tr>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HMH101T</td>
<td>Horticultural Mechanisation I</td>
<td>0.070</td>
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<tr>
<td>HMN211T</td>
<td>Horticultural Management II</td>
<td>0.133</td>
</tr>
<tr>
<td>HOR211T</td>
<td>Horticulture II</td>
<td>0.133</td>
</tr>
<tr>
<td>PLR201T</td>
<td>Plant Material Studies II</td>
<td>0.094*</td>
</tr>
<tr>
<td>TGC101T</td>
<td>Turfgrass Culture I</td>
<td>0.070</td>
</tr>
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</tr>
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<td></td>
<td><strong>TOTAL CREDITS FOR THE FIRST YEAR:</strong></td>
<td><strong>1.000</strong></td>
</tr>
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**SECOND YEAR**

One of the following:

- EXB1HOR Experiential Learning (Booysens/Hartbeeshoek) (1,000)
- EXP1HOR Experiential Learning (1,000)

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

**THIRD YEAR**

- ERT200T Environmental Studies II (0.125) Environmental Studies I
- HOR310T Horticulture III (0.300) Horticulture II
- HPM300T Horticultural Production Management III (0.300) Horticultural Management II
- PEC210T Plant Protection II (0.125)
- PLR300T Plant Material Studies III (0.150) Plant Material Studies II

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

---

**9.2 BACCALAUREUS TECHNOLOGIAE: HORTICULTURE**  
**Course code: BTHO02**

- **Campus where offered:** Pretoria Campus
- **Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.**

**REMARKS**

- **a. Admission requirement(s):** A National Diploma: Horticulture or an equivalent qualification. However, this does not apply to students who registered for the National Diploma for the first time before 2006 and who have not since interrupted their studies.
- **b. Selection criteria:** All applications are subject to selection.
- **c. Minimum duration:** One year.
- **d. Presentation:** Block course.
- **e. Intake for the course:** January only.
- **f. Registration for the subjects of this course:** January only.
- **g. Readmission:** See Chapter 3 of Students’ Rules and Regulations.
- **h. Subject credits:** Subject credits are shown in brackets after every subject.
YEAR SUBJECTS

<table>
<thead>
<tr>
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<td>Horticultural Production Technology IV</td>
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<td>RMD100K</td>
<td>Research Methodology</td>
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TOTAL CREDITS FOR THE QUALIFICATION: 1,000

9.3 MAGISTER TECHNOLOGIAE: HORTICULTURE
Course code: MTHO97

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Horticulture or an equivalent qualification.

b. Selection criteria: All applications are subject to selection.

c. Duration: A minimum of one year and a maximum of three years.

d. Subject credits: Subject credits are shown in brackets after every subject.

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<tr>
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<tr>
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<td>Dissertation: Horticulture</td>
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</tbody>
</table>

(re-registration)

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

9.4 DOCTOR TECHNOLOGIAE: HORTICULTURE
Course code: DTHO97

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Horticulture or an equivalent qualification. Prospective students must apply in good time for status to be awarded for equivalent qualifications.

b. Selection criteria: A research proposal must be approved by the Department before final registration for the course. Details of the requirements of research proposals are available on request. The final registration
and re-registration dates are usually at the end of February and at the end of August.

c. Promotional requirement(s): In the thesis, the student must provide proof of creative and original thinking and problem-solving abilities, and that he or she is making a significant contribution to the solution of a specific problem in the work situation of the horticultural study field.

The Doctor Technologiae: Horticulture will be conferred on a student who -

- is in possession of a Magister Technologiae: Horticulture or an equivalent qualification;
- has completed an approved research project of at least two years' duration after obtaining the required degree;
- has submitted an acceptable thesis, accompanied by two articles of a standard suitable for publication;
- has passed the prescribed examination (an additional oral examination for academic discourse may be required after the thesis has been evaluated); and
- has presented a colloquium of at least 40 minutes on the research project, for non-examination purposes.

d. Duration: A minimum of two years and a maximum of five years.

e. Subject credits: Subject credits are shown in brackets after every subject.

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<td>HOR700R</td>
<td>Thesis: Horticulture (re-registration)</td>
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TOTAL CREDITS FOR THE QUALIFICATION: 2,000

9.5 NATIONAL DIPLOMA: LANDSCAPE TECHNOLOGY
Course code: NDLT04

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Senior Certificate or an equivalent qualification.

b. Selection criteria: All applications are subject to a selection process based on academic potential. Applicants will be invited to sit for a series of tests to determine their potential for horticultural studies. The results of these tests will determine whether candidates will proceed with the mainstream or will be required to complete alternative additional courses.

c. Recommended subject(s): Biology, Physical Science or Mathematics and Art.

d. Minimum duration: Three years.

e. Presentation: First year: formal training (day classes).
Second year: experiential learning at the Boypsens and Hartbeeshoek training centres. Third year: formal training (day classes).

f. Intake for the course: January only.

g. Registration for the subjects of this course: January and July.

h. Experiential Learning: See Chapter 5 of Students’ Rules and Regulations.
i. Readmission: See Chapter 3 of Students’ Rules and Regulations.
j. Subject credits: Subject credits are shown in brackets after every subject.

Key to asterisks
* Information do not correspond with information in Report 151. (Deviations approved by the Senate in August 2005.)

FIRST YEAR

FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
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<tbody>
<tr>
<td>ERT111T</td>
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<tr>
<td>GMT101T</td>
<td>Growth Media Technology I (0,070)</td>
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<td>LTE101T</td>
<td>Landscape Technology I (0,090)</td>
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<td>PLR101T</td>
<td>Plant Material Studies I (0,090)</td>
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<tr>
<td>SMN101T</td>
<td>Supervisory Management I (0,090)</td>
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<tr>
<td>TEB101T</td>
<td>Site Planning I (0,070)</td>
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<td>TOTAL CREDITS FOR THE SEMESTER: 0,500</td>
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SECOND SEMESTER

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<td>LTE201T</td>
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<td>Landscape Technology I</td>
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<tr>
<td>LTM211T</td>
<td>Landscape Technology II (0,133)</td>
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<td>Supervisory Management I</td>
</tr>
<tr>
<td>PLR201T</td>
<td>Plant Material Studies II (0,094)*</td>
<td></td>
<td>Plant Material Studies I</td>
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<tr>
<td>TGC101T</td>
<td>Turfgrass Culture I (0,070)</td>
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<td>TOTAL CREDITS FOR THE SEMESTER: 0,500</td>
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TOTAL CREDITS FOR THE FIRST YEAR: 1,000

SECOND YEAR

One of the following:

- EXB1LST Experiential Learning (Boypsens/Hartbeeshoek) (1,000)
- EXP1LST Experiential Learning (1,000)

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

ERT200T  Environmental Studies II  (0,125)  Environmental Studies I
LTE300T  Landscape Technology III  (0,300)  Landscape Technology II
LTM300T  Landscape Technology Management III  (0,300)  Management II
PEC210T  Plant Protection II  (0,125)
PLR300T  Plant Material Studies III  (0,150)  Plant Material Studies II

TOTAL CREDITS FOR THE THIRD YEAR:  1,000

9.6 BACCALAUREUS TECHNOLOGIAE: LANDSCAPE TECHNOLOGY
Course code: BTLT02

Campus where offered:  Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a.  Admission requirement(s):  A National Diploma: Landscape Technology or an equivalent qualification. However, this does not apply to students who registered for the National Diploma for the first time before 2006 and who have not since interrupted their studies.

b.  Selection criteria:  All applications are subject to selection.

c.  Minimum duration:  One year.

d.  Presentation:  Block course.

e.  Intake for the course:  January only.

f.  Registration for the subjects of this course:

  g.  Readmission:  See Chapter 3 of Students’ Rules and Regulations.

 h.  Subject credits:  Subject credits are shown in brackets after every subject.

YEAR SUBJECTS

<table>
<thead>
<tr>
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<td></td>
<td>(re-registration)</td>
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<td>LTM400T</td>
<td>Landscape Technology Management IV</td>
<td>(0,400)</td>
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<tr>
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<td>(0,200)</td>
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TOTAL CREDITS FOR THE QUALIFICATION:  1,000
### NATIONAL DIPLOMA: TURFGRASS MANAGEMENT

**Course code:** NDTG04  

**Campus where offered:** Pretoria Campus  

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

#### REMARKS

a. **Admission requirement(s):** A Senior Certificate or an equivalent qualification. As a prerequisite for admission to this programme, prospective students must be employed by an approved employer in order to complete the required experiential learning.

b. **Selection criteria:** All applications are subject to a selection process based on academic potential. Applicants will be invited to sit for a series of tests to determine their potential for horticultural studies. The results of these tests will determine whether candidates will proceed with the mainstream or will be required to complete alternative additional courses.

c. **Recommended subject(s):** Biology and Physical Science.

d. **Minimum duration:** Three years.

e. **Presentation:** Block course.

f. **Intake for the course:** January only.

g. **Registration for the subjects of this course:** January only.

h. **Experiential Learning I and II:** See Chapter 5 of Students’ Rules and Regulations.

i. **Readmission:** See Chapter 3 of Students’ Rules and Regulations.

j. **Subject credits:** Subject credits are shown in brackets after every subject.

#### FIRST YEAR

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<td>TGS100T</td>
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**TOTAL CREDITS FOR THE FIRST YEAR:** 1,000

#### SECOND YEAR

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

TGC300T Turfgrass Culture III (0,350) Turfgrass Culture II
TGM300T Turfgrass Management III (0,373) Turfgrass Management II
TGN300T Turfgrass Mechanisation III (0,277) Turfgrass Mechanisation II

TOTAL CREDITS FOR THE THIRD YEAR: 1,000

9.8  BACCALAUREUS TECHNOLOGIAE: TURFGRASS MANAGEMENT
Course code: BTTG03

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Turfgrass Management or an equivalent qualification. However, this does not apply to students who registered for the National Diploma for the first time before 2006 and who have not since interrupted their studies.

b. Selection criteria: All applications are subject to selection.

c. Minimum duration: One year.

d. Presentation: Block course.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January only.

g. Readmission: See Chapter 3 of Students’ Rules and Regulations.

h. Subject credits: Subject credits are shown in brackets after every subject.

YEAR SUBJECTS

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TOTAL CREDITS FOR THE QUALIFICATION: 1,000
## SUBJECT INFORMATION

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<td>EVALUATION METHOD</td>
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<td>OVERVIEW OF SYLLABUS:</td>
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<table>
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<tr>
<th>SUBJECT NAME</th>
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<td>OVERVIEW OF SYLLABUS:</td>
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<td>OVERVIEW OF SYLLABUS:</td>
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<td>OVERVIEW OF SYLLABUS:</td>
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<table>
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<tr>
<th>SUBJECT NAME</th>
<th>EXPERIENTIAL LEARNING (BOOYSENS)</th>
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<tr>
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<td>OVERVIEW OF SYLLABUS:</td>
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<table>
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<tr>
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<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Maintenance of turf sports facilities.</td>
</tr>
</tbody>
</table>
SUBJECT NAME: GROWTH MEDIA TECHNOLOGY I
SUBJECT CODE: GMT101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 35 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: HORTICULTURAL MANAGEMENT II
SUBJECT CODE: HMN211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 65 hours
OVERVIEW OF SYLLABUS:
Horticultural legislation, administrative processes, production and operations management, marketing management, costing and purchasing, wholesale and retail outlet management, customer relations, computers in the horticultural industry.

SUBJECT NAME: HORTICULTURAL MECHANISATION I
SUBJECT CODE: HMH101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 35 hours
OVERVIEW OF SYLLABUS:
Principles and operation of the basic power units applicable to horticulture. Introduction to horticultural mechanisation: materials, tools and related tractor performance. Soil preparation machinery: types of engine system components of related horticultural implements. Specialised horticultural equipment: specialised turfgrass machinery and horticultural equipment, as well as hothouse equipment. Horticultural mechanisation planning: the planning for purchasing and managing horticultural machinery.

SUBJECT NAME: HORTICULTURAL PRODUCTION MANAGEMENT III
SUBJECT CODE: HPM300T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 145 hours
OVERVIEW OF SYLLABUS:
Financial management, human resources, organisational design, social responsibility, commercial and retail horticultural management, production, productivity. Cost accounting and control, inventory management, profit improvements, labour, financial statements, taxation, budgets, industrial relations, creative problem-solving, safety and loss control, import and export procedure, contract management, marketing, mentoring project management, community projects.

SUBJECT NAME: HORTICULTURAL PRODUCTION MANAGEMENT IV
SUBJECT CODE: HPM400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 190 hours
OVERVIEW OF SYLLABUS:
Project management, management information systems, organisational structure and behaviour, commercial and retail horticultural management, horticultural production, productivity.

SUBJECT NAME: HORTICULTURAL PRODUCTION TECHNOLOGY IV
SUBJECT CODE: HPT400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 190 hours
OVERVIEW OF SYLLABUS:
Advanced propagation techniques, improvement of plant material, biosphere protection, specialised production techniques, post-harvest technology. Genetics, plant breeding, micropropagation, hydroculture, production technology.
SUBJECT NAME: HORTICULTURE I
SUBJECT CODE: HOR111T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 45 hours
OVERVIEW OF SYLLABUS:
Introduction to the industry, growth media and container growing systems, nutrient management, propagation methods, seeds, cuttings, layering, grafting, budding and micropropagation.

SUBJECT NAME: HORTICULTURE II
SUBJECT CODE: HOR211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 65 hours
OVERVIEW OF SYLLABUS:
Nursery management, production in the nursery, flower forcing, growth regulators, CO₂ injection, pruning, hydrocultures.

SUBJECT NAME: HORTICULTURE III
SUBJECT CODE: HOR310T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 145 hours
OVERVIEW OF SYLLABUS:
Glasshouses and nursery structures, planning and construction of facilities, design considerations, shade houses, cold frames/storage, bathhouse nursery, sanitation and hygiene, glasshouse environmental control systems.

SUBJECT NAME: LANDSCAPE TECHNOLOGY I
SUBJECT CODE: LTE101T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 45 hours
OVERVIEW OF SYLLABUS:
Design methodology, processes and procedures. Site surveying. Studio work.

SUBJECT NAME: LANDSCAPE TECHNOLOGY II
SUBJECT CODE: LTE201T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 65 hours
OVERVIEW OF SYLLABUS:
Design of landscape projects, surveying for construction, soft and hard landscape construction, studio work.

SUBJECT NAME: LANDSCAPE TECHNOLOGY III
SUBJECT CODE: LTE300T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 145 hours
OVERVIEW OF SYLLABUS:
Advanced design projects, specialised construction elements, computer-aided design, studio work.

SUBJECT NAME: LANDSCAPE TECHNOLOGY IV
SUBJECT CODE: LTE400T
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: ± 190 hours
OVERVIEW OF SYLLABUS:
A dissertation and the implementation of an approved landscape, feasibility and design, working drawings and documentation, project installation and maintenance.

SUBJECT NAME: LANDSCAPE TECHNOLOGY MANAGEMENT II
SUBJECT CODE: LTM211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 65 hours
OVERVIEW OF SYLLABUS:
Entrepreneurship. Financial management, marketing, quality management, components of landscape contracts and documents, landscape maintenance.
SUBJECT NAME: LANDSCAPE TECHNOLOGY MANAGEMENT III
SUBJECT CODE: LTM300T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 145 hours
OVERVIEW OF SYLLABUS:
Financial management, human resource management, organisational design, social responsibility, landscape sales and marketing, project management, landscape mechanisation.

SUBJECT NAME: LANDSCAPE TECHNOLOGY MANAGEMENT IV
SUBJECT CODE: LTM400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 190 hours
OVERVIEW OF SYLLABUS:
Project management, management information systems, organisational structure and behaviour, financial landscape management, documentation, contracts and specification, landscape maintenance management.

SUBJECT NAME: PLANT MATERIAL STUDIES I
SUBJECT CODE: PLR101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 45 hours
OVERVIEW OF SYLLABUS:
External morphology, taxonomy, characteristics and requirements of ornamental plants, indigenous, exotic and endemic plants, plant appearance and identification, emphasis on trees, shrubs and ground covers.

SUBJECT NAME: PLANT MATERIAL STUDIES II
SUBJECT CODE: PLR201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 45 hours
OVERVIEW OF SYLLABUS:
Plant morphology, physiology. Introduction to viruses and bacteria. Requirements of ornamental plant material, factors in the selection of plants, transplanting procedures, pruning techniques, maintenance programmes, lists of indigenous and exotic plants. Emphasis on bulbs, annuals and perennials, climbers, vines and grasses.

SUBJECT NAME: PLANT MATERIAL STUDIES III
SUBJECT CODE: PLR300T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Introduction to eucaryote, plant physiology, characteristics, requirements and utilisation of ornamental plant material, functional and visual uses of plants, lists of indigenous and exotic ornamental plants, emphasis on conifers, aquatics, succulents, cacti and indoor plants.

SUBJECT NAME: PLANT PROTECTION II
SUBJECT CODE: PEC210T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 60 hours
OVERVIEW OF SYLLABUS:
Entomology, pest management, review of major South African pests, weed management, nematology, plant pathology.

SUBJECT NAME: RESEARCH METHODOLOGY
SUBJECT CODE: RMD100K
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 35 hours
OVERVIEW OF SYLLABUS:
Purpose, nature and significance of research, measurements and evaluation, statistics and analysis, evaluation through an approved research project.
SUBJECT NAME: SITE PLANNING I
SUBJECT CODE: TEB101T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 35 hours
OVERVIEW OF SYLLABUS:
Historical outline, legislation, principles and processes, site investigation, site design, drawing techniques and site construction.

SUBJECT NAME: SUPERVISORY MANAGEMENT I
SUBJECT CODE: SMN101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 45 hours
OVERVIEW OF SYLLABUS:
Management in the public and private sectors, organisational structure, primary and secondary elements of management, managerial divisions.

SUBJECT NAME: TURFGRASS CULTURE I
SUBJECT CODE: TGC101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 35 hours
OVERVIEW OF SYLLABUS:
Construction of turfgrass facilities, propagation and establishment techniques, culture practices, equipment, machinery and techniques. Introduction to turfgrass culture. Turfgrass propagation methods. Turfgrass establishment techniques. Introduction to primary cultural practices, supplementary cultural practices and turf pest control.

SUBJECT NAME: TURFGRASS CULTURE II
SUBJECT CODE: TGC110T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 45 hours
OVERVIEW OF SYLLABUS:
Introduction to turfgrass culture. Turfgrass propagation methods, turfgrass establishment techniques. Introduction to primary cultural practices, supplementary cultural practices and turf pest control.

SUBJECT NAME: TURFGRASS CULTURE III
SUBJECT CODE: TGC200T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 65 hours
OVERVIEW OF SYLLABUS:
Turfgrass mowing principles and practices. Turfgrass fertilisation, irrigation and cultivation principles and practices. Turfgrass insect, weed and disease identification and control. Related pest control and integrated pest management.

SUBJECT NAME: TURFGRASS CULTURE IV
SUBJECT CODE: TGC300T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
Turfgrass systems and maintenance programmes: drainage principles and systems, construction methods and materials, renovation methods and techniques. Turfgrass ecology, ecosystems and environmental awareness. Turfgrass documentation and contracts.

SUBJECT NAME: TURFGRASS CULTURE IV
SUBJECT CODE: TGC400T
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: ± 190 hours
OVERVIEW OF SYLLABUS:
Dissertation/project on a subject relevant to turfgrass science, culture, mechanisation or facility management.
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<thead>
<tr>
<th>SUBJECT NAME</th>
<th>TURFGRASS MANAGEMENT I</th>
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<tbody>
<tr>
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<tr>
<td>EVALUATION METHOD</td>
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<td>TOTAL TUITION TIME</td>
<td>± 45 hours</td>
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<td>TOTAL TUITION TIME</td>
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<tr>
<td>EVALUATION METHOD</td>
<td>CONTINUOUS ASSESSMENT</td>
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<tr>
<td>TOTAL TUITION TIME</td>
<td>± 70 hours</td>
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<td>SUBJECT CODE</td>
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<tr>
<td>EVALUATION METHOD</td>
<td>CONTINUOUS ASSESSMENT</td>
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<tr>
<td>TOTAL TUITION TIME</td>
<td>± 190 hours</td>
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<tr>
<td>OVERVIEW OF SYLLABUS</td>
<td>Business planning, entrepreneurship, marketing, project management, management information systems.</td>
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<tr>
<th>SUBJECT NAME</th>
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<tr>
<td>SUBJECT CODE</td>
<td>TGN100T</td>
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<tr>
<td>EVALUATION METHOD</td>
<td>CONTINUOUS ASSESSMENT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>± 45 hours</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS</td>
<td>Overview, operational principles and care of turfgrass machinery and equipment. Types of turfgrass machinery and equipment. Workshop tools and the basics of power units.</td>
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<tr>
<td>EVALUATION METHOD</td>
<td>CONTINUOUS ASSESSMENT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>± 65 hours</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS</td>
<td>Selection and calibration of turfgrass machinery and equipment. Turfgrass calculations, mensuration and levelling. Turfgrass machinery maintenance and repair.</td>
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<tr>
<th>SUBJECT NAME</th>
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<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>TGN300T</td>
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<tr>
<td>EVALUATION METHOD</td>
<td>CONTINUOUS ASSESSMENT</td>
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<tr>
<td>TOTAL TUITION TIME</td>
<td>± 70 hours</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS</td>
<td>Turfgrass irrigation systems and components. Turfgrass irrigation design, installation and maintenance. Planning, layout and maintenance of workshop facilities. Turfgrass computers and computerisation.</td>
</tr>
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</tbody>
</table>
SUBJECT NAME: TURFGRASS SCIENCE I
SUBJECT CODE: TGS100T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 35 hours

OVERVIEW OF SYLLABUS:
Introduction to turfgrass science and environment. Basic turfgrass physics, chemistry, physiology, morphology, soil science and biology (edaphology). Turfgrass nutrients and fertilisation. Turf-growing media and amendments.
10. DEPARTMENT OF MATHEMATICAL TECHNOLOGY

10.1 BACCALAUREUS TECHNOLOGIAE: QUALITY
Course code: BTQU02

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): Any relevant three-year tertiary qualification. Applicants must have demonstrated computer skills and must be familiar with databases, word processing and spreadsheets. Two years of working experience is highly recommended. Attendance of the programme's orientation workshop is compulsory. An abbreviated CV must be attached to the application form.

b. Selection criteria: A personal interview with a departmental selection panel.

c. Recommended subject(s): Computer Skills I (with a demonstrated competency in Excel, Word and PowerPoint) and any of the following subjects: Quantitative Techniques I, Qualitative Techniques I, Mathematics I and Statistics I.

d. Minimum duration: One year.

e. Presentation: Block course offered over a period of two years. Prospective students may register for a maximum of two subjects in each semester and may only register for the project in the third semester.

f. Intake for the course: January and July.

g. Registration for the subjects of this course: January and July.

h. Structure: This course consists of six subjects in which lectures are attended plus a research project, Project IV (seventh subject). Before the project will be accepted for examination, the student must submit an article, based on the research and approved by the supervisor, to be considered for publication in a journal. A draft of the article must be submitted for Project IV.

i. Readmission: See Chapter 3 of Students’ Rules and Regulations.

j. Subject credits: Subject credits are shown in brackets after every subject.

ATTENDANCE

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
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<tbody>
<tr>
<td>PJT400T</td>
<td>Project IV</td>
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<tr>
<td>PJT400R</td>
<td>Project IV (re-registration)</td>
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FIRST SEMESTER

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<tbody>
<tr>
<td>QMS301T</td>
<td>Quality Management Systems III</td>
<td>(0,125)</td>
</tr>
<tr>
<td>QPI401T</td>
<td>Quality Planning and Implementation IV</td>
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<tr>
<td>SQT301T</td>
<td>Statistical Quality Techniques III</td>
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SECOND SEMESTER

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<tbody>
<tr>
<td>CQI401T</td>
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<td>QAQ401T</td>
<td>Quality Auditing Techniques IV</td>
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<tr>
<td>QTS401T</td>
<td>Quality Techniques IV</td>
<td>(0,125)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

10.2 MAGISTER TECHNOLOGIAE: QUALITY
Course code: MTQU99

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Quality or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. These procedures will be fully explained to each prospective student during the personal interview.

c. Duration: A minimum of one year and a maximum of three years. Students must re-register annually for this programme.

d. Structure: This course consists of a research project that must be recorded in the form of a dissertation. Before the dissertation will be accepted for examination, an article, based on the research and approved by the supervisor, must be ready for submission to a peer-evaluated journal. The student must also present a colloquium before submitting the dissertation. In addition, he or she must successfully complete a programme in Research Methodology in the first year of the magister technologiae if it was not done as part of a previous qualification.

e. Subject credits: Subject credits are shown in brackets after every subject.

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<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
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<tbody>
<tr>
<td>QAS510T</td>
<td>Dissertation: Quality</td>
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<tr>
<td>QAS510R</td>
<td>Dissertation: Quality (re-registration)</td>
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</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000
## 10.3 DOCTOR TECHNOLOGIAE: QUALITY

Course code: DTQU99

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

**REMARKS**

a. Admission requirement(s): A Magister Technologiae: Quality or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. These procedures will be fully explained to each prospective student during the personal interview.

c. Duration: A minimum of two years and a maximum of five years. Students must re-register annually for this programme.

d. Structure: This course consists of a research project that must be recorded in the form of a thesis. Before the thesis can be accepted for examination, at least two articles, based on the research and approved by the supervisor, must have been accepted by a peer-evaluated journal (or a patent or artefact must have been successful). One of the two articles must already have been accepted for publication. Written proof of it must be submitted as part of the requirements of the degree. The student must also present a colloquium before submitting the thesis and must successfully defend the thesis before the degree will be awarded.

e. Subject credits: Subject credits are shown in brackets after every subject.

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<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
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<tbody>
<tr>
<td>QAS700T</td>
<td>Thesis: Quality</td>
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<tr>
<td>QAS700R</td>
<td>Thesis: Quality (re-registration)</td>
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**TOTAL CREDITS FOR THE QUALIFICATION:** 2,000

## 10.4 MAGISTER TECHNOLOGIAE: MATHEMATICAL TECHNOLOGY (Structured)

Course code: MTMNST

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

**REMARKS**

a. Admission requirement(s): Any four-year mathematically based bachelor’s degree or an equivalent qualification. The qualification must have at least four semesters of Mathematics up to and including one semester at level IV. Depending on the equivalent qualification, completion of certain additional subjects may be required.
b. Selection criteria: Selection is based on a personal interview with a departmental evaluation panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. These procedures will be fully explained to each prospective student during the personal interview.

c. Duration: A maximum of three years. Students must re-register annually for this programme.

d. Structure: The programme consists of subjects offered on a block basis and a research project that must be recorded in the form of a research report. In order to be awarded a structured magister technologiae, a candidate must pass each of the relevant subjects, as well as the research report. Before the research report will be accepted for examination, a draft article, based on the research and approved by the supervisor, must be ready for submission to a peer-evaluated journal. Aspects of the research report must have been presented at a national symposium or conference. In addition, students have to successfully complete a programme in Research Methodology in the first year of the magister technologiae if it was not done as part of a previous qualification.

e. Subject credits: Subject credits are shown in brackets after every subject.

**FIRST YEAR**

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<th>PREREQUISITE SUBJECT(S)</th>
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<tbody>
<tr>
<td>NAS500T</td>
<td>Numerical Analysis V</td>
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<tr>
<td>NLA500T</td>
<td>Numerical Linear Algebra V</td>
<td>(0,040)</td>
<td></td>
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<tr>
<td>ONL500T</td>
<td>Ordinary Nonlinear Differential Equations V</td>
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<tr>
<td>PDQ500T</td>
<td>Partial Differential Equations V</td>
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Plus:

**LABORATORY**

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<tr>
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<th>SUBJECT</th>
<th>CREDIT</th>
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<tbody>
<tr>
<td>MTP50AT</td>
<td>Mathematical Technology: Laboratory Project (A) V</td>
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</table>

TOTAL CREDITS FOR THE FIRST YEAR: 0.210

**SECOND YEAR**

Two of the following subjects (excluding those taken in the first year):

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<tr>
<td>NAS500T</td>
<td>Numerical Analysis V</td>
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<tr>
<td>NLA500T</td>
<td>Numerical Linear Algebra V</td>
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<tr>
<td>ONL500T</td>
<td>Ordinary Nonlinear Differential Equations V</td>
<td>(0,040)</td>
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<tr>
<td>PDQ500T</td>
<td>Partial Differential Equations V</td>
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</table>
Plus:

LABORATORY

MTP50BT Mathematical Technology: Laboratory Project (B) V (0,130)

TOTAL CREDITS FOR THE SECOND YEAR: 0,210

THIRD YEAR

CQM500T Colloquium V (0,040) Numerical Analysis V
Numerical Linear Algebra V
Ordinary Nonlinear Differential Equations V
Partial Differential Equations V

ILM500T Industrial Mathematics V (0,040)

RESEARCH

MAY501T Research Report: Mathematical Technology V (0,500) Numerical Analysis V
Numerical Linear Algebra V
Ordinary Nonlinear Differential Equations V
Partial Differential Equations V

MAY501R Research Report: Mathematical Technology V (re-registration) (0,000)

TOTAL CREDITS FOR THE THIRD YEAR: 0,580

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

10.5 MAGISTER TECHNOLOGIAE: MATHEMATICAL TECHNOLOGY
Course code: MTMN00

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): Any four-year mathematically based bachelor’s degree or an equivalent qualification. The qualification must include Mathematics in all four years of the degree as a major subject at levels I, II, III and IV. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. These procedures will be fully explained to each prospective student during the personal interview.

c. Duration: A minimum of one year and a maximum of three years. Students must re-register annually for this programme.

d. Structure: This programme consists of a research project undertaken under the guidance of a study leader and recorded in the
form of a dissertation. Before the dissertation will be accepted for examination, a draft article, based on the research and approved by the supervisor, must be ready for submission to a peer-evaluated journal. Aspects of the dissertation must have been presented at a national symposium or conference. The student must also present a colloquium before submitting the dissertation. In addition, he or she must successfully complete a programme in Research Methodology in the first year of the magister technologiae if it was not done as part of a previous qualification.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAY500T</td>
<td>Dissertation: Mathematical Technology</td>
<td>(1,000)</td>
</tr>
<tr>
<td>MAY500R</td>
<td>Dissertation: Mathematical Technology (re-registration)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

10.6 DOCTOR TECHNOLOGIAE: MATHEMATICAL TECHNOLOGY
Course code: DTMN00

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Mathematical Technology or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: Selection is based on a personal interview with a departmental evaluation panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. Procedures will be fully explained to each prospective student during the personal interview.

c. Duration: A minimum of two years and a maximum of five years. Students must re-register annually for this programme.

d. Structure: This course consists of a research project that must be recorded in the form of a thesis. Before the thesis will be accepted for examination, at least two articles, based on the research and approved by the supervisor, must have been submitted to a peer-evaluated journal (or a patent or artefact must have been successful). One of the two articles must already have been accepted for publication. Written proof of it must be submitted as part of the requirements of the degree. Aspects of the thesis must have been presented at an international symposium. The student must also present a colloquium before submitting the thesis and must successfully defend the thesis before the degree will be awarded.

e. Subject credits: Subject credits are shown in brackets after every subject.
<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAY700T</td>
<td>Thesis: Mathematical Technology</td>
<td>(2,000)</td>
</tr>
<tr>
<td>MAY700R</td>
<td>Thesis: Mathematical Technology</td>
<td>(0,000)</td>
</tr>
<tr>
<td></td>
<td>(re-registration)</td>
<td></td>
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</table>

TOTAL CREDITS FOR THE QUALIFICATION: 2,000

### 10.7 SUBJECT INFORMATION

<table>
<thead>
<tr>
<th>SUBJECT NAME:</th>
<th>COLLOQUIUM V</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE:</td>
<td>CQM500T</td>
</tr>
<tr>
<td>EVALUATION METHOD:</td>
<td>CONTINUOUS ASSESSMENT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME:</td>
<td>Not available</td>
</tr>
</tbody>
</table>

**OVERVIEW OF SYLLABUS:**

Students take turns to present lectures on the theory and applications of real analyses with the aid of algebraic manipulators.

<table>
<thead>
<tr>
<th>SUBJECT NAME:</th>
<th>CONTINUAL QUALITY IMPROVEMENT IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE:</td>
<td>CQI401T</td>
</tr>
<tr>
<td>EVALUATION METHOD:</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME:</td>
<td>Not available</td>
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</table>

**OVERVIEW OF SYLLABUS:**


<table>
<thead>
<tr>
<th>SUBJECT NAME:</th>
<th>INDUSTRIAL MATHEMATICS V</th>
</tr>
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<tbody>
<tr>
<td>SUBJECT CODE:</td>
<td>ILM500T</td>
</tr>
<tr>
<td>EVALUATION METHOD:</td>
<td>CONTINUOUS ASSESSMENT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME:</td>
<td>Not available</td>
</tr>
</tbody>
</table>

**OVERVIEW OF SYLLABUS:**

The contents depend on the availability of instructors and demand from regional industry (choose from "wavelets", "futures and derivatives", "applied graph theory", etc.).

<table>
<thead>
<tr>
<th>SUBJECT NAME:</th>
<th>MATHEMATICAL TECHNOLOGY: LABORATORY PROJECT (A) V</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE:</td>
<td>MTP50AT</td>
</tr>
<tr>
<td>EVALUATION METHOD:</td>
<td>PROJECT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME:</td>
<td>Not available</td>
</tr>
</tbody>
</table>

**OVERVIEW OF SYLLABUS:**

This practical subject must be undertaken simultaneously with any two of the theoretical subjects (except for the colloquium) stated above. Experiments employing both numeric and symbolic computation and using software such as Derive, MATLAB, Mathematica, Scientific Workplace, etc. are carried out, which demonstrate investigations of a deeper nature than would be possible in either of the two subjects. A project report is to be submitted for examination.

<table>
<thead>
<tr>
<th>SUBJECT NAME:</th>
<th>MATHEMATICAL TECHNOLOGY: LABORATORY PROJECT (B) V</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE:</td>
<td>MTP50BT</td>
</tr>
<tr>
<td>EVALUATION METHOD:</td>
<td>PROJECT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME:</td>
<td>Not available</td>
</tr>
</tbody>
</table>

**OVERVIEW OF SYLLABUS:**

This practical subject is to be taken simultaneously with any two of the theoretical subjects not covered in Laboratory Project (A) (except for the colloquium). Experiments employing both numeric and symbolic computation and using software such as Derive, MATLAB, Mathematica, Scientific Workplace, etc. are carried out, which demonstrate investigations of a deeper nature than would be possible in either of the two subjects. A project report is to be submitted for examination.
SUBJECT NAME: NUMERICAL ANALYSIS V  
SUBJECT CODE: NAS500T  
EVALUATION METHOD: CONTINUOUS ASSESSMENT  
TOTAL TUITION TIME: Not available  
OVERVIEW OF SYLLABUS: Integrating polynomials, numerical differentiation and integration, Runge-Kutta type methods, round-off error.

SUBJECT NAME: NUMERICAL LINEAR ALGEBRA V  
SUBJECT CODE: NLA500T  
EVALUATION METHOD: CONTINUOUS ASSESSMENT  
TOTAL TUITION TIME: Not available  
OVERVIEW OF SYLLABUS: Methods of solving systems of not necessarily linear equations, error analyses, difference equations and finite element methods.

SUBJECT NAME: ORDINARY NONLINEAR DIFFERENTIAL EQUATIONS V  
SUBJECT CODE: ONL500T  
EVALUATION METHOD: CONTINUOUS ASSESSMENT  
TOTAL TUITION TIME: Not available  
OVERVIEW OF SYLLABUS: Not necessarily linear ordinary differential equations are studied.

SUBJECT NAME: PARTIAL DIFFERENTIAL EQUATIONS V  
SUBJECT CODE: PDQ500T  
EVALUATION METHOD: CONTINUOUS ASSESSMENT  
TOTAL TUITION TIME: Not available  
OVERVIEW OF SYLLABUS: Dirichlet, Neumann, mixed boundary value problems and Sturm-Liouville theory.

SUBJECT NAME: PROJECT IV  
SUBJECT CODE: PJT400T  
EVALUATION METHOD: PROJECT  
TOTAL TUITION TIME: Not available  

SUBJECT NAME: QUALITY AUDITING TECHNIQUES IV  
SUBJECT CODE: QAQ401T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: Not available  

SUBJECT NAME: QUALITY MANAGEMENT SYSTEMS III  
SUBJECT CODE: QMS301T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: Not available  
<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>QUALITY PLANNING AND IMPLEMENTATION IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>QPI401T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>Not available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>QUALITY TECHNIQUES IV</th>
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</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
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<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
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</table>

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>RESEARCH REPORT: MATHEMATICAL TECHNOLOGY V</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>MAY501T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>RESEARCH</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>Not available</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>This could, for example, cover work extending results from the respective laboratory projects or it could be a completely new project incorporating the use of available technology, such as Derive, MATLAB, Mathematica and Scientific Workplace. The project must demonstrate the student’s ability to produce publishable research articles and/or artefacts in mathematical technology. It may be undertaken only after the successful completion of the six subjects and the two laboratory projects listed above.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>STATISTICAL QUALITY TECHNIQUES III</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>SQT301T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 4-HOUR PAPER (PRACTICAL)</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>Not available</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Fundamentals of statistics. Analytical statistics, including descriptive statistics, probability theory, sampling techniques, confidence intervals, hypothesis testing, regression analyses, non-parametric tests. Design of experiments. Use of statistical software. ISO 10017.</td>
</tr>
</tbody>
</table>
11. DEPARTMENT OF NATURE CONSERVATION

VISION

To be a first-choice, world-class department for training in nature conservation in southern Africa.

MISSION

We are committed to -
• top-quality, career-orientated training and research in nature conservation, game ranch management and ecotourism management; and
• the conservation of biodiversity, as well as sustainable utilisation and human development.

INTRODUCTION

The conservation and optimal utilisation of natural areas (for consumptive use through game ranch management, and non-consumptive use through ecotourism management) offer a vast number of career and job opportunities in the applicable fields. These include, among others, game rangers (wildlife management), researchers, environmental educators and interpreters, district service officers, ecotourism guides, tour operators, ecodestination planners, game ranch and reserve managers, professional hunters and hunting operators.

In preparing students for their selected career choices, a full range of qualifications is presented, namely national diplomas followed by the baccalaureus technologiae, as well as magister technologiae and doctor technologiae in the following fields: Nature Conservation, Game Ranch Management and Ecotourism Management. The baccalaureus technologiae comprises advanced study in the various fields and requires advanced technological and managerial skills. The magister technologiae and doctorates comprise problem-based research applicable to the specific subject field.

11.1 NATIONAL DIPLOMA: ECOTOURISM MANAGEMENT

Course code: NDEK01

THIS COURSE IS OFFERED BY THE FACULTY OF AGRICULTURE, HEALTH AND NATURAL SCIENCES AND THE FACULTY OF MANAGEMENT SCIENCES.

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Senior Certificate or an equivalent qualification with Biology and English, with at least a D symbol at Higher Grade.

b. Selection criteria: Prospective students will not be admitted without prior selection. Applications must reach the Department before 15 June of the preceding year.

The attendance of a selection and orientation camp prior to the commencement of studies is recommended. The camp is held annually during the June/July school holidays. Enquiries: Ms H Joubert, tel. (012) 382-5306.

Selection is based on the allocation of points (Swedish formula) for school subjects passed (Higher, Standard or Lower Grade and symbols obtained).
Formula for determination of academic merit:

<table>
<thead>
<tr>
<th>(%)</th>
<th>HG VALUE</th>
<th>SG VALUE</th>
<th>LG VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 - 100%</td>
<td>9</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>80 - 89%</td>
<td>8</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>70 - 79%</td>
<td>7</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>60 - 69%</td>
<td>6</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>50 - 59%</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>40 - 49%</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>30 - 39%</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>20 - 29%</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Applicants with 28 points will be accepted, 26 - 27 points will be interviewed and 25 and lower will not be accepted.

c. Recommended subject(s): Tourism and Hotel and Hospitality Management.
d. Minimum duration: Three years.
e. Presentation: Day classes.
f. Intake for the course: January only.
g. Registration for the subjects of this course: January and July.
h. Promotion requirements: Students must pass the prerequisite subjects, as indicated in the curriculum, before they will be permitted to register for the follow-up subjects.
i. Training excursions and practicals: Training excursions and practicals are compulsory and involve additional expenses, over and above the class fees. Basic camping equipment is also required. Further details will be provided to students during registration.
j. General: It is compulsory to wear the required uniform during certain practical excursions. Uniforms may also be worn to class and practicals. Details regarding uniforms will be provided to students during registration.

Membership of the Pretoria Campus Wildlife Society is strongly recommended for all students.

The nature of the training involves a degree of risk, although all reasonable precautions are taken by the University and the Department to prevent accidents and injuries. It is recommended that students invest in insurance. Further information will be available during registration.

k. Experiential Learning I and II: See Chapter 5 of Students’ Rules and Regulations.
l. Readmission: See Chapter 3 of Students’ Rules and Regulations.
m. Subject credits: Subject credits are shown in brackets after every subject.

Key to asterisks
* Information does not correspond with information in Report 151.
(Deviations approved by the Senate in August 2005.)
### FIRST YEAR

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
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</thead>
<tbody>
<tr>
<td>ECD100T</td>
<td>Ecotourism Development I</td>
<td>(0,166)*</td>
<td></td>
</tr>
<tr>
<td>ECK100T</td>
<td>Ecotourism Marketing I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>ECQ100T</td>
<td>Ecotourism Management I</td>
<td>(0,167)</td>
<td></td>
</tr>
<tr>
<td>ECR100T</td>
<td>Ecotourism Practice I</td>
<td>(0,100)</td>
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**FIRST SEMESTER**

<table>
<thead>
<tr>
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<th>SUBJECT</th>
<th>CREDIT</th>
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</thead>
<tbody>
<tr>
<td>ECB10AT</td>
<td>Ecotourism: Biology IA</td>
<td>(0,083)</td>
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<tr>
<td>ECI101T</td>
<td>Ecotourism Interpretation I</td>
<td>(0,100)</td>
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</tbody>
</table>

Training Excursion 1: Local Nature Reserve: Pretoria region

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECB10BT</td>
<td>Ecotourism: Biology IB</td>
<td>(0,084)</td>
</tr>
<tr>
<td>ECI201T</td>
<td>Ecotourism Interpretation II</td>
<td>(0,100)</td>
</tr>
<tr>
<td>WIM101T</td>
<td>Wildlife Management I</td>
<td>(0,100)</td>
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</table>

Training Excursion 2: KwaZulu-Natal

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

### SECOND YEAR

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUS110T</td>
<td>Computer Usage I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>ECD200T</td>
<td>Ecotourism Development II</td>
<td>(0,166)*</td>
<td>Ecotourism Development I</td>
</tr>
<tr>
<td>ECK200T</td>
<td>Ecotourism Marketing II</td>
<td>(0,100)</td>
<td>Ecotourism Marketing I</td>
</tr>
<tr>
<td>ECQ200T</td>
<td>Ecotourism Management II</td>
<td>(0,167)</td>
<td>Ecotourism Management I</td>
</tr>
<tr>
<td>ECR200T</td>
<td>Ecotourism Practice II</td>
<td>(0,100)</td>
<td>Ecotourism Practice I</td>
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</table>

**FIRST SEMESTER**

<table>
<thead>
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<tbody>
<tr>
<td>ECB20AT</td>
<td>Ecotourism: Biology IIA</td>
<td>(0,083)</td>
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<tr>
<td>WIM201T</td>
<td>Wildlife Management II</td>
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Training Excursion 3: Mpumalanga/Lowveld

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
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</thead>
<tbody>
<tr>
<td>ECB20BT</td>
<td>Ecotourism: Biology IIB</td>
<td>(0,084)</td>
</tr>
<tr>
<td>ECI301T</td>
<td>Ecotourism Interpretation III</td>
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Training Excursion 4: Limpopo Province

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

### THIRD YEAR

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
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</thead>
<tbody>
<tr>
<td>ECD300T</td>
<td>Ecotourism Development III</td>
<td>(0,166)*</td>
<td>Ecotourism Development II</td>
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<tr>
<td>ECQ300T</td>
<td>Ecotourism Management III</td>
<td>(0,167)</td>
<td>Ecotourism Management II</td>
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**FIRST SEMESTER**

<table>
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<tr>
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<th>SUBJECT</th>
<th>CREDIT</th>
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<tbody>
<tr>
<td>ECB301T</td>
<td>Ecotourism: Biology III</td>
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</tr>
<tr>
<td>EXP1ETM</td>
<td>Experiential Learning I</td>
<td>(0,250)</td>
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</tbody>
</table>
SECOND SEMESTER

EXP2ETM Experiential Learning II (0,250)

TOTAL CREDITS FOR THE THIRD YEAR: 1,000

11.2 BACCALAUREUS TECHNOLOGIAE: ECOTOURISM MANAGEMENT

Course code: BTEK01

THIS COURSE IS OFFERED BY THE FACULTY OF AGRICULTURE, HEALTH AND NATURAL SCIENCES AND THE FACULTY OF MANAGEMENT SCIENCES.

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Ecotourism Management or an equivalent qualification. However, this does not apply to students who registered for the first time for the National Diploma before 2006 and who have not since interrupted their studies.

b. Selection criteria: All applications are subject to selection.

c. Minimum duration: One year.

d. Presentation: Block course.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January only.

g. Readmission: See Chapter 3 of Students’ Rules and Regulations.

h. Subject credits: Subject credits are shown in brackets after every subject.

YEAR SUBJECTS

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
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</tr>
</thead>
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<tr>
<td>ECB40BT</td>
<td>Ecotourism: Biology IVB</td>
<td>(0,125)</td>
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<tr>
<td>ECD400T</td>
<td>Ecotourism Development IV</td>
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</tr>
<tr>
<td>ECQ400T</td>
<td>Ecotourism Management IV</td>
<td>(0,250)</td>
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FIRST OR SECOND SEMESTER

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<tr>
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<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
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<tbody>
<tr>
<td>RMD10AH</td>
<td>Research Methodology A</td>
<td>(0,125)</td>
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<tr>
<td>RMD10BH</td>
<td>Research Methodology B</td>
<td>(0,125)</td>
</tr>
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</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000
11.3 MAGISTER TECHNOLOGIAE: ECOTOURISM MANAGEMENT
Course code: MTEK01

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Ecotourism Management or an equivalent qualification. A candidate will only be permitted to register once a research protocol (research proposal) has been approved by the Department.

b. Duration: A minimum of one year and a maximum of three years.

c. Promotion requirement(s): In the dissertation, a candidate must prove that he or she understands a particular problem in the ecotourism industry in which he or she has done research, and that he or she is able to analyse and set this out logically, arrive at logical conclusions or a diagnosis, and make proposals for the solution or elimination of the problem. The dissertation must comply with the usual technical requirements.

The Magister Technologiae: Ecotourism Management is conferred on a candidate who -
• has submitted a satisfactory dissertation - a publishable article is required along with the dissertation (after the evaluation of the dissertation, an additional oral examination or academic discussion may be required); and
• has presented a colloquium (public lecture) of at least 40 minutes on the dissertation. This presentation is not an examination requirement.

d. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETM500T</td>
<td>Dissertation: Ecotourism</td>
<td>(1,000)</td>
</tr>
<tr>
<td>ETM500R</td>
<td>Dissertation: Ecotourism (re-registration)</td>
<td>(0,000)</td>
</tr>
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TOTAL CREDITS FOR THE QUALIFICATION: 1,000

11.4 SUBJECT INFORMATION

<table>
<thead>
<tr>
<th>SUBJECT NAME:</th>
<th>COMPUTER USAGE I</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE:</td>
<td>CUS110T</td>
</tr>
<tr>
<td>EVALUATION METHOD:</td>
<td>CONTINUOUS ASSESSMENT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME:</td>
<td>± 75 hours</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>MS Word and Excel for Windows. Internet and e-mail. All other computer software programs applicable to ecotourism.</td>
</tr>
</tbody>
</table>
SUBJECT NAME: ECOTOURISM: BIOLOGY IA
SUBJECT CODE: ECB10AT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ECOTOURISM: BIOLOGY IB
SUBJECT CODE: ECB10BT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ECOTOURISM: BIOLOGY IIA
SUBJECT CODE: ECB20AT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
The use of botanical keys: general and specialist keys, plant identification, biomes of South Africa.

SUBJECT NAME: ECOTOURISM: BIOLOGY IIB
SUBJECT CODE: ECB20BT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ECOTOURISM: BIOLOGY III
SUBJECT CODE: ECB301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ECOTOURISM: BIOLOGY IVA
SUBJECT CODE: ECB40AT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:
Human-nature experience. Ecology: environmental impact assessment, integrated environmental management.

SUBJECT NAME: ECOTOURISM: BIOLOGY IVB
SUBJECT CODE: ECB40BT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:
SUBJECT NAME: ECOTOURISM DEVELOPMENT I
SUBJECT CODE: ECD100T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ECOTOURISM DEVELOPMENT II
SUBJECT CODE: ECD200T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Marine tourism: what is marine tourism, characteristics, opportunities, impact and the future of marine tourism. Rural tourism: financing, development and marketing issues, holiday farm operators, key issues facing rural enterprises. Cultural tourism: definition of cultural tourism, cultural heritage, cultural resources, case studies.

SUBJECT NAME: ECOTOURISM DEVELOPMENT III
SUBJECT CODE: ECD300T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Sustainable tourism: global environmental issues, environmental significance of leisure tourism, sustainability and economic restructuring, sustainability tourism and indigenous people, sustainability in the accommodation sector. Polar tourism: tourism issues and their impact in polar regions, cruise tourism in polar regions and its impact, tourism experiences, waste disposal, visitor management in polar regions.

SUBJECT NAME: ECOTOURISM DEVELOPMENT IV
SUBJECT CODE: ECD400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ECOTOURISM INTERPRETATION I
SUBJECT CODE: ECI101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ECOTOURISM INTERPRETATION II
SUBJECT CODE: ECI201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
SUBJECT NAME: ECOTOURISM INTERPRETATION III
SUBJECT CODE: ECI301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Field guiding: general - interpretive services. Community involvement and development. Attributes of a successful communication guide or officer. Basic maintenance skills. Client service. Traditions and cultures of various groups. Tracking skills. Environmental education: sustainability, environmental literacy, development of resource material, programmes and tools.

SUBJECT NAME: ECOTOURISM MANAGEMENT I
SUBJECT CODE: ECQ100T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Entrepreneurship and how to establish one’s own business. Managing a small business. Entrepreneurship and small business management in perspective and personal assessment. Basic business concepts for the prospective entrepreneur. The identification of feasible small business ideas. The viability of a business idea. The business plan: setting up a business, general management, finance, marketing, operations, purchasing, staff, administration and public relations.

SUBJECT NAME: ECOTOURISM MANAGEMENT II
SUBJECT CODE: ECQ200T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Basic principles of financial management of a small business: basic financial concepts, basic accounting for the small business, financial statements and their analysis, the capital needs of the small business and financing those needs, financial planning and control, breakeven analysis, sales forecasting and budgets (including cash-flow management), credit collection management, inventory management, financial remuneration of the owner(s) and provision for tax and insurance purposes, growth in the small business, tourism events and financial management of events. Human resource management for a small business: general introduction, understanding oneself and the individual employee, the South African legislative framework, preparing to staff an organisation, recruitment, selection and orientation, leading and motivating people for performance, developing a small business, the South African labour relations system, managing labour relations in South Africa, managing consultants and contracts during special tourism events.

SUBJECT NAME: ECOTOURISM MANAGEMENT III
SUBJECT CODE: ECQ300T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Strategic planning or formulation: vision, mission, analysing the external environment in the tourism and leisure industry, macro-environment, national and international tourism and leisure, job or task environment, analysing the internal environment, formulation of strategic goals, gap analysis, developing strategies, evaluation and selection of strategies, contemporary issues in strategic management.

SUBJECT NAME: ECOTOURISM MANAGEMENT IV
SUBJECT CODE: ECQ400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:
<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>ECOTOURISM MARKETING I</th>
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</thead>
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<td>ECK100T</td>
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<td>EVALUATION METHOD</td>
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<tr>
<td>TOTAL TUITION TIME</td>
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<table>
<thead>
<tr>
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<th>ECOTOURISM MARKETING II</th>
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<tbody>
<tr>
<td>SUBJECT CODE</td>
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<td>TOTAL TUITION TIME</td>
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<tr>
<th>SUBJECT NAME</th>
<th>ECOTOURISM PRACTICE I</th>
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<tr>
<td>SUBJECT CODE</td>
<td>ECR100T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>CONTINUOUS ASSESSMENT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>± 75 hours</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Global ecodestinations. Tourist guiding: techniques, management. Conferences and other events: players in the industry, on-site management, checking in/checking out, special programmes and special events, trade shows, legal issues, meeting technology, logistics in planning and international gatherings.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>ECOTOURISM PRACTICE II</th>
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<tbody>
<tr>
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<td>EVALUATION METHOD</td>
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<td>TOTAL TUITION TIME</td>
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<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>EXPERIENTIAL LEARNING I</th>
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<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>EXP1ETM</td>
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<tr>
<td>EVALUATION METHOD</td>
<td>EXPERIENTIAL LEARNING</td>
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<tr>
<td>TOTAL TUITION TIME</td>
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<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Industry-related training as determined by the industry and the University.</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>EXP2ETM</td>
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<tr>
<td>EVALUATION METHOD</td>
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<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Industry-related training as determined by the industry and the University.</td>
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SUBJECT NAME: RESEARCH METHODOLOGY A
SUBJECT CODE: RMD10AH
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:
This subject provides background knowledge of research methodology regarding the planning, execution and interpretation of results and scientific reporting. It incorporates the following aspects: philosophies, skills, criteria, types of research and processes, as well as writing of reports and presentation of seminars, construction of questionnaires, etc. Introductory statistical analysis forms an integral part of this presentation.

SUBJECT NAME: RESEARCH METHODOLOGY B
SUBJECT CODE: RMD10BH
EVALUATION METHOD: RESEARCH REPORT AND ORAL EXAMINATION
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:
Compiling a detailed research protocol (research proposal) and completing a pilot study regarding an identified research project under the leadership of a mentor. The results of the pilot study will be presented during the last contact week of the study year. A written report, as well as an oral presentation is required.

SUBJECT NAME: WILDLIFE MANAGEMENT I
SUBJECT CODE: WIM101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Animals: classification and characteristics. Plants: classification and characteristics. Geology and soils: introduction to geomorphology, earth forces that change the crust of the earth, origin and nature of important rocks in Africa, soil-forming factors, soil characteristics, basic pedology, basic climatology, climate regions. Basic astronomy. Freshwater management: catchment areas, wetlands, rivers, dams and fish species.

SUBJECT NAME: WILDLIFE MANAGEMENT II
SUBJECT CODE: WIM201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:

11.5 TRAINING EXCURSIONS

A minimum of four compulsory training excursions (5 -14 days each) are scheduled in the training period. Evaluation of each training excursion forms an integral part of the semester mark for the subject and a pass mark is required for each training excursion in order to pass that semester. The costs of training excursions normally include all travelling expenses, accommodation and entrance fees. Where necessary, provision should be made for malaria and, especially, tick-bite fever. Students will be fully informed in this regard. Basic camping equipment is required and students should be self-sufficient during these training trips.
Please note: Dates, duration, venues and costs of training excursions are subject to change.

TRAINING EXCURSION 1 - LOCAL NATURE RESERVE: PRETORIA REGION
During this excursion, emphasis is placed on the practical principles and philosophy of ecotourism as a career. Practical aspects of all the first-semester subjects are emphasised and the most important biotic and abiotic components of the local environment are studied. An additional objective of this excursion is to introduce students to the complex interaction in nature and to gain knowledge of plant identification, animal studies and veld interpretation.
Duration: 5 days.
TRAINING EXCURSION 2 - KWAZULU-NATAL
This excursion includes a visit to the coastal areas and/or midland reserves of the KwaZulu-Natal Conservation Services. Students participate in and are exposed to the numerous management, research, community and environmental education activities of one of South Africa's premier conservation organisations.
Duration: 8 days.

TRAINING EXCURSION 3 - MPUMALANGA/LOWVELD
Students are exposed to a variety of practical aspects regarding conservation management and environmental interpretation. The following tourism aspects are emphasised: the layout of rest camps/resorts, marketing and management of resorts and ecotourism facilities, waste management, environmental interpretation (including bush camps), hiking tours and community involvement.
Duration: 8 days.

TRAINING EXCURSION 4 - LIMPOPO PROVINCE
During this excursion special emphasis is placed on the activities of an ecotourism practitioner within provincial and privately owned conservation practices. Ecological management and daily activities, as well as field interpretation skills, are emphasised. The ecological impact of tourism is studied. The main emphasis of this excursion is on the practical application and participation in various activities and medium-term projects.
Duration: 14 days.

11.6 NATIONAL DIPLOMA: GAME RANCH MANAGEMENT
Course code: NDGR04
Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS
a. Admission requirement(s): A Senior Certificate or an equivalent qualification.
b. Selection criteria: Selection is based on a weighted Swedish scale to obtain greater variance among applicants. With the standardised formula, too many applicants end up with the same score and no differentiation is possible.

Minimum requirements and allocation of marks:
• 20 points on TUT's M-scorecard (weighted).
• Minimum six grade 12 subjects.
• Bonus marks (2) are awarded for specific subjects (Biology, Geography, Agriculture, etc.) - a maximum of 6 marks may be awarded.
• Bonus marks (2) are awarded for prior experience and specialised courses completed - a maximum of 6 marks may be awarded.
• The evaluation mark (theory test: 60%, practical: 20%, interview: 20%, total: 100) of the selection and orientation camp is taken into account in selection. The ratio of Swedish points to camp marks is 75:25.
• The selection of applicants who do not attend the selection and orientation camp is based only on the weighted Swedish points: 100.

SYMBOL | HG VALUE | SG VALUE
--- | --- | ---
A | 6 | 5
B | 5 | 4
C | 4 | 3
D | 3 | 2
E | 2 | 1

NATURE CONSERVATION
c. Recommended subject(s): Biology at Higher Grade.
d. Minimum duration: Option 1: three years. Option 2: four years.
e. Presentation: Option 1: two years (four semesters) of day classes, followed by one year (two semesters) of experiential learning. Option 2: three years (six semesters) of day classes, followed by one year (two semesters) of experiential learning.
f. Intake for the course: January only.
g. Registration for the subjects of this course: January and July.
h. Promotion requirements: Students must pass all prerequisite subjects, as indicated in the curriculum, before they will be permitted to register for the follow-up subjects. First-semester students who do not meet the prerequisites will not be allowed to register for the second semester, and will have to reapply to be considered for evaluation for the following year (this rule applies to options 1 and 2).
i. Training excursions and practicals: Training excursions and practicals are compulsory and involve additional expenses, over and above the class fees. Basic camping equipment is also required. Particulars will be provided to students during registration.
j. General: It is compulsory to wear the required uniform during certain practical excursions. Uniforms may also be worn to class and to practicals. Details regarding uniforms will be provided to students during registration.

Membership of the Pretoria Campus Wildlife Society is strongly recommended for all students.

The nature of the training involves a degree of risk, although all reasonable precautions are taken by the University and the Department to prevent accidents and injuries. It is recommended that students invest in insurance. Further information will be available during registration.

k. IMPORTANT:

- Students usually enrol for option 1, but those wishing to enrol for option 2 may do so.
- Following the first test series (progress reports are issued), all students with an average of less than 50% will be requested to change to option 2.
- Students who decide not to follow option 1, must pass the three subjects of the first semester of option 2 in order to be eligible for enrolling for the second semester. Option 2 is then followed.
- Students who follow option 1 and who fail any other subjects after the first semester, must change to option 2.

l. Financial support, loans and bursaries: The University administers the National Student Financial Aid Scheme (NSFAS) for financial support and the Department currently administers three bursaries (for senior students only), namely the Robbie Cooper Memorial Trust Bursary, the Lycaon Bursary, and the South African Hunters’ Association Bursary. Information is available at the Department.
m. Experiential Learning I and II: See Chapter 5 of Students' Rules and Regulations.

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

o. Subject credits: Subject credits are shown in brackets after every subject.

**OPTION 1**

**FIRST YEAR**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
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</thead>
<tbody>
<tr>
<td>GRM101T</td>
<td>Game Ranch Management I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>GRY101T</td>
<td>Game Ranch Ecology I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>GSC101T</td>
<td>Game Science I</td>
<td>(0,100)</td>
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</tr>
<tr>
<td>RLS101T</td>
<td>Rangeland Studies I</td>
<td>(0,100)</td>
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Training Excursion 1 - Pretoria region

TOTAL CREDITS FOR THE SEMESTER: 0,400

**SECOND SEMESTER**

<table>
<thead>
<tr>
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<th>PREREQUISITE SUBJECT(S)</th>
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<tbody>
<tr>
<td>GRE101T</td>
<td>Game Ranch Economics I</td>
<td>(0,100)</td>
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</tr>
<tr>
<td>GRM201T</td>
<td>Game Ranch Management II</td>
<td>(0,100)</td>
<td>Game Ranch Management I</td>
</tr>
<tr>
<td>GRY201T</td>
<td>Game Ranch Ecology II</td>
<td>(0,100)</td>
<td>Game Ranch Ecology I</td>
</tr>
<tr>
<td>GSC201T</td>
<td>Game Science II</td>
<td>(0,100)</td>
<td>Game Science I</td>
</tr>
<tr>
<td>SSC101C</td>
<td>Soil Science I</td>
<td>(0,100)</td>
<td></td>
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</tbody>
</table>

Training Excursion 2 - Lapalala

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE FIRST YEAR: 0,900

**SECOND YEAR**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
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<tbody>
<tr>
<td>CUS101T</td>
<td>Computer Usage I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>GRE201T</td>
<td>Game Ranch Economics II</td>
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<td>Game Ranch Economics I</td>
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<td>GRY301T</td>
<td>Game Ranch Ecology III</td>
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<tr>
<td>GSC301T</td>
<td>Game Science III</td>
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plus one of the following subjects:

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<tr>
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<th>SUBJECT</th>
<th>CREDIT</th>
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</thead>
<tbody>
<tr>
<td>GLN101T</td>
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</tr>
<tr>
<td>GUN101T</td>
<td>Game Utilization I</td>
<td>(0,125)</td>
</tr>
</tbody>
</table>

Training Excursion 3 - Bushveld

TOTAL CREDITS FOR THE SEMESTER: 0,600

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
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</thead>
<tbody>
<tr>
<td>GHM101T</td>
<td>Game Health Management I</td>
<td>(0,125)</td>
</tr>
</tbody>
</table>
NATURE CONSERVATION

GRE301T  Game Ranch Economics III (0,125)  Game Ranch Economics II
GRM301T  Game Ranch Management III (0,125)  Game Ranch Management II

plus one of the following subjects:

GLN201T  Game Lodge Management II (0,125)  Game Lodge Management I
GUN201T  Game Utilization II (0,125)  Game Utilization I

Training Excursion 4 - Limpopo Province

TOTAL CREDITS FOR THE SEMESTER: 0,500
TOTAL CREDITS FOR THE SECOND YEAR: 1,100

THIRD YEAR

FIRST SEMESTER

EXP1GRM  Experiential Learning I (0,500)

TOTAL CREDITS FOR THE SEMESTER: 0,500

SECOND SEMESTER

EXP2GRM  Experiential Learning II (0,500)

TOTAL CREDITS FOR THE SEMESTER: 0,500
TOTAL CREDITS FOR THE THIRD YEAR: 1,000

OPTION 2

FIRST YEAR

FIRST SEMESTER

CODE        SUBJECT                                         CREDIT PREREQUISITE SUBJECT(S)
GRM101T  Game Ranch Management I (0,100)
GSC101T  Game Science I (0,100)
RLS101T   Rangeland Studies I (0,100)

Training Excursion 1 - Pretoria region

TOTAL CREDITS FOR THE SEMESTER: 0,300

SECOND SEMESTER

GRM201T  Game Ranch Management II (0,100)  Game Ranch Management I
GSC201T  Game Science II (0,100)  Game Science I
SSC101C  Soil Science I (0,100)

TOTAL CREDITS FOR THE SEMESTER: 0,300
TOTAL CREDITS FOR THE FIRST YEAR: 0,600

SECOND YEAR

FIRST SEMESTER

CUS101T   Computer Usage I (0,100)
GRY101T  Game Ranch Ecology I (0,100)

TOTAL CREDITS FOR THE SEMESTER: 0,100
### Second Semester

<table>
<thead>
<tr>
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<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GRE101T</td>
<td>Game Ranch Economics I</td>
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<tr>
<td>GRY201T</td>
<td>Game Ranch Ecology II</td>
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#### Grade Point Average
Game Ranch Ecology I

### TOTAL CREDITS FOR THE SEMESTER: 0,325

### Third Year

#### First Semester

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<th>Course Name</th>
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<tbody>
<tr>
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<td>Game Ranch Economics II</td>
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</tr>
<tr>
<td>GRY301T</td>
<td>Game Ranch Ecology III</td>
<td>(0,125)</td>
</tr>
<tr>
<td>GSC301T</td>
<td>Game Science III</td>
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</table>

#### Grade Point Average
Game Ranch Economics II

### TOTAL CREDITS FOR THE SEMESTER: 0,375

### Second Semester

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<td>Game Health Management I</td>
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<tr>
<td>GRE301T</td>
<td>Game Ranch Economics III</td>
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<tr>
<td>GRM301T</td>
<td>Game Ranch Management III</td>
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#### Grade Point Average
Game Ranch Management II

### TOTAL CREDITS FOR THE SEMESTER: 0,375

### TOTAL CREDITS FOR THE THIRD YEAR: 0,750

### Fourth Year

#### First Semester

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<td>Experiential Learning I</td>
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#### Grade Point Average
Experiential Learning I

### TOTAL CREDITS FOR THE SEMESTER: 0,500

#### Second Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP2GRM</td>
<td>Experiential Learning II</td>
<td>(0,500)</td>
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</table>

#### Grade Point Average
Experiential Learning II

### TOTAL CREDITS FOR THE SEMESTER: 0,500

### TOTAL CREDITS FOR THE FOURTH YEAR: 1,000
11.7 BACCALAUREUS TECHNOLOGIAE: GAME RANCH MANAGEMENT

Course code: BTGR03

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Game Ranch Management or an equivalent qualification. However, this does not apply to students who registered for the National Diploma for the first time before 2006 and who have not since interrupted their studies.

b. Selection criteria: Submission of curriculum vitae. Work experience and applicable additional courses are considered.

c. Minimum duration: One year.

d. Presentation: Block course over a period of two years. These blocks consist of four compulsory week-long blocks per annum (excluding examinations) - usually in January, April, July and October.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January only.

g. Readmission: See Chapter 3 of Students’ Rules and Regulations.

h. Subject credits: Subject credits are shown in brackets after every subject.


<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
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</thead>
<tbody>
<tr>
<td>GRE400T</td>
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</tr>
<tr>
<td>GRM40BT</td>
<td>Game Ranch Management IVB</td>
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</tr>
<tr>
<td>GSC40BT</td>
<td>Game Science IVB</td>
<td>(0,150)</td>
</tr>
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</table>

plus one of the following subjects:

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<thead>
<tr>
<th>CODE</th>
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<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMD10AH</td>
<td>Research Methodology A</td>
<td>(0,050)</td>
</tr>
<tr>
<td>RMD10BH</td>
<td>Research Methodology B</td>
<td>(0,050)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE FIRST YEAR: 0,500

SECOND YEAR (2008/2010)

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<tr>
<td>GRM40AT</td>
<td>Game Ranch Management IVA</td>
<td>(0,150)</td>
</tr>
<tr>
<td>GSC40AT</td>
<td>Game Science IVA</td>
<td>(0,150)</td>
</tr>
</tbody>
</table>

plus one of the following subjects:

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMD10AH</td>
<td>Research Methodology A</td>
<td>(0,050)</td>
</tr>
<tr>
<td>RMD10BH</td>
<td>Research Methodology B</td>
<td>(0,050)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SECOND YEAR: 0,500

TOTAL CREDITS FOR THE QUALIFICATION: 1,000
**11.8 MAGISTER TECHNOLOGIAE: GAME RANCH MANAGEMENT**

**Course code:** MTGR01

**Campus where offered:** Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

**REMARKS**

a. **Admission requirement(s):** A Baccalaureus Technologiae: Game Ranch Management or an equivalent qualification. A candidate will only be permitted to register once a research protocol (research proposal) has been approved by the Department.

b. **Duration:** A minimum of one year and a maximum of three years.

c. **Promotion requirement(s):** In the dissertation, a candidate must prove that he or she understands a particular problem in the game-ranching working environment or industry in which he or she has done research, and that he or she is able to analyse and set this out logically, arrive at logical conclusions or a diagnosis and make proposals for the solution or elimination of the problem. Dissertations must comply with the usual technical requirements.

The Magister Technologiae: Game Ranch Management is conferred on a candidate who -

• is in possession of the Baccalaureus Technologiae: Game Ranch Management or an equivalent qualification;
• has followed an approved syllabus of research and/or advanced study of at least one year, following the prerequisite degree;
• has submitted a satisfactory dissertation (a publishable scientific article is required along with the dissertation);
• has passed the prescribed examination (following the evaluation of the dissertation, an additional oral examination or academic discussion may be required); and
• has presented a colloquium (public lecture) of at least 40 minutes on the research project. This presentation is not an examination requirement.

d. **Subject credits:** Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
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<th>SUBJECT</th>
<th>CREDIT</th>
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</thead>
<tbody>
<tr>
<td>GRM500T</td>
<td>Dissertation: Game Ranch Management</td>
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</tr>
<tr>
<td>GRM500R</td>
<td>Dissertation: Game Ranch Management (re-registration)</td>
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**TOTAL CREDITS FOR THE QUALIFICATION:** 1,000
11.9 DOCTOR TECHNOLOGIAE: GAME RANCH MANAGEMENT
Course code: DTGR01

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Game Ranch Management or an equivalent qualification. A candidate will only be permitted to register once a research protocol (research proposal) has been approved by the Department.

b. Promotion requirement(s): In the thesis, a candidate must provide proof of original and creative thinking and problem-solving abilities, and make a real contribution to the solution of problems in the working environment or game-ranching industry to which his or her research applies.

The thesis must comply with the usual technical requirements. The Doctor Technologiae: Game Ranch Management is conferred on a candidate who -
• is in possession of the Magister Technologiae: Game Ranch Management or an equivalent qualification;
• has followed an approved syllabus of research and/or advanced study of at least two years, following the prerequisite degree;
• has submitted a satisfactory thesis (two publishable scientific articles are required along with the thesis);
• has passed the prescribed examination (following the evaluation of the thesis, an additional oral examination or academic discussion may be required); and
• has presented a colloquium (public lecture) of at least 40 minutes on the research project. This presentation is not an examination requirement.

c. Duration: A minimum of two years and a maximum of five years.

d. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
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<th>CREDIT</th>
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<tbody>
<tr>
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<td>Thesis: Game Ranch Management</td>
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<tr>
<td>GRM700R</td>
<td>Thesis: Game Ranch Management (re-registration)</td>
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</table>

TOTAL CREDITS FOR THE QUALIFICATION: 2,000

11.10 SUBJECT INFORMATION

SUBJECT NAME: COMPUTER USAGE I
SUBJECT CODE: CUS101T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
An introduction to the historical background, hardware and software, and the operation of a computer. Fields of application in nature conservation and wildlife management. Word processing and databases.
SUBJECT NAME: EXPERIENTIAL LEARNING I
SUBJECT CODE: EXP1GRM
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: 6 months

OVERVIEW OF SYLLABUS:
Experiential learning is done with an accredited employer and is overseen by a mentor and a departmental lecturer. A compulsory syllabus is followed and two reports (progress and final report) must be submitted. Students may be visited at their place of employment. A final oral examination is taken at the end of the period.

SUBJECT NAME: EXPERIENTIAL LEARNING II
SUBJECT CODE: EXP2GRM
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: 6 months

OVERVIEW OF SYLLABUS:
Experiential learning is done with an accredited employer and is overseen by a mentor and a departmental lecturer. A compulsory syllabus is followed and two reports (progress and final report) must be submitted. Students may be visited at their place of employment. A final oral examination is taken at the end of the period.

SUBJECT NAME: GAME HEALTH MANAGEMENT I
SUBJECT CODE: GHM101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours

OVERVIEW OF SYLLABUS:

SUBJECT NAME: GAME LODGE MANAGEMENT I
SUBJECT CODE: GLN101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours

OVERVIEW OF SYLLABUS:

SUBJECT NAME: GAME LODGE MANAGEMENT II
SUBJECT CODE: GLN201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours

OVERVIEW OF SYLLABUS:

SUBJECT NAME: GAME RANCH ECOLOGY I
SUBJECT CODE: GRY101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours

OVERVIEW OF SYLLABUS:
Ecobiological principles pertaining to game ranch management. Components of an ecosystem and important interrelationships. Population regulation, limiting factors and their application on a game ranch.

SUBJECT NAME: GAME RANCH ECOLOGY II
SUBJECT CODE: GRY201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours

OVERVIEW OF SYLLABUS:
SUBJECT NAME: GAME RANCH ECOLOGY III
SUBJECT CODE: GRY301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: GAME RANCH ECONOMICS I
SUBJECT CODE: GRE101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Labour legislation applicable to a game ranch. Legislation applicable to game ranch management (ownership of wild animals). Law enforcement and securing integrity. Administrative procedures.

SUBJECT NAME: GAME RANCH ECONOMICS II
SUBJECT CODE: GRE201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Financial planning and control on a game ranch.

SUBJECT NAME: GAME RANCH ECONOMICS III
SUBJECT CODE: GRE301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Marketing management. Price, product, distribution and promotion principles and decisions.

SUBJECT NAME: GAME RANCH ECONOMICS IV
SUBJECT CODE: GRE400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: GAME RANCH MANAGEMENT I
SUBJECT CODE: GRM101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Planning and management of infrastructure on a game ranch - roads, fences and camps. Environmental impact assessment. Techniques - welding, erecting fences, water provision and basic vehicle maintenance.

SUBJECT NAME: GAME RANCH MANAGEMENT II
SUBJECT CODE: GRM201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
SUBJECT NAME: GAME RANCH MANAGEMENT III
SUBJECT CODE: GRM301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: GAME RANCH MANAGEMENT IVA
SUBJECT CODE: GRM40AT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: GAME RANCH MANAGEMENT IVB
SUBJECT CODE: GRM40BT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: GAME RANCH STRATEGIC MANAGEMENT IV
SUBJECT CODE: GRS400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: GAME SCIENCE I
SUBJECT CODE: GSC101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: GAME SCIENCE II
SUBJECT CODE: GSC201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Overview of important vertebrates in game ranching. Anatomy and physiology of the different feeding groups. Reproduction and practical application. Feeding and application on a game ranch. Genetic principles and considerations on a game ranch. Reproduction and practical application.

SUBJECT NAME: GAME SCIENCE III
SUBJECT CODE: GSC301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Animal behaviour: principles and application on a game ranch (habitat selection, social behaviour, feeding behaviour, reproduction behaviour).
SUBJECT NAME: GAME SCIENCE IVA
SUBJECT CODE: GSC40AT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: GAME SCIENCE IVB
SUBJECT CODE: GSC40BT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 640 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: GAME UTILIZATION I
SUBJECT CODE: GUN101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: GAME UTILIZATION II
SUBJECT CODE: GUN201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
This subject focuses on game translocation, with the emphasis on physical and chemical capturing techniques, tranquillisers, boma management, transport, veterinary considerations, game sales and auctions, insurance and ethics. Game sales. Auctions. Legal considerations. Veterinary considerations. Habitat assessment. Importing wildlife.

SUBJECT NAME: RANGELAND STUDIES I
SUBJECT CODE: RLS101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: RESEARCH METHODOLOGY A
SUBJECT CODE: RMD10AH
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:
This course is designed to present the student who has had a more practical education up to this stage with a comprehensive course on the theory, method and practice of scientific research. The student will have a cursory knowledge of the history and philosophy of science. He or she will also be able to define research and discuss its relevance in conservation. The course includes an introduction to biostatistics. The student will be able to identify a research priority, conduct a literature survey and articulate the project proposal. The course is a combination of theory and practical assignments, culminating in a theoretical examination.
SUBJECT NAME: RESEARCH METHODOLOGY B  
SUBJECT CODE: RMD10BH  
EVALUATION METHOD: RESEARCH REPORT AND ORAL EXAMINATION  
TOTAL TUITION TIME: ± 40 hours  
OVERVIEW OF SYLLABUS:  
This course is a project course in which the student will execute the research contemplated in the project proposal presented in Research Methodology A. The student will independently execute the research, analyse and interpret the data and bring the project to conclusion in scientific format. A staff member is assigned to each student as a project supervisor. The final mark is made up from the final report on the project and a seminar presentation of the research.

SUBJECT NAME: SOIL SCIENCE I  
SUBJECT CODE: SSC101C  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 70 hours  
OVERVIEW OF SYLLABUS:  
Introductory geology, soil-forming factors, characteristics of soils, soil classification, biogeochemical cycles, soil conservation and its application in wildlife management.

11.11 TRAINING EXCURSIONS

A minimum of four compulsory training excursions are scheduled in the training period. Evaluation of each training excursion forms an integral part of the semester mark for the subject and a pass mark is required for each training excursion in order to pass that semester. The costs of training excursions normally include all travelling expenses, accommodation and entrance fees, and meals in some cases. Where necessary, precautions should be taken against malaria, and, especially, tick-bite fever. Students will be informed in this regard.

TRAINING EXCURSION 1 - PRETORIA REGION
This excursion is undertaken annually to a suitable site in the Pretoria area. The practical aspects of all first-semester subjects are addressed during the excursion. The most important biotic and abiotic components of the local environment are investigated and students have an opportunity to gain knowledge of plant identification, animal identification and field interpretation.  
Duration: 5 days.

TRAINING EXCURSION 2 - LAPALALA
Limnological evaluation of the Palala River within the Waterberg biosphere at Lapalala. Visits to game ranches and to important role-players in the game industry. Students are exposed to surveying techniques of freshwater ecotones.  
Duration: 10 to 12 days.

TRAINING EXCURSION 3 - BUSHVELD
Venue will be announced. This excursion exposes students to habitat analysis and game utilisation on a game farm. The excursion focuses on different vegetation survey methods and various aspects relating to the hunting industry. The hunting, skinning and caping of game species form an integral part of this training excursion. Other activities can be arranged on an ad hoc basis.  
Duration: 5 days.

TRAINING EXCURSION 4 - LIMPOPO PROVINCE
This training excursion is undertaken by fourth-semester students and comprises a vital component of the training in the course Game Ranch Management III (GRM301A). The Percy Fife, Polokwane and Venetia Nature Reserves are visited. Students are exposed to management techniques for the intensive breeding of roan antelope and the management of lions, wild dogs, white rhinos and elephants in relatively smaller reserves. Practical training is provided on lion and hyena call-ups, radiotelemetry, GPS, map development, bird ringing and trophy carcass preparation. Reserve management along the principles of sustainable utilisation and adaptive management is also discussed.  
Duration: 9 days.
11.12 NATIONAL DIPLOMA: NATURE CONSERVATION
Course code: NDNA04

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Senior Certificate or an equivalent qualification.

b. Selection criteria: Selection is based on a weighted Swedish scale to obtain greater variance among applicants. With the standardised formula, too many applicants end up with the same score and no differentiation is possible.

Minimum requirements and allocation of marks:
• 20 points on TUT’s M-scorecard (weighted).
• Minimum six grade 12 subjects.
• Bonus marks (2) are awarded for specific subjects (Biology, Geography, Agriculture, etc.) - a maximum of 6 marks may be awarded.
• Bonus marks (2) are awarded for prior experience and specialised courses completed - a maximum of 6 marks may be awarded.
• The evaluation mark (theory test: 60%, practical: 20%, interview: 20%, total: 100) of the selection and orientation camp is taken in account in selection. The ratio of Swedish points to camp marks is 75:25.
• The selection of applicants who do not attend the selection and orientation camp is based only on weighted Swedish points: 100.

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>HG VALUE</th>
<th>SG VALUE</th>
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</thead>
<tbody>
<tr>
<td>A</td>
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<td>B</td>
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<td>D</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>E</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

c. Recommended subject(s): Biology at Higher Grade.

d. Minimum duration: Option 1: three years.
   Option 2: four years.

e. Presentation: Option 1: two years (four semesters) of formal day-class training, followed by one year (two semesters) of experiential learning.
   Option 2: three years (six semesters) of formal day-class training, followed by one year (two semesters) of experiential learning.

f. Intake for the course: January only.

g. Registration for the subjects of this course: January and July.

h. Promotion requirement(s): Students must pass the prerequisite subjects indicated in the curriculum before they will be permitted to register for the follow-up subjects.

i. Training excursions and practicals: Training excursions and practicals are compulsory and involve additional expenses, over and above the class fees. Basic camping equipment is also required. Details in this regard will be provided to students during registration.
j. General: It is compulsory to wear the required uniform during certain practical excursions. Uniforms may also be worn to class and to practicals. Details regarding uniforms will be provided to students during registration.

Membership of the Pretoria Campus Wildlife Society is strongly recommended for all students.

The nature of the training involves a degree of risk, although all reasonable precautions are taken by the University and the Department to prevent accidents and injuries. It is recommended that students invest in insurance. Further information is obtainable during registration.

k. IMPORTANT:

- Students usually enrol for option 1, but those wishing to enrol for option 2 may do so.
- Following the first test series (progress reports are issued), all students with an average of less than 50% will be requested to change to option 2.
- Students who decide not to follow option 1, must pass the three subjects of the first semester of option 2 in order to be eligible for enrolling for the second semester. Option 2 is then followed.
- Students who follow option 1 and who fail any other subjects after the first semester must change to option 2.

l. Financial support, loans and bursaries: The University administers a TEFSA (Tertiary Education Fund of South Africa) financial support programme and the Department of Nature Conservation currently administers three bursaries, namely the Robbie Cooper Memorial Trust Bursary, the Lycaon Bursary and the South African Hunters’ Association Bursary. Information is available at the Department.

m. Experiential Learning I and II: See Chapter 5 of Students’ Rules and Regulations.

n. Readmission: See Chapter 3 of Students’ Rules and Regulations.

o. Subject credits: Subject credits are shown in brackets after every subject.

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

OPTION 1

FIRST YEAR

FIRST SEMESTER

<table>
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<tr>
<td>BON101T</td>
<td>Conservation Development I</td>
<td>(0,100)</td>
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<tr>
<td>WNB101T</td>
<td>Conservation Ecology I</td>
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<tr>
<td>WPS101T</td>
<td>Plant Studies I</td>
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Training Excursion 1 - Pretoria region

TOTAL CREDITS FOR THE SEMESTER: 0,400
### SECOND SEMESTER

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<th>Course Title</th>
<th>Credits</th>
<th>Notes</th>
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<td>Animal Studies II</td>
<td>(0,100)*</td>
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<td>RMG101T</td>
<td>Resource Management I</td>
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<tr>
<td>SSC101C</td>
<td>Soil Science I</td>
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<tr>
<td>WNB201T</td>
<td>Conservation Ecology II</td>
<td>(0,100)</td>
<td>Conservation Ecology I</td>
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<tr>
<td>WPS201T</td>
<td>Plant Studies II</td>
<td>(0,100)*</td>
<td>Plant Studies I</td>
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</tbody>
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Training Excursion 2 - KwaZulu-Natal

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE FIRST YEAR: 0,900

### SECOND YEAR

#### FIRST SEMESTER

<table>
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</thead>
<tbody>
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<td>BKO101T</td>
<td>Conservation Communication I</td>
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<tr>
<td>CUS101T</td>
<td>Computer Usage I</td>
<td>(0,100)</td>
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<tr>
<td>CVA101T</td>
<td>Conservation Administration I</td>
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<td>RMG201T</td>
<td>Resource Management II</td>
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<td>WPS301T</td>
<td>Plant Studies III</td>
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Training Excursion 3 - Mpumalanga Escarpment/Lowveld and Kruger National Park

TOTAL CREDITS FOR THE SEMESTER: 0,600

### SECOND SEMESTER

<table>
<thead>
<tr>
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<td>Resource Management III</td>
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<td>Resource Management II</td>
</tr>
<tr>
<td>WNB301T</td>
<td>Conservation Ecology III</td>
<td>(0,125)</td>
<td>Conservation Ecology II</td>
</tr>
</tbody>
</table>

Training Excursion 4 - Suikerbosrand Nature Reserve
Training Excursion 5 - Rustenburg

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE SECOND YEAR: 1,100

### THIRD YEAR

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP1NCV</td>
<td>Experiential Learning I</td>
<td>(0,500)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

#### SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP2NCV</td>
<td>Experiential Learning II</td>
<td>(0,500)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE THIRD YEAR: 1,000
# Option 2

## First Year

### First Semester

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>Credit</th>
<th>Prerequisite Subject(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANS111T</td>
<td>Animal Studies I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>BON101T</td>
<td>Conservation Development I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>WPS101T</td>
<td>Plant Studies I</td>
<td>(0,100)</td>
<td></td>
</tr>
</tbody>
</table>

Training Excursion 1 - Pretoria region

Total Credits for the Semester: 0,300

### Second Semester

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>Credit</th>
<th>Prerequisite Subject(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANS211T</td>
<td>Animal Studies II</td>
<td>(0,100)</td>
<td>Animal Studies I</td>
</tr>
<tr>
<td>SSC101C</td>
<td>Soil Science I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>WPS201T</td>
<td>Plant Studies II</td>
<td>(0,100)</td>
<td>Plant Studies I</td>
</tr>
</tbody>
</table>

Total Credits for the Semester: 0,300

Total Credits for the First Year: 0,600

## Second Year

### First Semester

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>Credit</th>
<th>Prerequisite Subject(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKO101T</td>
<td>Conservation Communication I</td>
<td>(0,125)</td>
<td></td>
</tr>
<tr>
<td>CUS101T</td>
<td>Computer Usage I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>WNB101T</td>
<td>Conservation Ecology I</td>
<td>(0,100)</td>
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</table>

Total Credits for the Semester: 0,325

### Second Semester

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>Credit</th>
<th>Prerequisite Subject(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKO201T</td>
<td>Conservation Communication II</td>
<td>(0,125)</td>
<td>Conservation Communication I</td>
</tr>
<tr>
<td>RMG101T</td>
<td>Resource Management I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>WNB201T</td>
<td>Conservation Ecology II</td>
<td>(0,100)</td>
<td>Conservation Ecology I</td>
</tr>
</tbody>
</table>

Training Excursion 2 - KwaZulu-Natal

Total Credits for the Semester: 0,325

Total Credits for the Second Year: 0,650

## Third Year

### First Semester

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>Credit</th>
<th>Prerequisite Subject(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVA101T</td>
<td>Conservation Administration I</td>
<td>(0,125)</td>
<td>Resource Management I</td>
</tr>
<tr>
<td>RMG201T</td>
<td>Resource Management II</td>
<td>(0,125)</td>
<td></td>
</tr>
<tr>
<td>WPS301T</td>
<td>Plant Studies III</td>
<td>(0,125)</td>
<td>Plant Studies II</td>
</tr>
</tbody>
</table>

Training Excursion 3 - Mpumalanga Escarpment/Lowveld and Kruger National Park

Total Credits for the Semester: 0,375
SECOND SEMESTER

ANS311T  Animal Studies III (0,125) Animal Studies II
RMG301T  Resource Management III (0,125) Resource Management II
WNB301T  Conservation Ecology III (0,125) Conservation Ecology II

Training Excursion 4 - Suikerbosrand Nature Reserve
Training Excursion 5 - Rustenburg

TOTAL CREDITS FOR THE SEMESTER: 0,375
TOTAL CREDITS FOR THE THIRD YEAR: 0,750

FOURTH YEAR

FIRST SEMESTER

EXP1NCV  Experiential Learning I (0,500)

TOTAL CREDITS FOR THE SEMESTER: 0,500

SECOND SEMESTER

EXP2NCV  Experiential Learning II (0,500)

TOTAL CREDITS FOR THE SEMESTER: 0,500
TOTAL CREDITS FOR THE FOURTH YEAR: 1,000

11.13 BACCALAUREUS TECHNOLOGIAE: NATURE CONSERVATION
Course code: BTNA00

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Nature Conservation or an equivalent qualification, with at least a 60% aggregate. However, this does not apply to students who registered for the National Diploma for the first time before 2006 and who have not since interrupted their studies.

b. Selection criteria: Submission of curriculum vitae. Work experience and applicable additional courses are considered.

c. Minimum duration: One year.

d. Presentation: Block course over a period of two years. These blocks comprise four compulsory week-long blocks per annum (excluding examinations) - usually in January, April, July and October.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January only.

g. Readmission: See Chapter 3 of Students’ Rules and Regulations.

h. Subject credits: Subject credits are shown in brackets after every subject.
YEAR SUBJECTS


<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMG40YT</td>
<td>Resource Management IVB</td>
<td>(0,150)</td>
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</tr>
<tr>
<td>WPS40YT</td>
<td>Plant Studies IVB</td>
<td>(0,150)</td>
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</tr>
<tr>
<td></td>
<td>plus one of the following subjects:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RMD10AH</td>
<td>Research Methodology A</td>
<td>(0,050)</td>
<td></td>
</tr>
<tr>
<td>RMD10BH</td>
<td>Research Methodology B</td>
<td>(0,050)</td>
<td>Research Methodology A</td>
</tr>
<tr>
<td></td>
<td>plus two of the following subjects:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EED100T</td>
<td>Environmental Education I</td>
<td>(0,100)</td>
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<tr>
<td>FMN120T</td>
<td>Financial Management I</td>
<td>(0,100)</td>
<td></td>
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<tr>
<td>FWM400T</td>
<td>Fresh Water Management IV</td>
<td>(0,100)</td>
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</tr>
<tr>
<td>PMR100T</td>
<td>Principles of Management I</td>
<td>(0,100)</td>
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</tr>
<tr>
<td></td>
<td>TOTAL CREDITS FOR THE FIRST YEAR:</td>
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SECOND YEAR (2008/2010)

<table>
<thead>
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<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVM100T</td>
<td>Conservation Management I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>RMG40XT</td>
<td>Resource Management IVA</td>
<td>(0,150)</td>
<td></td>
</tr>
<tr>
<td>WPS40XT</td>
<td>Plant Studies IVA</td>
<td>(0,150)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>plus one of the following subjects:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RMD10AH</td>
<td>Research Methodology A</td>
<td>(0,050)</td>
<td></td>
</tr>
<tr>
<td>RMD10BH</td>
<td>Research Methodology B</td>
<td>(0,050)</td>
<td>Research Methodology A</td>
</tr>
<tr>
<td></td>
<td>TOTAL CREDITS FOR THE SECOND YEAR:</td>
<td>0,450</td>
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</tr>
<tr>
<td></td>
<td>TOTAL CREDITS FOR THE QUALIFICATION:</td>
<td>1,000</td>
<td></td>
</tr>
</tbody>
</table>

11.14 MAGISTER TECHNOLOGIAE: NATURE CONSERVATION

Course code: MTNA95

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Nature Conservation or an equivalent qualification. A candidate will only be permitted to register once a research protocol (research proposal) has been approved by the Department.

b. Duration: A minimum of one year and a maximum of three years.

c. Promotion requirement(s): In the dissertation, a candidate must prove that he or she understands a particular problem in the nature conservation working environment or industry in which he or she has done research, and that he or she is able to analyse and set this out logically, arrive at logical conclusions or a diagnosis, and make proposals for the solution or elimination of the problem. The dissertation must comply with the usual technical requirements.
The Magister Technologiae: Nature Conservation is conferred on a candidate who -

• is in possession of the Baccalaureus Technologiae: Nature Conservation or an equivalent qualification;
• has followed an approved syllabus of research and/or advanced study of at least one year, following the prerequisite degree;
• has submitted a satisfactory dissertation (a publishable scientific article is required along with the dissertation);
• has passed the prescribed examination (following the evaluation of the dissertation, an additional oral examination or academic discussion may be required); and
• has presented a colloquium (public lecture) of at least 40 minutes on the research project. This presentation is not an examination requirement.

d. Subject credits:

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCV500T</td>
<td>Dissertation: Nature Conservation</td>
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</tr>
<tr>
<td>NCV500R</td>
<td>Dissertation: Nature Conservation</td>
<td>0,000</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

11.15 DOCTOR TECHNOLOGIAE: NATURE CONSERVATION

Course code: DTNA96

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Nature Conservation, or an equivalent qualification. A candidate will only be permitted to register once a research protocol (research proposal) has been approved by the Department.

b. Promotion requirement(s): In the thesis, a candidate must provide proof of original and creative thinking and problem-solving abilities, and make a real contribution to the solution of problems in the nature conservation industry to which his or her research applies.

The thesis must comply with the usual technical requirements. The Doctor Technologiae: Nature Conservation is conferred on a candidate who -

• is in possession of the Magister Technologiae: Nature Conservation or an equivalent qualification;
• has followed an approved syllabus of research and/or advanced study of at least two years, following the prerequisite degree;
• has submitted a satisfactory thesis (two publishable scientific articles are required along with the thesis);
• has passed the prescribed examination (following the evaluation of the thesis, an additional oral examination or academic discussion may be required); and
• has presented a colloquium (public lecture) of at least 40 minutes on the research project. This presentation is not an examination requirement.
c. Duration: A minimum of two years and a maximum of five years.
d. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
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<tbody>
<tr>
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<td>Thesis: Nature Conservation</td>
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</tr>
<tr>
<td>NCV700R</td>
<td>Thesis: Nature Conservation (re-registration)</td>
<td>(0,000)</td>
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**TOTAL CREDITS FOR THE QUALIFICATION:** 2,000

### 11.16 SUBJECT INFORMATION

**SUBJECT NAME:** ANIMAL STUDIES I  
**SUBJECT CODE:** ANS111T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** ± 75 hours  
**OVERVIEW OF SYLLABUS:**  
Taxonomy, morphology, feeding, life cycles, the ecological and, where applicable, economic importance of the invertebrates. The notifiable diseases of wildlife.

**SUBJECT NAME:** ANIMAL STUDIES II  
**SUBJECT CODE:** ANS211T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** ± 75 hours  
**OVERVIEW OF SYLLABUS:**  
Overview of the animal kingdom. Classification and systems of the following vertebrates: Mammalia, Aves, Reptilia, Amphibia, Pisces, with special reference to birds and mammals.

**SUBJECT NAME:** ANIMAL STUDIES III  
**SUBJECT CODE:** ANS311T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** ± 75 hours  
**OVERVIEW OF SYLLABUS:**  
The ethology of vertebrates and, particularly, habitat selection, social behaviour, and feeding and mating behaviour. Adaptations of animals, zoogeography and applied population genetics.

**SUBJECT NAME:** COMPUTER USAGE I  
**SUBJECT CODE:** CUS101T  
**EVALUATION METHOD:** CONTINUOUS ASSESSMENT  
**TOTAL TUITION TIME:** ± 75 hours  
**OVERVIEW OF SYLLABUS:**  
An introduction to historical background, hardware and software, the operation of a computer. Fields of application in nature conservation and wildlife management. Word processing and databases.

**SUBJECT NAME:** CONSERVATION ADMINISTRATION I  
**SUBJECT CODE:** CVA101T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** ± 75 hours  
**OVERVIEW OF SYLLABUS:**  
The course includes administrative procedures, legislation and law enforcement, personnel management, tourism management and conservation economy.

**SUBJECT NAME:** CONSERVATION COMMUNICATION I  
**SUBJECT CODE:** BKO101T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** ± 75 hours  
**OVERVIEW OF SYLLABUS:**  
Introductory course on the nature, objectives and functions of conservation communication. The fields of application of interpretation, extension, environmental education and public relations are discussed. Communication aids and the practical aspects of oral presentation are emphasised. Introductory aspects of credibility, human behaviour and behavioural change are discussed against the background of the adoption and diffusion of innovations within environmental conservation.
SUBJECT NAME: CONSERVATION COMMUNICATION II
SUBJECT CODE: BKO201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
The development and execution of interpretation, extension and environmental education programmes. Problem-solving and the causes of environmental problems are dealt with as the point of departure for programme development. Group dynamics, including the group process, are discussed as an introduction. Applicable group techniques for environmental education are also covered.

SUBJECT NAME: CONSERVATION DEVELOPMENT I
SUBJECT CODE: BON101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
The extent and importance of the conservation of natural resources, biotic diversity and essential biochemical cycles. The following aspects are covered: conservation history in South Africa and elsewhere, conservation philosophies, conservation strategies, environmental conservation and the utilisation of natural resources.

SUBJECT NAME: CONSERVATION ECOLOGY I
SUBJECT CODE: WNB101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Ecobiological principles, components of an ecosystem, energy in the ecosystem, productivity and the ecosystem, limiting factors in the ecosystem and climatology.

SUBJECT NAME: CONSERVATION ECOLOGY II
SUBJECT CODE: WNB201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Population dynamics, population regulation, ecological genetics, behavioural ecology, sociobiology, habitats and niches, communities, coevolution, succession and plant ecology.

SUBJECT NAME: CONSERVATION ECOLOGY III
SUBJECT CODE: WNB301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: CONSERVATION MANAGEMENT I
SUBJECT CODE: CVM100T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:
This subject is broadly based on the emerging discipline of conservation biology. The goal of conservation biology is to gain an understanding of natural ecological systems in order to maintain ecological diversity in the face of increasing human population pressure. The subject attempts to apply theoretical ecological and genetic models to real-life situations and to address the loss of biodiversity through a fusion of theory, basic and applied research and public education. It investigates human impact and develops practical approaches to prevent the extinction of species.
<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>ENVIRONMENTAL EDUCATION I</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>EED100T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>± 75 hours</td>
</tr>
</tbody>
</table>

**OVERVIEW OF SYLLABUS:**
A study of the philosophy of environmental education against the background of the sustainable utilisation of resources. The nature, objectives and functions, and the fields of application of environmental education are discussed. Educational principles, didactics theories, and educational norms of both formal and non-formal education are included. Fundamental sociology and applicable physiological aspects are discussed.

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>EXPERIENTIAL LEARNING I</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>EXP1NCV</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>EXPERIENTIAL LEARNING</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>6 months</td>
</tr>
</tbody>
</table>

**OVERVIEW OF SYLLABUS:**
Experiential learning is done with an accredited employer and is overseen by a mentor and a departmental lecturer. A compulsory syllabus is followed and two reports (progress and final report) must be submitted. Students may be visited at their places of employment. A final oral examination is also taken at the end of the period.

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>EXPERIENTIAL LEARNING II</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>EXP2NCV</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>EXPERIENTIAL LEARNING</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>6 months</td>
</tr>
</tbody>
</table>

**OVERVIEW OF SYLLABUS:**
Experiential learning is done with an accredited employer and is overseen by a mentor and a departmental lecturer. A compulsory syllabus is followed and two reports (progress and final report) must be submitted. Students may be visited at their places of employment. A final oral examination is also taken at the end of the period.

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>FINANCIAL MANAGEMENT I</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>FMN120T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>± 40 hours</td>
</tr>
</tbody>
</table>

**OVERVIEW OF SYLLABUS:**
The objective of this course is to provide the student with the necessary knowledge and techniques to make effective financial decisions. The course content deals with an introductory study unit, financial reports and statements, the analysis and interpretation of financial results, production economic principles and cost terms, budgets and risk and uncertainty.

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>FRESH WATER MANAGEMENT IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>FWM400T</td>
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<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>± 40 hours</td>
</tr>
</tbody>
</table>

**OVERVIEW OF SYLLABUS:**
This subject is primarily concerned with the management of inland (freshwater) water resources and habitats for conservation, and their sustainable utilisation. A broad theoretical background is given on the ecology, nature, occurrence, conservation status and associated problems of freshwater ecosystems in southern Africa. This is followed by measures to effectively manage such ecosystems (monitoring, breeding, freshwater organisms, legislation, etc.). The emphasis throughout is on insight and the practical application of knowledge.

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>PLANT STUDIES I</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>WPS101T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>± 75 hours</td>
</tr>
</tbody>
</table>

**OVERVIEW OF SYLLABUS:**
The structure and germination of different seed types, the external structure and functions of the various plant organs, as well as all the morphological modifications found in nature. The internal (anatomical) structure of roots, stems and leaves, as well as the physiological reactions that take place in plants.
SUBJECT NAME: PLANT STUDIES II
SUBJECT CODE: WPS201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Attention is given to basic taxonomic principles. These include definitions, taxonomic systems, taxonomic methods, dynamics of taxonomy and criteria used in classification. The evolutionary development of the flowering plants, as well as a wide range of indigenous flowering plant families, is discussed with reference to characteristics for identification. The development and management of a small herbarium are discussed.

SUBJECT NAME: PLANT STUDIES III
SUBJECT CODE: WPS301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: PLANT STUDIES IVA
SUBJECT CODE: WPS40XT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:
An in-depth study of vegetation or plant science, its principles, aims and applications. This includes the nature of quantitative plant ecology and vegetation science, the description of plant communities, the nature and characteristics of plant data, basic vegetation-related statistics, analysis of data, ordination methods, phytosociology and numerical classification. The emphasis is placed on the application of vegetation research and monitoring to ensure better management of plant resources.

SUBJECT NAME: PLANT STUDIES IVB
SUBJECT CODE: WPS40YT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:
This subject deals with advanced theory and application regarding the management of veld and vegetation in nature reserves (game). An advanced theoretical base is given on aspects such as management approaches, veld monitoring, veld evaluation, carrying capacity, fire management, bush control, veld improvement, problem plant management, grazing management and management plans. The emphasis is on practical applications and insight. An introduction to the use of computers in the study field is included.

SUBJECT NAME: PRINCIPLES OF MANAGEMENT I
SUBJECT CODE: PMR100T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 40 hours
OVERVIEW OF SYLLABUS:
A study of the principles of management as a functional part of business management. The theory of management is explained through the process approach. Aspects that are emphasised include different management levels, basic management functions, additional functions, the management environment, environmental reconnaissance (scenarios) and planning. Strategic planning and strategy implementation, decision-making, coordination, organising (principles and systems), provision of human resources (performance evaluation), and activating, controlling and managing information systems.
OVERVIEW OF SYLLABUS:
This course is designed to present the student who has had a more practical education until now with a comprehensive course on the theory, method and practice of scientific research. The student will gain cursory knowledge of the history and philosophy of science. He or she will also be able to define research and discuss its relevance in conservation. The course includes an introduction to biostatistics. The student will be able to identify a research priority, conduct a literature survey and articulate the project proposal. The course is a combination of theory and practical assignments, culminating in a theoretical examination.

OVERVIEW OF SYLLABUS:
This course is a project course in which the student will execute the research contemplated in the project proposal presented in Research Methodology A. The student will independently execute the research, analyse and interpret the data and bring the project to conclusion in a scientific format. A staff member is assigned to each student as a project supervisor. The final mark is made up from the final report on the project and a seminar presentation of the research.

OVERVIEW OF SYLLABUS:
Monitoring of numbers, distribution and density of species, as well as the monitoring of condition and population dynamics, which includes age determination, sex ratios and natality and mortality percentages. Principles of data collection, processing and interpretation. Basic statistics, as applicable to the nature conservation field, as well as the scientific method. Principles and methods of animal monitoring, with the emphasis on ungulates. Determination of animal numbers, age and condition.

OVERVIEW OF SYLLABUS:

OVERVIEW OF SYLLABUS:
The planning and management of wildlife areas (physical and biological), game breeding, game recommendations, harvesting, game capture and translocation, game feeding, supplements, managing hunters. Planning and management of infrastructure in wildlife areas.

OVERVIEW OF SYLLABUS:
This subject deals with advanced aspects of game and wildlife management. Different approaches and objectives in wildlife management are covered, as well as the nature and philosophy of wildlife management as a science. The following aspects are covered at an advanced level: ecology and population dynamics of game, animal nutrition, feeding and water utilisation, the ecology of animal behaviour, the ecology of predation and the ecology of game diseases. The emphasis is on the application of these aspects in practical game management.
This subject addresses advanced aspects and applications of game and wildlife management. An advanced theoretical basis is given to aspects such as management approaches, genetics, game recommendations, game monitoring, game utilisation and game management plans, with the emphasis on recent developments in these fields. An introduction is also given to aspects such as game and game product marketing, ecotourism and computer use (all recent and important developments in the wildlife management field).

SUBJECT NAME: SOIL SCIENCE I
SUBJECT CODE: SSC101C
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Introductory geology, soil-forming factors, characteristics of soils, soil classification, biogeochemical cycles, soil conservation and its application in wildlife management.

11.17 TRAINING EXCURSIONS

A minimum of five compulsory training excursions are scheduled in the training period. The evaluation of each training excursion forms an integral part of the semester mark for the subject and a pass mark is required for each training excursion in order to pass that semester. The costs of training excursions normally include all travelling expenses, accommodation and entrance fees, and meals in some cases. Where necessary, precautions should be taken against malaria, and, especially, tick-bite fever. Students will be informed in this regard.

TRAINING EXCURSION 1 - PRETORIA REGION
This excursion is undertaken annually to a suitable site in the Pretoria area. During the excursion the practical facets of all first-semester subjects are addressed. The most important biotic and abiotic components of the area are studied. Students thus have an opportunity to gain knowledge regarding plant identification, animal identification and veld interpretation.
Duration: 5 days.

TRAINING EXCURSION 2 - KWAZULU-NATAL
This excursion takes place during September, and the KwaZulu-Natal north coast, Midlands and Drakensberg reserves are visited. Students take part in various practical activities and are exposed to management and research procedures. The excursion often overlaps with the international coastal clean-up activities. The involvement of local communities in the activities of the KwaZulu-Natal Conservation Service and other environmental education actions are also noted.
Duration: 10 to 12 days.

TRAINING EXCURSION 3 - MPUMALANGA ESCARPMENT/LOWVELD AND KRUGER NATIONAL PARK
Students are exposed to biomes of the region, in particular bankeveld, grassland and savanna. In-depth discussions are conducted and field demonstrations provided on the abiotic components, such as soils and the plant or animal assemblages of each. It includes visits to Verloren Valle Nature Reserve, with special emphasis on its role as a conservation area for wattled cranes and rare plant species, as well as a practical excursion to fen wetlands to see peat and various graminoid plants.

This is followed by a visit to Lydenburg Fisheries Station and practicals on aquaculture. Moving to the Lowveld, students undertake field practicals on the catena effect in savannas with the relevant plant or soil associations. This includes field-monitoring techniques, followed by field demonstrations on the soils, underlying geology and plant associations of the major landscapes of the Kruger National Park. Students attend a series of specialist lectures on predators, disease epidemiology (TB, thileriosis, foot-and-mouth disease, anthrax, rinderpest, encephalitis and myocarditis), management plans, alien plants, TB in lions and vegetation monitoring within the Kruger National Park. Students actively partake in environmental education, interpretation demonstrations and excursions at Lydenburg,
Bourke’s Luck and Skukuza. Students also attend lectures and field demonstrations on amphibians, rare plant cultivation and problem animal control. These are supplemented with lectures on pumps, boreholes, fencing, internal combustion engines and welding. Each lecture is followed by field or workshop demonstrations.
Duration: 12 days.

TRAINING EXCURSION 4 - SUIKERBOSRAND NATURE RESERVE
During this excursion, particular emphasis is placed on the activities of a nature conservationist within a provincial conservation organisation. Students are exposed to a variety of practical aspects pertaining to conservation, i.e. resource management, environmental education, interpretation, law enforcement, cultural services and ecological processes or activities.
Duration: 5 days.

TRAINING EXCURSION 5 - RUSTENBURG
This training excursion concentrates on general game farm management, with special reference to game farms and smaller reserves. Included are recommendations on game numbers and species, water provision, supplementary feeding and game capturing. Emphasis is also placed on the provision of infrastructure, fire breaks and veld management.
Duration: 5 days.
12. DEPARTMENT OF NURSING

12.1 NATIONAL CERTIFICATE: OCCUPATIONAL THERAPY ASSISTANTS
Course code: NCOY97

Campus where offered: Soshanguve Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Senior certificate or an equivalent qualification with Biology and English.

b. Selection criteria: All applicants are subject to selection.

c. Minimum duration: One year.

d. Presentation: Day classes or a two-year block course.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January only.

g. Purpose of qualification: The qualifying student will be able to facilitate the functional participation of clients in various settings in which occupational therapy is required. He or she will function as a member of a multidisciplinary team, under the supervision of a qualified occupational therapist.

After completion of this learning programme, students will be able to register with the Health Professionals Council of South Africa (HPCSA).

h. Exit-level outcomes: • Contributes to the health and well-being of individuals, groups, families and the community.
• Applies treatment to clients through purposeful activities prescribed by an occupational therapist.
• Conducts him- or herself as a professional and contributes to the management of the assigned work area, adhering to relevant policies.

i. Experiential learning: See Chapter 5 of Students’ Rules and Regulations.

j. Readmission: See Chapter 3 of Students’ Rules and Regulations.

k. Subject credits: Subject credits are shown in brackets after every subject.

YEAR SUBJECTS

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<td>COD100B</td>
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TOTAL CREDITS FOR THE QUALIFICATION: 1,000
12.2 BACCALAUREUS TECHNOLOGIÆ: NURSING (COMMUNITY NURSING)

Course Code: BTCN02

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): Registration with the South African Nursing Council as a nurse, midwife and community health nurse. A minimum of two years’ experience as a registered nurse.

b. Selection criteria: All applicants are subject to selection.

c. Minimum duration: One year.

d. Presentation: Block course offered over a period of two years.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January only.

g. Experiential learning: Will be dealt with throughout the programme on an integrated and applied basis.

h. Purpose of qualification: This qualification is intended for registered nurses who wish to specialise in community nursing. Candidates who have obtained this qualification will be able to facilitate the development and application of advanced health strategies, technologies and research in communities, and will apply cost-effective management strategies in the provision of a comprehensive community health service.

i. Exit-level outcomes:
   • Acts as an agent of change in the delivery of health services to communities.
   • Applies scientific nursing skills and technologies in the delivery of comprehensive primary health-care nursing to individuals, groups and communities throughout their lifespan.
   • Practises professional nursing within the ethical legal framework of the health and nursing profession.
   • Applies managerial strategies and technologies to a community health-care environment.
   • Applies the principles of research to community nursing.

j. Readmission: See Chapter 3 of Students’ Rules and Regulations.

k. Subject credits: Subject credits are shown in brackets after every subject.

FIRST YEAR

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<tr>
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<td>Nursing Research I</td>
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TOTAL CREDITS FOR THE FIRST YEAR: 0,575
SECOND YEAR

COH400T  Community Health IV  (0,350)  Community Nursing IV
NMG40BT  Nursing Management IVB (0,075)  Nursing Management IVA

TOTAL CREDITS FOR THE SECOND YEAR:  0,425
TOTAL CREDITS FOR THE QUALIFICATION:  1,000

12.3  BACCALAUREUS TECHNOLOGIAE: NURSING (OCCUPATIONAL HEALTH)
Course code: BTON96/BTON02

Campus where offered:  Soshanguve Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

NO NEW REGISTRATIONS FOR THE COURSE (BTON96) ARE ACCEPTED AS FROM 2006. STUDENTS WHO ARE CURRENTLY REGISTERED FOR THIS QUALIFICATION WILL HAVE UNTIL 2008 TO OBTAIN IT, SUBJECT TO THE STIPULATIONS OF REGULATION 3.1.1(a) ON THE MAXIMUM DURATION OF STUDY. THIS COURSE WAS REPLACED BY BTON02.

Phase-out date:  31 December 2008

REMARKS

a.  Admission requirement(s):  M+4 and registration with the South African Nursing Council as a nurse and midwife.

b.  Selection criteria:  All applicants are subject to selection.

c.  Minimum duration:  One year.

d.  Presentation:  Block and telematic course offered over a period of two years.

e.  Intake for the course:  January only.

f.  Registration for the subjects of this course:  January only.

g.  Experiential learning:  Will be dealt with throughout the programme on an integrated and applied basis.

h.  Purpose of qualification:  This qualification is intended for registered nurses who wish to specialise in occupational nursing. A candidate at this level will be able to apply advanced occupational nursing strategies and technologies and management strategies through the cost-effective management of an occupational health service.

i.  Exit-level outcomes:  • Applies scientific nursing skills and technologies in the delivery of comprehensive occupational nursing to the employee, the family and the community.
  • Practices professional nursing within the ethical legal framework of the health and nursing profession.
  • Applies managerial strategies and technologies to an occupational health-care environment.
  • Applies the principles of research to occupational nursing.
j. Readmission: See Chapter 3 of Students’ Rules and Regulations.
k. Subject credits: Subject credits are shown in brackets after every subject.

**FIRST YEAR**

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**TOTAL CREDITS FOR THE FIRST YEAR:** 0,500

**SECOND YEAR**

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**TOTAL CREDITS FOR THE SECOND YEAR:** 0,500

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

### 12.4 BACCALAUREUS TECHNOLOGIAE: NURSING (ONCOLOGY)

**Course Code:** BTNO02

**Campus where offered:** Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

### REMARKS

a. Admission requirement(s): Registration with the South African Nursing Council as a nurse. Employed in a clinical environment. A minimum of two years’ experience as a registered nurse.
b. Selection criteria: All applicants are subject to selection.
c. Minimum duration: One year.
d. Presentation: Block and telematic course offered over a period of two years.
e. Intake for the course: January only.
f. Registration for the subjects of this course: January only.
g. Experiential learning: Will be dealt with throughout the programme on an integrated and applied basis.
h. Purpose of qualification: This qualification is intended for registered nurses who wish to specialise in oncology nursing. Candidates at this level will be able to apply advanced oncology nursing strategies and technologies and management strategies through the cost-effective management of an oncology health service.
i. Exit-level outcomes:  
   - Applies scientific nursing skills and technologies in the delivery of comprehensive oncology nursing to the cancer patient, the family and the community.  
   - Practises professional nursing within the ethical legal framework of the health and nursing profession.  
   - Applies managerial strategies and technologies to an oncology health-care environment.  
   - Applies the principles of research to oncology nursing.

j. Readmission:  
   See Chapter 3 of Students’ Rules and Regulations.

k. Subject credits:  
   Subject credits are shown in brackets after every subject.

### FIRST YEAR

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TOTAL CREDITS FOR THE FIRST YEAR: 0.575

### SECOND YEAR

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<th>CREDIT</th>
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TOTAL CREDITS FOR THE SECOND YEAR: 0.425

TOTAL CREDITS FOR THE QUALIFICATION: 1.000

### 12.5 BACCALAUREUS TECHNOLOGIAE: NURSING SCIENCE

**Course Code: BTNS01**

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

### REMARKS

a. Admission requirement(s): A Senior Certificate or an equivalent qualification.

b. Selection criteria: Selection is based on a Potential Assessment, as well as departmental selection.

c. Minimum duration: Four years.

d. Presentation: Day classes.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January only.

g. Experiential learning: Attendance of the allocated experiential learning is compulsory. An absence of more than 12 days (96 hours) from experiential learning, including simulated skills, work-integrated learning...
and service learning, will exclude the student from proceeding to the next year of study. Students in the third year of study should submit the completed midwifery register to be able to proceed to the fourth year of study. Students who do not meet the minimum required number of experiential learning hours at the end of the fourth academic year will have to re-register to complete the experiential learning.

A student can only be registered with the South African Nursing Council as a nurse (general, psychiatric and community) and midwife once the required number of experiential learning hours have been completed.

h. Purpose of qualification: This qualification is intended for candidates who wish to register as nurses (general, psychiatric, community) and midwives. Independent nursing practitioners and midwives will be able to apply scientific nursing and midwifery skills and technologies in the rendering and management of a comprehensive nursing service, based on research findings.

i. Exit level outcomes: • Applies scientific nursing and midwifery skills and technologies in rendering a comprehensive nursing service.
  • Maximises the utilisation of resources to improve the quality of health care and services.
  • Applies the principles of research in nursing and midwifery practice.

j. Readmission: See Chapter 3 of Students’ Rules and Regulations.

k. Subject credits: Subject credits are shown in brackets after every subject.

FIRST YEAR

<table>
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<tr>
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<td>MIN100T</td>
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TOTAL CREDITS FOR THE FIRST YEAR: 1,180

SECOND YEAR

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TOTAL CREDITS FOR THE SECOND YEAR: 1,355
### THIRD YEAR

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**TOTAL CREDITS FOR THE THIRD YEAR:** 0.815

### FOURTH YEAR

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**TOTAL CREDITS FOR THE FOURTH YEAR:** 0.650

### 12.6 MAGISTER TECHNOLOGIAE: NURSING

**Course Code:** MTNG98

**Course Title:** Nursing Dynamics IV

**Credits:** 0.150

**Campus where offered:** Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

### REMARKS

a. **Admission requirement(s):** A Baccalaureus Technologiae: Nursing or an equivalent qualification. Research Methodology is compulsory.

b. **Selection criteria:** All applicants are subject to selection.

c. **Duration:** A minimum of one year and a maximum of three years.

d. **Purpose of qualification:** This qualification is intended for registered nurses. Candidates will be able to apply critical analysis and problem-solving techniques in the investigation of health-related problems through research, which will contribute to a scientific base for nursing practice.

e. **Exit-level outcomes:**
   - Critically reviews, analyses and applies the results of health and nursing-related literature to his or her own research studies.
   - Conducts his or her own nursing research, the results of which will contribute to the scientific base of the nursing discipline.
   - Logically develops, analyses and draws conclusions.
   - Communicates the results of the research in an acceptable manner, which will enhance the transfer of technology.

f. **Subject credits:** Subject credits are shown in brackets after every subject.
NURSING

---

**CODE** | **SUBJECT** | **CREDIT**
--- | --- | ---
NUR510T | Dissertation: Nursing | (1,000)
NUR510R | Dissertation: Nursing (re-registration) | (0,000)

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

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**12.7 DOCTOR TECHNOLOGIAE: NURSING**

**Course Code:** DTNG98

**Campus where offered:** Pretoria Campus

Please note that the campus at which the course will be presented still has to be confirmed.

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**REMARKS**

a. **Admission requirement(s):** A Magister Technologiae: Nursing or an equivalent qualification.

b. **Selection criteria:** All applicants are subject to selection.

c. **Duration:** A minimum of two years and a maximum of five years.

d. **Purpose of qualification:** This qualification is intended for registered nurses who wish to further their studies through nursing research. Candidates will be able to apply original and creative thoughts in an in-depth critical analysis of nursing problems through research, thereby contributing new insights, information and developments to the discipline and practice of nursing.

e. **Exit-level outcomes:**
   - Conducts independent research at an advanced level, which promotes research-based nursing practice.
   - Contributes new insights, knowledge and/or information to the discipline of nursing.
   - Publishes and communicates the results of nursing research in a technology transfer document.

f. **Subject credits:** Subject credits are shown in brackets after every subject.

---

**CODE** | **SUBJECT** | **CREDIT**
--- | --- | ---
NUR700T | Thesis: Nursing | (2,000)
NUR700R | Thesis: Nursing (re-registration) | (0,000)

**TOTAL CREDITS FOR THE QUALIFICATION:** 2,000
The subjects in the learning programmes are presented in an integrated manner. The embedded knowledge and skills of each subject will be listed.

**SUBJECT NAME:** ANATOMY AND PHYSIOLOGY I  
**SUBJECT CODE:** APY140T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** Not available  
**OVERVIEW OF SYLLABUS:**  
Introduction to the structure of the human body. The cell: chemistry, biochemistry molecules, enzyme structure and function. Tissues: types, bones, blood lymph and muscle. Basic knowledge: skeletal, neurological, lymphatic, respiratory, digestive and reproductive systems and the senses.

**SUBJECT NAME:** APPLIED BIOLOGICAL AND NATURAL SCIENCE I  
**SUBJECT CODE:** ABN100T  
**EVALUATION METHOD:** CONTINUOUS ASSESSMENT  
**TOTAL TUITION TIME:** ± 120 hours  
**OVERVIEW OF SYLLABUS:**  
Applied anatomy and physiology, nutrition, biochemistry and biophysics.

**SUBJECT NAME:** APPLIED BIOLOGICAL AND NATURAL SCIENCE II  
**SUBJECT CODE:** ABN200T  
**EVALUATION METHOD:** CONTINUOUS ASSESSMENT  
**TOTAL TUITION TIME:** ± 130 hours  
**OVERVIEW OF SYLLABUS:**  
Applied anatomy and physiology, nutrition, biochemistry and biophysics.

**SUBJECT NAME:** APPLIED SOCIAL SCIENCE I  
**SUBJECT CODE:** ASU100T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** ± 70 hours  
**OVERVIEW OF SYLLABUS:**  

**SUBJECT NAME:** APPLIED SOCIAL SCIENCE II  
**SUBJECT CODE:** ASU200T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** ± 78 hours  
**OVERVIEW OF SYLLABUS:**  
Mentally, physically or socially disabled individuals and groups. Family studies. Role development.

**SUBJECT NAME:** COMMUNITY DEVELOPMENT I  
**SUBJECT CODE:** COD100B  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** Not available  
**OVERVIEW OF SYLLABUS:**  
Introduction to community development: process, community profile. Life skills: interpersonal relationships, learning skills, thinking skills. Sociology: definition, culture, socialisation, demography and human ecology, social change, social problems. Psychology: definition of concepts, motivation, attitudes, human needs. Industrial psychology: ergonomics, work environment, occupational health and safety.
SUBJECT NAME: COMMUNITY HEALTH IV
SUBJECT CODE: COH400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 200 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: COMMUNITY NURSING IV
SUBJECT CODE: CNG400T
EVALUATION METHOD: 1 X 3-HOUR PAPER AND PRACTICAL
TOTAL TUITION TIME: ± 88 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: EXPERIENTIAL LEARNING
SUBJECT CODE: EXP1OTA
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Four blocks of five weeks each of clinical training in selected hospitals and selected health-care centres. Student placement will be done by the University.

SUBJECT NAME: MEDICAL SURGICAL NURSING (CAPITA SELECTA) IV
SUBJECT CODE: MSN400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 88 hours
OVERVIEW OF SYLLABUS:
SUBJECT NAME: MIDWIFERY NURSING I
SUBJECT CODE: MIN100T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 8 hours
OVERVIEW OF SYLLABUS:
Healthy mother and baby.

SUBJECT NAME: MIDWIFERY NURSING: PRACTICAL II
SUBJECT CODE: MIN20QT
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 280 hours
OVERVIEW OF SYLLABUS:
Family planning. Teenage pregnancy. Antenatal skills.

SUBJECT NAME: MIDWIFERY NURSING: PRACTICAL III
SUBJECT CODE: MIN30QT
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 720 hours
OVERVIEW OF SYLLABUS:
Midwifery skills. Authentic holistic nursing assessment of pregnant women.

SUBJECT NAME: MIDWIFERY NURSING: THEORY II
SUBJECT CODE: MIN20PT
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
Women's health. Normal childbirth.

SUBJECT NAME: MIDWIFERY NURSING: THEORY III
SUBJECT CODE: MIN30PT
EVALUATION METHOD: 2 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 88 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: NURSING DYNAMICS I
SUBJECT CODE: NDN100T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 35 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: NURSING DYNAMICS II
SUBJECT CODE: NDN200T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 35 hours
OVERVIEW OF SYLLABUS:
Multidisciplinary professional teams. Networking. Reading skills, critical and analytical thinking skills. Interpretation skills. Literature search, also surfing the Net. Scope of practice. Health Act and applicable legislation, health policies. Interpersonal relations. Assertiveness and self-esteem.
SUBJECT NAME: NURSING DYNAMICS III
SUBJECT CODE: NDN300T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 35 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: NURSING DYNAMICS IV
SUBJECT CODE: NDN400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 35 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: NURSING MANAGEMENT IV
SUBJECT CODE: NMG400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Nursing dynamics, administration and nursing management, contemporary health-care systems, national health policy, planning of services, managing and initiating change, disaster/emergency management, personnel administration, quality assurance, communication, conflict management, ethos and professionalism.

SUBJECT NAME: NURSING MANAGEMENT IVA
SUBJECT CODE: NMG40AT
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 88 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: NURSING MANAGEMENT IVB
SUBJECT CODE: NMG40BT
EVALUATION METHOD: PRACTICAL
TOTAL TUITION TIME: ± 88 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: NURSING: PRACTICAL I
SUBJECT CODE: NUR10QT
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 930 hours
OVERVIEW OF SYLLABUS:
<table>
<thead>
<tr>
<th>SUBJECT NAME:</th>
<th>NURSING: PRACTICAL II</th>
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<tbody>
<tr>
<td>SUBJECT CODE:</td>
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<tr>
<td>EVALUATION METHOD:</td>
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<td>TOTAL TUITION TIME:</td>
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<tr>
<td>EVALUATION METHOD:</td>
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<td>TOTAL TUITION TIME:</td>
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<td>NUR40QT</td>
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<tr>
<td>EVALUATION METHOD:</td>
<td>CONTINUOUS ASSESSMENT</td>
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<tr>
<td>TOTAL TUITION TIME:</td>
<td>± 1 140 hours</td>
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<tr>
<td>EVALUATION METHOD:</td>
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<td>NUR10PT</td>
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<tr>
<td>EVALUATION METHOD:</td>
<td>1 X 3-HOUR PAPER</td>
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<td>TOTAL TUITION TIME:</td>
<td>± 148 hours</td>
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<tr>
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<td>2 X 3-HOUR PAPER</td>
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<td>TOTAL TUITION TIME:</td>
<td>± 245 hours</td>
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<td>SUBJECT NAME:</td>
<td>NURSING: THEORY III</td>
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<tr>
<td>EVALUATION METHOD:</td>
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<td>TOTAL TUITION TIME:</td>
<td>± 184 hours</td>
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<tr>
<td>EVALUATION METHOD:</td>
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<td>TOTAL TUITION TIME:</td>
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<th>SUBJECT NAME:</th>
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<td>OCH400T</td>
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<tr>
<td>EVALUATION METHOD:</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME:</td>
<td>Not available</td>
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<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Variables influencing development of occupational health in South Africa, occupational health legislation, labour relations, occupational diseases, occupational safety.</td>
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<tr>
<th>SUBJECT NAME:</th>
<th>OCCUPATIONAL HEALTH NURSING IV</th>
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<tr>
<td>SUBJECT CODE:</td>
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<td>EVALUATION METHOD:</td>
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<td>TOTAL TUITION TIME:</td>
<td>Not available</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Principles of occupational health nursing: occupational nursing, fundamentals of occupational nursing, role of occupational nurse. Professional ethics (integrated with management). Assessment of health status of workers, family, associates and relevant groups: pre-employment examinations, examinations after sick leave, periodic examination, exit examination, examination of food handlers, screening of people who are well, identification of clinical vulnerability. Types of screening procedures: audiometry, eye-sight testing, follow-up of contacts, chronic disease screening. Diagnostic and treatment methods (including pharmacology): history taking, physical examination, laboratory studies, treatment, counselling and referral. Pharmacology: anti-effective drugs, antihistamines, CNS drugs, respiratory drugs, autonomic drugs, diuretics, analgesics, anticoagulants. Appropriate nursing in the family, group and community context: healthy life-style programme, employee assistance programme, occupational health-training programme. Dynamics of nursing practice: physiology of nursing, interpersonal skills, conflict resolution, effective communication, health promotion and education. Control of working environment, for example, engineering control methods, i.e. hazard identification, controlling, monitoring records, inspections, protective clothing, hazard communication system, training of employees.</td>
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<tr>
<th>SUBJECT NAME:</th>
<th>OCCUPATIONAL THERAPY: PRACTICE I</th>
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<tbody>
<tr>
<td>SUBJECT CODE:</td>
<td>OTP100T</td>
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<tr>
<td>EVALUATION METHOD:</td>
<td>1 X 2-HOUR PAPER</td>
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<td>TOTAL TUITION TIME:</td>
<td>Not available</td>
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<table>
<thead>
<tr>
<th>SUBJECT NAME:</th>
<th>OCCUPATIONAL THERAPY: THEORY I</th>
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<tbody>
<tr>
<td>SUBJECT CODE:</td>
<td>OCT100T</td>
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<tr>
<td>EVALUATION METHOD:</td>
<td>1 X 3-HOUR PAPER</td>
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<td>TOTAL TUITION TIME:</td>
<td>Not available</td>
</tr>
</tbody>
</table>
OVERVIEW OF SYLLABUS:

OVERVIEW OF SYLLABUS:
Clinical drug therapy.
### 13. DEPARTMENT OF PHARMACY

#### 13.1 BACCALAUREUS: PHARMACIAE (B PHARM)

**Course code: BPHARM**

**THIS PROGRAMME (COURSE) IS OFFERED IN PARTNERSHIP WITH THE UNIVERSITY OF LIMPOPO (MEDUNSA CAMPUS).**

The degree is conferred by the University of Limpopo. The rules of the University of Limpopo, therefore, apply to this programme.

**Campus where offered:**
- Arcadia Campus
- Medunsa Campus

Please note that the site of delivery (Arcadia campus) indicated is subject to change and will still be confirmed.

### REMARKS

**a. Admission requirement(s):**

Applications will be considered from candidates who are in possession of, or are about to receive -

- Matriculation Exemption Certificates from the UMALUSI;
- Matriculation Exemption Certificates granted by the Matriculation Board; or
- Senior Certificates with university exemption.

Mathematics and two of the following matric subjects at Higher Grade are compulsory: Biology, Physiology, Physical Science and Botany. Candidates who have Mathematics at Standard Grade and who have achieved A or B ratings may also be considered.

Applications from candidates who have completed training that meet the requirements of the National Qualifications Framework will also be considered. Candidates who had been accepted for the foundation programme of Tshwane University of Technology and successfully completed the programme will also be admitted.

**b. Selection criteria:**

After the B Pharm selection committee has screened all the candidates who comply with (a) above, they will compile a list of candidates for Potential Assessment and interviews.

After the Potential Assessment and interviews, a list of applicants who have been conditionally accepted will be drawn up. A reserve list of applicants who have not been accepted will also be drawn up to replace candidates who decide not to enrol.

Due to the nature of the programme and the teaching, learning and assessment methods, admission to the B Pharm programme is at first-year level only.

**c. Recommended subject(s):**

See (a) above.

**d. Duration:**

The minimum duration of the degree/programme is four years of day-class study. After successful completion of the study period, students must complete a one-year internship, followed by one year of community service, before they may practise as pharmacists.

All students admitted to the second year of study must register
with the South African Pharmacy Council (SAPC) before 31 March of the relevant year. Registration as a pharmacist's assistant may also take place from the second year of study. A registration fee as determined by the SAPC, as well as the following documents, is required before registration can be finalised:

(i) Birth certificate 
(ii) Matriculation or Matriculation Exemption Certificate (if the above certificate does not indicate a pass in Mathematics, a further certificate is required to the effect that an examination in Mathematics, of a standard that is at least equivalent to the Standard Grade in the matriculation examination, has been passed) 
(iii) Letter of confirmation from the University that the student has commenced study for the degree

After successful completion of the study period, graduates are required to undertake a one-year period of internship. During this time, they have to submit portfolios for assessment and pass a pre-registration examination for entry-level pharmacists. Before proceeding to full registration as pharmacists, candidates are required to complete one year in the public sector as community service pharmacists.

Exit points: in terms of regulations relating to the Pharmacy Act, 1974 (Act No. 53 of 1974), as amended, students who leave the programme after completion of the first year may register with the SAPC as basic-level pharmacist’s assistants. Students who leave the programme after satisfying the requirements for the second year may register as post-basic-level pharmacist’s assistants.

Please note: The above rules must comply with the proposed regulations of the South African Pharmacy Council as promulgated in terms of the Pharmacy Act, as amended.

e. Course presentation: The Baccalaureus: Pharmaciae (B Pharm) is conferred after successful completion of the study period. It is a University of Limpopo (Medunsa Campus) degree, offered in partnership with the Tshwane University of Technology (TUT). Students are registered at the University of Limpopo (Medunsa Campus) and enrolled at a campus of TUT. The B Pharm programme will be presented in semester format, with one semester of each year of study presented at each institution.

This programme is presented in English only. The B Pharm curriculum will be updated continuously to reflect statutory requirements.

B Pharm students will receive dual identification, which will give them full access to all the facilities of both institutions. Academic support for students is available at both institutions.

f. Accommodation and transport: Accommodation is available at the student residences of the University of Limpopo (Medunsa Campus) or at the TUT campuses. A student bus service operates between the University of Limpopo (Medunsa Campus) and the TUT Arcadia Campus.
g. Information for applications:

UNIVERSITY OF LIMPOPO  
(Medunsa Campus)  
The Registrar  
PO Box 143  
MEDUNSA  
Tel. (012) 521-4135  
Fax: (012) 521-5732  

or  

TSHWANE UNIVERSITY OF TECHNOLOGY  
(Arcadia Campus)  
Department of Pharmacy  
Tel. (012) 382-6303  
Fax: (012) 382-6243  

Please note: Subject fees are obtainable from the University of Limpopo (Medunsa Campus).

FIRST YEAR

FIRST SEMESTER (ARCADIA CAMPUS)

<table>
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<tr>
<th>CODE</th>
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<tbody>
<tr>
<td>PATO113</td>
<td>From Atoms to Molecules</td>
</tr>
<tr>
<td>PMOL114</td>
<td>From Molecules to Medicines</td>
</tr>
<tr>
<td>PORI111</td>
<td>Orientation and Induction</td>
</tr>
<tr>
<td>PTAS112</td>
<td>Tasks and Challenges in Health Care</td>
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SECOND SEMESTER (MEDUNSA CAMPUS)

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<tr>
<th>CODE</th>
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<tbody>
<tr>
<td>PELR123</td>
<td>Experiential Learning: Research Methodology and Primary Health Care</td>
</tr>
<tr>
<td>PMIC121</td>
<td>Micro-organisms - Man and Medicines</td>
</tr>
<tr>
<td>PNUT122</td>
<td>Nutrition and Gastro-enterology</td>
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SECOND YEAR

FIRST SEMESTER (MEDUNSA CAMPUS)

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<tbody>
<tr>
<td>PBIO211</td>
<td>Biopharmaceutics, Pharmacokinetics and Pharmacodynamics</td>
</tr>
<tr>
<td>PCAR212</td>
<td>Cardiovascular Pharmacy</td>
</tr>
<tr>
<td>PRES213</td>
<td>Respiratory and Related Sensory Systems (respiratory system, ear and eye)</td>
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SECOND SEMESTER (ARCADIA CAMPUS)

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<tr>
<td>PELI223</td>
<td>Experiential Learning: Industrial Pharmacy Practice</td>
</tr>
<tr>
<td>PIND222</td>
<td>Industrial Pharmacy Practice</td>
</tr>
<tr>
<td>PMAN221</td>
<td>Principles and Practice of Pharmaceutical Manufacturing</td>
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THIRD YEAR

FIRST SEMESTER (ARCADIA CAMPUS)

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<tr>
<td>PBIV313</td>
<td>Modern Technologies in Health Care</td>
</tr>
<tr>
<td>PCOM312</td>
<td>Community-based Pharmaceutical Care</td>
</tr>
<tr>
<td>PPRE311</td>
<td>Sterile Pharmaceutical Products</td>
</tr>
</tbody>
</table>
SECOND SEMESTER (ARCADIA AND MEDUNSA CAMPUS)

PELC323  Experiential Learning: Community Pharmacy Practice (Arcadia campus)
PEND321  Endocrine and Reproductive Pharmacy (Medunsa campus)
PMUS322  Musculoskeletal and Skin Conditions and Pain Management (Arcadia campus)

FOURTH YEAR

FIRST SEMESTER (MEDUNSA CAMPUS)

PNEU411  Neurological and Psychiatric Pharmacy
PHSP412  Health Systems: Pharmacy

SECOND SEMESTER (ARCADIA AND MEDUNSA CAMPUS)

PELH423  Experiential Learning: Hospital Pharmacy Practice
PHBC421  Hospital-based Pharmaceutical Care
PREM422  Research Methodology (Advanced) and Research Project

13.2 BACCALAUREUS TECHNOLOGIAE: PHARMACEUTICAL SCIENCES

Course code: BTPL01

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will
still be confirmed.

REMARKS

a. Admission requirement(s): Any relevant three-year national qualification in the biological,
   health or natural sciences and proficiency in English.
b. Selection criteria: A personal interview with a departmental selection panel.
c. Minimum duration: One year.
d. Presentation: Block course.
e. Intake for the course: January only.
f. Registration for the course: January only.
g. Readmission: See Chapter 3 of Students’ Rules and Regulations.
h. Late applications: Late applications for this programme (course) will be
   considered.
i. Subject credits: Subject credits are shown in brackets after every subject.
Five of the following subjects:

- BPM400T Biopharmaceutics IV (0,200)
- CCR400T Clinical Trials IV (0,200)
- EQI400T Establishing the Quality of Medicines IV (0,200)
- FDF400T Formulation of Dosage Forms IV (0,200)
- GCL400T Good Clinical and Laboratory Practice IV (0,200)
- HRM400T Human Resource Management IV (0,200)
- PHA400T Pharmaceutical Packaging IV (0,200)
- ROM400T Registration of Medicines IV (0,200)

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Pharmaceutical Sciences, B Pharm or an equivalent qualification and proficiency in English.

b. Selection criteria: A personal interview with a departmental selection panel.

c. Duration: A minimum of one year and a maximum of three years.

d. Subject credits: Subject credits are shown in brackets after every subject.
13.4 MAGISTER TECHNOLOGIAE: PHARMACEUTICAL SCIENCES
Course code: MTPL01

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Pharmaceutical Sciences, B Pharm or an equivalent qualification and proficiency in English. Candidates must pass a Research Methodology course before the dissertation will be accepted.

b. Selection criteria: A personal interview with a departmental selection panel.

c. Duration: A minimum of one year and a maximum of three years.

d. Subject credits: Subject credits are shown in brackets after every subject.

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<th>CREDIT</th>
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<td>PHR500T</td>
<td>Dissertation: Pharmaceutical Sciences</td>
<td>(1,000)</td>
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<tr>
<td>PHR500R</td>
<td>Dissertation: Pharmaceutical Sciences (re-registration)</td>
<td>(0,000)</td>
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</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

13.5 DOCTOR TECHNOLOGIAE: PHARMACEUTICAL SCIENCES
Course code: DTPL01

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Pharmaceutical Sciences or an equivalent qualification and proficiency in English.

b. Selection criteria: In addition to meeting the above requirements, candidates will also be required to undergo a selection procedure. This will include completion of a biographical information sheet and an interview.

c. Duration: A minimum of two years and a maximum of five years.

d. Subject credits: Subject credits are shown in brackets after every subject.

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<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHR700T</td>
<td>Thesis: Pharmaceutical Sciences</td>
<td>(2,000)</td>
</tr>
<tr>
<td>PHR700R</td>
<td>Thesis: Pharmaceutical Sciences (re-registration)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 2,000
13.6 NATIONAL DIPLOMA: SOMATOLOGY  
Course code: NDSY97

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Senior Certificate or an equivalent qualification with a pass in either Biology, Physiology, Physical Science or Mathematics.

b. Selection criteria: Students will be selected for admission based on a Potential Assessment and/or an entrance examination and an interview with a departmental selection panel.

c. Recommended subject(s): English and Business Economics.

d. Minimum duration: Three years.

e. Presentation: Day classes.

f. Intake for the course: January only.

g. Registration for the subjects of this course: January only.

h. Theory and practical: Before students may enrol for the next level, they must pass both the practical and theoretical components of Biotics I, II and III, and Soma Techniques I, II and III. Students must attend at least 85% of both the practical and theoretical classes of these two subjects. Should a student fail to attend 85% of classes, permission to sit the final practical and theoretical examinations may be denied. Should a student be physically unable to carry out the practical component, permission to continue with this course may be refused.

i. Textbooks: Additional textbooks will be required.

j. Uniforms: A specific uniform is compulsory and must be purchased by the student. Access to classes may be refused to students who don’t wear uniforms.

k. Projects and assignments: Students will be expected to undertake projects and assignments in some of the subjects.

l. Readmission: See Chapter 3 of Students’ Rules and Regulations.

m. Subject credits: Subject credits are shown in brackets after every subject.

Key to asterisks:
* The subject Soma Techniques III (STH300T) must be taken simultaneously with Soma Techniques Project II (STP200T): alternatively Soma Techniques III (STH300T) must already have been completed when Soma Techniques Project II (STP200T) is taken.
## FIRST YEAR

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
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<tbody>
<tr>
<td>AES110T</td>
<td>Aesthetics I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>APY140B</td>
<td>Anatomy and Physiology I</td>
<td>(0,130)</td>
<td></td>
</tr>
<tr>
<td>BTS100T</td>
<td>Biotics I</td>
<td>(0,150)</td>
<td></td>
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<tr>
<td>COS100B</td>
<td>Communication Skills I</td>
<td>(0,080)</td>
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<tr>
<td>NUT100T</td>
<td>Nutrition I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>SCI100T</td>
<td>Science I</td>
<td>(0,140)</td>
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</tr>
<tr>
<td>STH100T</td>
<td>Soma Techniques I</td>
<td>(0,300)</td>
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</table>

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

## SECOND YEAR

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
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<tbody>
<tr>
<td>APY220T</td>
<td>Anatomy and Physiology II</td>
<td>(0,120)</td>
<td>Anatomy and Physiology I</td>
</tr>
<tr>
<td>BNP110C</td>
<td>Business Practice I</td>
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<tr>
<td>BTS200T</td>
<td>Biotics II</td>
<td>(0,150)</td>
<td>Biotics I</td>
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<tr>
<td>NUT210B</td>
<td>Nutrition II</td>
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<tr>
<td>SCI200T</td>
<td>Science II</td>
<td>(0,130)</td>
<td>Science I</td>
</tr>
<tr>
<td>SOS100T</td>
<td>Socio-Psychology I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>STH200T</td>
<td>Soma Techniques II</td>
<td>(0,300)</td>
<td>Soma Techniques I</td>
</tr>
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</table>

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

## THIRD YEAR

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
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<th>PREREQUISITE SUBJECT(S)</th>
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<tbody>
<tr>
<td>ABS300T</td>
<td>Applied Biological Sciences III</td>
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<td>Anatomy and Physiology II</td>
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<tr>
<td>BNP200T</td>
<td>Business Practice II</td>
<td>(0,100)</td>
<td>Business Practice I</td>
</tr>
<tr>
<td>BTS300T</td>
<td>Biotics III</td>
<td>(0,150)</td>
<td>Biotics II</td>
</tr>
<tr>
<td>NUT320B</td>
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<td>Nutrition II</td>
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<tr>
<td>SOS300T</td>
<td>Socio-Psychology III*</td>
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<td>Socio-Psychology I</td>
</tr>
<tr>
<td>STH300T</td>
<td>Soma Techniques III*</td>
<td>(0,300)</td>
<td>Soma Techniques II</td>
</tr>
<tr>
<td>STP200T</td>
<td>Soma Techniques Project II*</td>
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TOTAL CREDITS FOR THE THIRD YEAR: **1,000**

### 13.7 BACCALAUREUS TECHNOLOGIAE: SOMATOLOGY

**Course code: BTSY97**

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

### REMARKS

a. Admission requirement(s): A National Diploma: Somatology or an equivalent qualification. However, this does not apply to students who registered for the National Diploma for the first time before 2007 and who have not since interrupted their studies.

b. Selection criteria: All applications are subject to selection.

c. Minimum duration: One year.
d. Presentation: Day classes.
e. Intake for the course: January only.
f. Registration for the subjects of this course: January and July.
g. Textbooks: Additional textbooks will be required.
h. Uniforms: A specific uniform is compulsory and must be purchased by the student. Access to classes may be refused to students who don't wear uniforms.
i. Projects and assignments: Students will be expected to undertake projects and assignments in some of the subjects.
j. Readmission: See Chapter 3 of Students’ Rules and Regulations.
k. Subject credits: Subject credits are shown in brackets after every subject.

ATTENDANCE

<table>
<thead>
<tr>
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<th>SUBJECT</th>
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</tr>
</thead>
<tbody>
<tr>
<td>BNP300T</td>
<td>Business Practice III</td>
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<tr>
<td>NUT400T</td>
<td>Nutrition IV</td>
<td>(0,150)</td>
</tr>
<tr>
<td>SOJ400T</td>
<td>Somatology Project IV</td>
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<tr>
<td>STH400T</td>
<td>Soma Techniques IV</td>
<td>(0,300)</td>
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FIRST SEMESTER

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<th>SUBJECT</th>
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<tbody>
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<td>RSY201T</td>
<td>Research Methodology: Natural Sciences</td>
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<tr>
<td>RSY20XT</td>
<td>Research Methodology: Natural Sciences: Somatology</td>
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SECOND SEMESTER

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<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
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</thead>
<tbody>
<tr>
<td>RSY201T</td>
<td>Research Methodology: Natural Sciences</td>
<td></td>
</tr>
<tr>
<td>RSY20YT</td>
<td>Research Methodology: Natural Sciences: Statistics</td>
<td>(0,075)</td>
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</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

13.8 MAGISTER TECHNOLOGIAE: SOMATOLOGY

Course code: MTSY99

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Somatology or an equivalent qualification.
b. Selection criteria: A personal interview with a selection committee.
c. Duration: A minimum of one year and a maximum of three years. Students must re-register for this course every year.

d. Structure: The course consists of a research project, which must be recorded in the form of a dissertation.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STG500T</td>
<td>Dissertation: Somatology</td>
<td>(1,000)</td>
</tr>
<tr>
<td>STG500R</td>
<td>Dissertation: Somatology (re-registration)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

### 13.9 SUBJECT INFORMATION

**SUBJECT NAME:** AESTHETICS I  
**SUBJECT CODE:** AES110T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER AND PRACTICAL  
**TOTAL TUITION TIME:** Not available  
**OVERVIEW OF SYLLABUS:**  
History of make-up, current make-up techniques, corrective make-up, evening make-up, photographic make-up, day make-up, make-up for different skin colours, make-up for the aged skin, hairstyles, client cards, make-up products, eyebrow shaping. Principles of colour and form and colour analysis. Day spa and clinic layout.

**SUBJECT NAME:** ANATOMY AND PHYSIOLOGY I  
**SUBJECT CODE:** APY140B  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** Not available  
**OVERVIEW OF SYLLABUS:**  
Terminology. The cell, tissue and the skin. The skeletal and muscular systems. The nervous and circulatory systems.

**SUBJECT NAME:** ANATOMY AND PHYSIOLOGY II  
**SUBJECT CODE:** APY220T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** Not available  
**OVERVIEW OF SYLLABUS:**  
The skin, sensory organs, lymphatic system and immunology, digestive system, metabolism and nutrition. Excretory organs, urinary system, fluids and electrolytes, reproductive, endocrine and respiratory systems. Practical work.

**SUBJECT NAME:** APPLIED BIOLOGICAL SCIENCES III  
**SUBJECT CODE:** ABS300T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** Not available  
**OVERVIEW OF SYLLABUS:**  
Microbiology, hygiene, introduction to pharmacology, introduction to pathology.

**SUBJECT NAME:** BIOPHARMACUTEUTICS IV  
**SUBJECT CODE:** BPM400T  
**EVALUATION METHOD:** CONTINUOUS ASSESSMENT  
**TOTAL TUITION TIME:** Not available  
**OVERVIEW OF SYLLABUS:**  
SUBJECT NAME: BIOPHARMACEUTICS, PHARMACOKINETICS AND PHARMACODYNAMICS
SUBJECT CODE: PBIO211
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
An introduction to health-care interventions and biopharmaceutics (processes prior to drug administration), pharmacokinetics (processes that include drug absorption, distribution, metabolism and excretion) and therapeutic drug monitoring and pharmacodynamics (drug action).

SUBJECT NAME: BIOTICS I
SUBJECT CODE: BTS100T
EVALUATION METHOD: 1 X 3-HOUR PAPER AND PRACTICAL
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Components of well-being, movement, applied anatomy, anthropometry, aerobic programming and injury prevention. Practical: aerobic participation, body analysis and music planning.

SUBJECT NAME: BIOTICS II
SUBJECT CODE: BTS200T
EVALUATION METHOD: 1 X 3-HOUR PAPER AND PRACTICAL
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Anthropometry, physiology of exercise and energy systems. Practical: anthropometry, aerobics, step, toning and stretching classes.

SUBJECT NAME: BIOTICS III
SUBJECT CODE: BTS300T
EVALUATION METHOD: 1 X 3-HOUR PAPER AND PRACTICAL
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Injuries, stress management, exercise and pregnancy, fitness evaluation. Practical: advanced aerobics and callisthenics classes, fitness evaluation, gymnasium equipment, personal training and prenatal and postnatal exercise.

SUBJECT NAME: BUSINESS PRACTICE I
SUBJECT CODE: BNP110C
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Introduction to the business world, marketing orientation, non-verbal and verbal communication, written business communication, professional ethics, selling techniques, sales administration.

SUBJECT NAME: BUSINESS PRACTICE II
SUBJECT CODE: BNP200T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Identifying market opportunities, locating the clinic, product and service strategy, pricing strategy, advertising, sales promotions, public relations, legal aspects.

SUBJECT NAME: BUSINESS PRACTICE III
SUBJECT CODE: BNP300T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Strategic business planning, human resource, financial and operations management, clinic administration, basic accounting procedures, risk management, starting a small business, entrepreneurship.
PHARMACY

SUBJECT NAME: CARDIOVASCULAR PHARMACY
SUBJECT CODE: PCAR212
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
An overview of the anatomy and physiology of the cardiovascular and renal systems. The pathophysiology of the major disorders affecting the cardiovascular and renal systems. The pharmacology of the therapeutic agents, including antimicrobials, used to treat these disorders.

SUBJECT NAME: CLINICAL RESEARCH
SUBJECT CODE: CRH500T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Study design in clinical trials. Biopharmaceutics. Case reports. Good clinical practice (GCP) and good laboratory practice (GLP).

SUBJECT NAME: CLINICAL TRIALS IV
SUBJECT CODE: CCR400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Clinical trial design. Case reports.

SUBJECT NAME: COMMUNICATION SKILLS I
SUBJECT CODE: COS100B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Writing and letter-writing skills for the somatology industry. Oral presentation and demonstration skills.

SUBJECT NAME: COMMUNITY-BASED PHARMACEUTICAL CARE
SUBJECT CODE: PCOM312
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Administration, management skills and the philosophy of pharmaceutical care. Counselling, provision of advice and drug therapy management and their effects on the patient. Immune status importance of prevention and nutrition and their effects on the family. Epidemiology, health education and drug information and their effects on the community. The following aspects of dispensing: legal, communication with the patient and other health-care professionals, patient profiles, preparation of the prescription and record-keeping. The role of the pharmacist as a tutor.

SUBJECT NAME: COMMUNITY PHARMACY
SUBJECT CODE: CYH500T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: ENDOCRINE AND REPRODUCTIVE PHARMACY
SUBJECT CODE: PEND321
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
A study of the pathophysiology of major disorders affecting the endocrine system, coupled with drug treatment of such conditions. This module includes the basic female and male reproduction functions, diseases and conditions that are under hormonal control, including pregnancy, growth development, birth, genetics, lactation and ageing.
SUBJECT NAME: ESTABLISHING THE QUALITY OF MEDICINES IV
SUBJECT CODE: EQI400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Good manufacturing practice. Quality control procedures on raw materials and finished products. Stability testing.

SUBJECT NAME: EXPERIENTIAL LEARNING: COMMUNITY PHARMACY PRACTICE
SUBJECT CODE: PELC323
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Practical experience in aspects of the dispensing process, pharmacist-initiated care, communication with the patient and other health-care workers, specialist areas of community pharmacy, legal and ethical requirements, important aspects of management.

SUBJECT NAME: EXPERIENTIAL LEARNING: HOSPITAL PHARMACY PRACTICE
SUBJECT CODE: PELH423
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Philosophy of pharmaceutical care, health systems, managing drug supply, administration and management. Treatment plans.

SUBJECT NAME: EXPERIENTIAL LEARNING: INDUSTRIAL PHARMACY PRACTICE
SUBJECT CODE: PELI223
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Practical experience in aspects of the medicines regulatory process, production of pharmaceuticals, pharmaceutical research and development, implementing good manufacturing procedures, quality assurance, personnel and business management, as well as the marketing and advertising of pharmaceuticals.

SUBJECT NAME: EXPERIENTIAL LEARNING: RESEARCH METHODOLOGY AND PRIMARY HEALTH CARE
SUBJECT CODE: PELR123
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
The basic principles of research methodology and the design and use of research instruments. The application of those principles and instruments in a study of pharmaceutical and related services at primary health-care level.

SUBJECT NAME: FORMULATION OF DOSAGE FORMS IV
SUBJECT CODE: FDF400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Types of dosage forms and their excipients. Unit processes.

SUBJECT NAME: FROM ATOMS TO MOLECULES
SUBJECT CODE: PATO113
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Drug entities of synthetic organic/inorganic nature: structure, reactivity, mechanisms, bonding, acid/base characteristics, configuration and conformation, periodic table, redox reactions, salt formation, pH, pKa, limit tests, physical phases. Analytical methods.
SUBJECT NAME: FROM MOLECULES TO MEDICINES
SUBJECT CODE: PMOL114
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
An overview of the design and development of pharmaceutical products. Research and development of drug delivery systems, chemistry of medicinal compounds - introductory organic chemistry, the reactions that drug compounds undergo, physical and chemical properties of drugs and how these affect formulation, isolation/synthesis of active ingredients, preformulation, formulation, basic principles underlying the development of drug delivery systems, the various drug delivery systems, stability aspects, an introduction to preclinical and clinical trails, compounding of medicines.

SUBJECT NAME: GOOD CLINICAL AND LABORATORY PRACTICE IV
SUBJECT CODE: GCL400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Principles of good clinical practice (GCP) and good laboratory practice (GLP). Writing and implementing standard operating procedures.

SUBJECT NAME: HEALTH SYSTEMS: PHARMACY
SUBJECT CODE: PHSP412
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Major managerial and clinical areas of pharmacy, e.g. logistics, including cold chain management and financial management, standard operating procedures, control of bulk compounding and preparation of sterile products, pharmacy and therapeutic committees, pharmacoconomics in drug selection, drug information, infection control, clinical nutrition (enteral and parenteral feeding and stoma care), oncology, radiopharmacy and radioisotopes, transplants and related drug therapy, handling of pharmaceutical waste, the role of the consultant pharmacist.

SUBJECT NAME: HOSPITAL-BASED PHARMACEUTICAL CARE
SUBJECT CODE: PHBC421
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
The principles and practice of pharmaceutical care in the hospital setting. The module covers the compilation of a patient database, identification of his or her drug-related needs, construction of a drug-related problem list and the development, implementation and evaluation of a pharmaceutical care plan.

SUBJECT NAME: HUMAN RESOURCE MANAGEMENT IV
SUBJECT CODE: HRM400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: INDUSTRIAL PHARMACY PRACTICE
SUBJECT CODE: PIND222
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
An overview of the pharmaceutical manufacturing facility and organisational layout. Planning for production. The manufacturing facility. The principles and practice of quality assurance, including good manufacturing practices and quality control.

SUBJECT NAME: MEDICINE GOVERNANCE
SUBJECT CODE: MGE500T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
National drug policies. Drug regulation in South Africa. Regulation of complementary medicines, veterinary medicines and medical devices.
SUBJECT NAME: MICRO-ORGANISMS - MAN AND MEDICINES
SUBJECT CODE: PMIC121
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
A study of medically important micro-organisms, including bacteria, viruses, fungi, protozoa, helminths and arthropods. Biological and microbiological aspects of structure, growth, diagnosis, virulence, pathogenesis, sensitivity, resistance and transmission. An introduction to the body's defences against infection, including the lymphatic system, cells of the immune system and inflammatory and hypersensitivity reactions. Additional agents used in infections.

SUBJECT NAME: MODERN TECHNOLOGIES IN HEALTH CARE
SUBJECT CODE: PBIV313
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Principles of molecular biology, the principles, methods and products of biotechnology, such as fermentation, recombinant DNA technology, gene therapy and immunological assays, as applied to the diagnosis, prevention and treatment of inherited and acquired diseases. Theory and practice of new drug delivery systems. The immune system response and host defence mechanisms, with particular reference to diseases that can be prevented through immunisation. The principles and production of vaccines, antisera, immunoglobulins and the principles of hybridisation technology.

SUBJECT NAME: MUSCULOSKELETAL AND SKIN CONDITIONS AND PAIN MANAGEMENT
SUBJECT CODE: PMUS322
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
An integrated study of the anatomy, physiology, pathophysiology and pharmacotherapy of the skeletal and muscular systems and skin. The module also includes wounds and dressings. Emphasis is placed on the pharmacology of therapeutic agents used to treat disorders of these systems.

SUBJECT NAME: NEUROLOGICAL AND PSYCHIATRIC PHARMACY
SUBJECT CODE: PNEU411
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
An integrated study of the basic anatomy and physiology of the brain and nervous system. The module includes the pathophysiology of the major disorders affecting the central nervous system, with the emphasis on the pharmacology of appropriate therapeutic agents. Substance abuse, anaesthetics and pain management are also covered.

SUBJECT NAME: NUTRITION I
SUBJECT CODE: NUT100T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Study of the chemical structure, metabolism and physiological functions of each nutrient, as well as the interaction of nutrients in the body.

SUBJECT NAME: NUTRITION II
SUBJECT CODE: NUT210B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Application of basic nutritional knowledge gained in the first year regarding energy metabolism, planning of nutritionally balanced meals and the nutrition of specific age groups. Basic knowledge of the modification of the normal diet when planning therapeutic menus.
NUTRITION III
SUBJECT CODE: NUT320B
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

NUTRITION IV
SUBJECT CODE: NUT400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Study of the human nutritional needs in the life cycle, influences of nutrition on physical and mental development with regard to malnutrition, cultural and religious influences.

NUTRITION AND GASTRO-ENTEROLOGY
SUBJECT CODE: PNUT122
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
An anatomical and physiological overview of the liver and gastro-intestinal tract and their innervation, with particular emphasis on the absorption and metabolism of nutrients and drugs. Major problems of nutrition and metabolic or chronic disorders in which nutrition plays a pivotal role will be addressed, including diabetes, obesity, eating disorders, malabsorption, alcohol abuse and pancreatitis. The identification of the presence of risk factors for malnutrition. The chemistry, pharmaceutics and pharmacology of drugs affecting the gastrointestinal tract and drugs used to treat common GI problems.

ORIENTATION AND INDUCTION
SUBJECT CODE: PORI111
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Orientation in terms of the educational institutions, their administration, student bodies, general organisation, campus layout, the unique arrangement between the University of Limpopo (Medunsa Campus) and the Tshwane University of Technology and its effect on student life. A broad overview of the course presentation and learning strategy, language, social, communication, academic, library and computer skills. An overview of the nature of the profession and the ethics and professionalism involved.

PHARMACEUTICAL PACKAGING IV
SUBJECT CODE: PHA400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Specification requirements for pharmaceutical packaging and labelling. Quality control procedures on packaging materials.

PHARMACEUTICAL PRODUCTION
SUBJECT CODE: PRU500T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Formulation of dosage forms. Establishing the quality of pharmaceutical products. Packaging and labelling of pharmaceuticals.

PHARMACO-ECONOMICS
SUBJECT CODE: PHN500T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
SUBJECT NAME: PRINCIPLES AND PRACTICE OF PHARMACEUTICAL MANUFACTURING
SUBJECT CODE: PMAN221
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
An overview of the manufacturing of pharmaceuticals. Physical, chemical and pharmaceutical principles in the production, packaging and labelling of pharmaceutical products.

SUBJECT NAME: REGISTRATION OF MEDICINES IV
SUBJECT CODE: ROM400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Requirements of the Medicines Control Council. Application for the registration of a medicine.

SUBJECT NAME: RESEARCH METHODOLOGY
SUBJECT CODE: RMD500C
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: RESEARCH METHODOLOGY (ADVANCED) AND RESEARCH PROJECT
SUBJECT CODE: PREM422
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
The theory and practice of research, including a structured project in an area of pharmacy. The module is presented in three parts:
Part 1: Research methodology, theory and protocol development
Part 2: Experimental phase and data collection
Part 3: Completion and submission of research report
These parts are separated by other modules for administrative and logistical reasons.

SUBJECT NAME: RESEARCH METHODOLOGY: NATURAL SCIENCES: SOMATOLOGY
SUBJECT CODE: RSY20XT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
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.

SUBJECT NAME: RESEARCH METHODOLOGY: NATURAL SCIENCES: STATISTICS
SUBJECT CODE: RSY20YT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
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.
SUBJECT NAME: RESPIRATORY AND RELATED SENSORY SYSTEMS
(RESPRATORY SYSTEM, EAR AND EYE)
SUBJECT CODE: PRES213
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
The structure and functioning of the respiratory system, the ear and the eye. The role of the nervous system in controlling the functioning of the respiratory system, ear and eye. Important disorders of the respiratory system, ear and eye and their prevention, non-pharmacological and pharmacological management.

SUBJECT NAME: SCIENCE I
SUBJECT CODE: SCI100T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Weight and measures, nature of matter, two-phase preparations, properties of solids, liquids and gases, heat, water, saponification, acids, bases, salts, neutralisation, oils, fats, waxes, starches, gums, gels, resins, synthetic mucilages, colours, lakes, pigments and dyes. Cosmetology practical.

SUBJECT NAME: SCIENCE II
SUBJECT CODE: SCI200T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: SOCIO-PSYCHOLOGY I
SUBJECT CODE: SOS100T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: SOCIO-PSYCHOLOGY II
SUBJECT CODE: SOS200T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Abnormal psychology: frustration, conflict, stress, neurosis and pathological manifestations. Basic principles and handling techniques.

SUBJECT NAME: SOMA TECHNIQUES I
SUBJECT CODE: STH100T
EVALUATION METHOD: 1 X 3-HOUR PAPER AND PRACTICAL
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: SOMA TECHNIQUES II
SUBJECT CODE: STH200T
EVALUATION METHOD: 1 X 3-HOUR PAPER AND PRACTICAL
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
SUBJECT NAME: SOMA TECHNIQUES III
SUBJECT CODE: STH300T
EVALUATION METHOD: 2 X 2-HOUR PAPER AND PRACTICAL
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Lymph drainage, reflexology, pressure point massage, aromatherapy, stress management, skin diseases and hereditary diseases, different kinds of therapies, new developments, physical and psychological changes, diathermy, hydrotherapy.

SUBJECT NAME: SOMA TECHNIQUES IV
SUBJECT CODE: STH400T
EVALUATION METHOD: 1 X 3-HOUR PAPER AND PRACTICAL
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Specialised massage techniques, diathermy, destress treatments, holistic therapies.

SUBJECT NAME: SOMA TECHNIQUES PROJECT II
SUBJECT CODE: STP200T
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Various techniques and their application. Experiential learning in an approved spa, health clinic or hospital.

SUBJECT NAME: SOMATOLOGY PROJECT IV
SUBJECT CODE: SOJ400T
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Project carried out with the cooperation of the student's employer. Applied knowledge.

SUBJECT NAME: STERILE PHARMACEUTICAL PRODUCTS
SUBJECT CODE: PPRE311
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
An overview of the manufacturing of sterile pharmaceutical products. Sterilisation. The control of contamination. The manufacturing of sterile pharmaceutical products. The principles and practice of quality assurance, including good manufacturing practices and quality control, as applied to sterile pharmaceutical products.

SUBJECT NAME: TASKS AND CHALLENGES IN HEALTH CARE
SUBJECT CODE: PTAS112
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
14. DEPARTMENT OF SPORT AND PHYSICAL REHABILITATION SCIENCES

14.1  BACCALAUREUS TECHNOLOGIAE: BIOKINETICS

Course code: BTBK05

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Sport and Exercise Technology or an equivalent qualification. Appropriate experience, for which recognition of prior learning can be applied, will also be considered for entrance into the Baccalaureus Technologiae.

b. Selection criteria: A personal evaluation to determine whether the prospective learner has the appropriate aptitude, attitude and interpersonal relationship skills, as well as the capability to successfully complete this qualification and cope with the demands of the industry.

The Health Professions Council of South Africa (HPCSA) and the South African Biokinetics Association set the maximum number of students that will be accepted into the course, which is currently limited to nine students.

c. Minimum duration: One year.

d. Presentation: Day classes.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January only.

g. Professional registration (as a student): Registration with the HPCSA as a student-in-training is compulsory. Please note that the council requires a further period of internship before full registration as a Biokineticist.

h. Readmission: See Chapter 3 of Students’ Rules and Regulations.

i. Subject credits: Subject credits are shown in brackets after every subject.

Key to asterisks
* Information does not correspond with information in Report 151.
YEARSUBJECTS

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALN400T</td>
<td>Applied Anatomy IV</td>
<td>(0,167)</td>
</tr>
<tr>
<td>AXP400T</td>
<td>Advanced Exercise and Physical Evaluation IV</td>
<td>(0,167)</td>
</tr>
<tr>
<td>CCX400T</td>
<td>Clinical Exercise Science IV</td>
<td>(0,167)</td>
</tr>
<tr>
<td>CNO400T</td>
<td>Clinical Orthopaedic Management IV</td>
<td>(0,167)</td>
</tr>
<tr>
<td>PMN400T</td>
<td>Practice Management IV</td>
<td>(0,167)</td>
</tr>
<tr>
<td>RMD110T</td>
<td>Research Methodology</td>
<td>(0,081)*</td>
</tr>
<tr>
<td>SET410T</td>
<td>Research Project IV</td>
<td>(0,084)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

14.2 NATIONAL DIPLOMA: MEDICAL ORTHOTICS AND PROSTHETICS

Course code: NDOP04

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): For 2007: A Senior Certificate or an equivalent qualification with a pass in Physical Science and Biology or Physiology at Standard Grade.

As from 2008: A Senior Certificate or an equivalent qualification with a pass in Physical Science, Mathematics and Biology with D symbols at Higher Grade.

b. Selection criteria: After successful completion of a Potential Assessment, prospective students must undergo an aptitude test and a personal interview.

c. Recommended subject(s): Mathematics.

d. Minimum duration: Three years.

e. Presentation: Four semesters of day classes and two semesters of experiential learning at an institution approved by the Health Professions Council of South Africa (HPCSA). Students are placed by TUT for experiential learning.

f. Intake for the course: January only.

g. Registration for the subjects of this course: January and July.

h. Professional registration (as a student): Registration with the HPCSA is compulsory.

i. Other requirements: Immunisation against Hepatitis B is compulsory. A valid first-aid certificate. A first-aid course will be arranged by the University in the first year. International students will be assessed by the Department to determine enrolment for this qualification.
Special rules and regulations: Unless otherwise stipulated, special rules and regulations apply to students who register for this course. Students are expected to familiarise themselves with these rules and regulations.

Registration as a medical orthotist and prosthetist with the HPCSA: After meeting the course requirements of either the National Diploma: Medical Orthotics and Prosthetics or the Baccalaureus Technologiae: Medical Orthotics and Prosthetics, a student has to complete an internship of 12 months at an HPCSA-accredited training centre before he or she may register with the council as a medical orthotics and prosthetics practitioner. At the end of the internship year students may register as medical orthotists and prosthetists with the HPCSA. The year of internship will be completed under the auspices of the HPCSA, and any enquiries in this regard should be addressed to that council.

Experiential Learning I and II: See Chapter 5 of Students' Rules and Regulations.

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

Subject credits: Subject credits are shown in brackets after every subject.

### FIRST YEAR

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP1MOP</td>
<td>Experiential Learning I</td>
<td>(0,500)</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,500

#### SECOND SEMESTER

*(After completion of Experiential Learning I.)*

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
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</thead>
<tbody>
<tr>
<td>APK121T</td>
<td>Anatomy, Physiology and Kinesiology I</td>
<td>(0,090)</td>
<td></td>
</tr>
<tr>
<td>OPS101T</td>
<td>Orthotics and Prosthetics Material Science I</td>
<td>(0,090)</td>
<td></td>
</tr>
<tr>
<td>PYY111T</td>
<td>Psychology I</td>
<td>(0,090)</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,270

**TOTAL CREDITS FOR THE FIRST YEAR:** 0,770

#### SECOND YEAR

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>APK221T</td>
<td>Anatomy, Physiology and Kinesiology II</td>
<td>(0,170)</td>
<td>Anatomy, Physiology and Kinesiology I</td>
</tr>
<tr>
<td>OPC101T</td>
<td>Orthotics and Prosthetics Practice I</td>
<td>(0,110)</td>
<td></td>
</tr>
<tr>
<td>OTT101T</td>
<td>Orthotics Theory I</td>
<td>(0,105)</td>
<td></td>
</tr>
<tr>
<td>PCX101T</td>
<td>Prosthetics Theory I</td>
<td>(0,105)</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,490
### SECOND SEMESTER

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>OPC211T</td>
<td>Orthotics and Prosthetics Practice II</td>
<td>(0,220)</td>
</tr>
<tr>
<td>OPS201T</td>
<td>Orthotics and Prosthetics Material Science II</td>
<td>(0,170)</td>
</tr>
<tr>
<td>OTT201T</td>
<td>Orthotics Theory II</td>
<td>(0,220)</td>
</tr>
<tr>
<td>PCX201T</td>
<td>Prosthetics Theory II</td>
<td>(0,220)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,830

TOTAL CREDITS FOR THE SECOND YEAR: 1,320

### THIRD YEAR

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCO301T</td>
<td>Basic Concepts of Orthopaedics III</td>
<td>(0,090)</td>
</tr>
<tr>
<td>OPC311T</td>
<td>Orthotics and Prosthetics Practice III</td>
<td>(0,110)</td>
</tr>
<tr>
<td>OTT301T</td>
<td>Orthotics Theory III</td>
<td>(0,105)</td>
</tr>
<tr>
<td>PCX301T</td>
<td>Prosthetics Theory III</td>
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</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,410

#### SECOND SEMESTER

(After completion of all of the above subjects)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP2MOP</td>
<td>Experiential Learning II</td>
<td>(0,500)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE THIRD YEAR: 0,910

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**14.3 BACCALAUREUS TECHNOLOGIAE: MEDICAL ORTHOTICS AND PROSTHETICS**

**Course code: BTOP98**

- **Campus where offered:** Pretoria Campus
- **Remarks:**
  - Admission requirement(s): A National Diploma: Medical Orthotics and Prosthetics or an equivalent qualification.
  - Selection criteria: Candidates are evaluated by a selection panel based on a presentation on a given topic.
  - Minimum duration: One year.
  - Presentation: Day classes.
  - Intake for the course: January only.
  - Registration for the subjects of this course: January only.
g. Other requirements: International students will be assessed by the Department to
determine enrolment for this course. Student fees are applicable
to this process.

h. Professional registration as a student: Registration with the HPCSA is compulsory for all national
students.

i. Registration as a medical orthotist and prosthetist with the HPCSA: After meeting the course requirements of either the National
Diploma: Medical Orthotics and Prosthetics or the Baccalaureus
Technologiae: Medical Orthotics and Prosthetics, a student has
to complete an internship of 12 months at an HPCSA-accredited
training centre before he or she may register with the HPCSA
as a medical orthotist and prosthetics practitioner. At the end of
the internship year, students may register as medical orthotists
and prosthetists with the HPCSA. The year of internship will be
completed under the auspices of the HPCSA, and any enquiries
in this regard should be addressed to that council.

j. Readmission: See Chapter 3 of Students’ Rules and Regulations.

k. Subject credits: Subject credits are shown in brackets after every subject.

YEARS

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
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<tbody>
<tr>
<td>BNP110T</td>
<td>Business Practice I</td>
<td>(0,170)</td>
</tr>
<tr>
<td>OPC400T</td>
<td>Orthotics and Prosthetics Practice IV</td>
<td>(0,250)</td>
</tr>
<tr>
<td>ORP400T</td>
<td>Orthotics and Prosthetics Theory IV</td>
<td>(0,250)</td>
</tr>
<tr>
<td>RMQ110C</td>
<td>Research Methods and Techniques I</td>
<td>(0,160)</td>
</tr>
<tr>
<td>TSF200T</td>
<td>Applied Psychology and Pharmacology II</td>
<td>(0,170)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

14.4 NATIONAL DIPLOMA: OFFICIATING AND COACHING SCIENCE
Course code: NDOC01

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will
still be confirmed.

REMARKS

a. Admission requirement(s): A Senior Certificate or an equivalent qualification.

b. Selection criteria: Selection is based on an academic assessment and a psychometric
Potential Assessment.
Selection on scholastic performance will be based on the student’s M-score according to the following system:

<table>
<thead>
<tr>
<th>HIGHER GRADE</th>
<th>SYMBOL</th>
<th>M-SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>3</td>
<td></td>
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<tr>
<td>D</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>1</td>
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</table>

<table>
<thead>
<tr>
<th>STANDARD GRADE</th>
<th>SYMBOL</th>
<th>M-SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>B</td>
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</tr>
<tr>
<td>C</td>
<td>2</td>
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</tr>
<tr>
<td>D</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

A minimum M-score of 10 points is required.

Potential Assessment:
Student potential will be assessed by means of a Potential Assessment on the student profile identified. The assessment will address, inter alia, the student’s potential to solve problems, think creatively, demonstrate initiative and act responsibly. A minimum score will be determined by the Bureau for Student Development.

c. Recommended subject(s): Biology, Physiology and Physical Science.
d. Minimum duration: Three years.
e. Presentation: Day classes.
f. Intake for the course: January only.
g. Registration for the subjects of this course:
h. Golf specialisation (only for Golf Academy students):
   Golf enthusiasts who wish to qualify as professional players, greenkeepers, coaches, golf club managers or directors of golf, may enrol simultaneously for an accredited course at the Professional Golfers Association (PGA). The following PGA subjects must be taken additionally: Rules of Golf, History of Golf, Fitness in Golf, Psychology of Golf, Fundamentals of Golf and Turf Management. Students will be enrolled at the Golf Academy. The selection criteria for the Golf Academy differ from the general criteria.

Enquiries: Christian Marais, cell 082 577 4535, or Johannes Mashinini, tel. (012) 382 4374.
i. Readmission: See Chapter 3 of Students’ Rules and Regulations.
j. Subject credits: Subject credits are shown in brackets after every subject.

FIRST YEAR

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRK130T</td>
<td>Marketing I</td>
<td>(0,200)</td>
</tr>
<tr>
<td>SDC110T</td>
<td>Sport Didactics and Coaching I</td>
<td>(0,200)</td>
</tr>
<tr>
<td>SET110T</td>
<td>Sport and Exercise Technology I</td>
<td>(0,200)</td>
</tr>
<tr>
<td>SFR100T</td>
<td>Sport and Physical Recreation Studies I</td>
<td>(0,200)</td>
</tr>
<tr>
<td>SRT100T</td>
<td>Sport Management I</td>
<td>(0,200)</td>
</tr>
</tbody>
</table>

SPORT AND PHYSICAL REHABILITATION SCIENCES
TOTAL CREDITS FOR THE FIRST YEAR: 1,000

SECOND YEAR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>CSI200T</td>
<td>Coaching Science II</td>
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</tr>
<tr>
<td>HMS200T</td>
<td>Human Movement Studies II</td>
<td>0.250</td>
</tr>
<tr>
<td>PRS120T</td>
<td>Public Relations I</td>
<td>0.250</td>
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<tr>
<td>SYC200T</td>
<td>Sport Psychology II</td>
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</table>

TOTAL CREDITS FOR THE SECOND YEAR: 1,000

THIRD YEAR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSI300T</td>
<td>Coaching Science III</td>
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</tr>
<tr>
<td>PDM300T</td>
<td>Physiological Development III</td>
<td>0.250</td>
</tr>
<tr>
<td>PRS210T</td>
<td>Public Relations II</td>
<td>0.250</td>
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<tr>
<td>SYC300T</td>
<td>Sport Psychology III</td>
<td>0.250</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE THIRD YEAR: 1,000

### 14.5 BACCALAUREUS TECHNOLOGIAE: OFFICIATING AND COACHING SCIENCE

**Course code: BTOC01**

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

**REMARKS**

a. Admission requirement(s): A National Diploma: Officiating and Coaching Science or an equivalent qualification. However, this does not apply to students who registered for the National Diploma for the first time before 2007 and who have not since interrupted their studies.

b. Selection criteria: All applications are subject to selection.

c. Minimum duration: One year.

d. Presentation: Day classes.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January only.

g. Golf specialisation (only for Golf Academy students): Golf enthusiasts who wish to qualify as professional players, greenkeepers, coaches, golf club managers or directors of golf, may enrol simultaneously for an accredited course at the Professional Golfers Association (PGA). The following PGA subjects must be taken additionally: Rules of Golf, History of Golf, Fitness in Golf, Psychology of Golf, Fundamentals of Golf and Turf Management. Students will be enrolled at the Golf Academy. The selection criteria for the Golf Academy differ from the general criteria.

Enquiries: Christian Marais, cell 082 577 4535, or Johannes Mashinini, tel. (012) 382 4374.

h. Readmission: See Chapter 3 of Students’ Rules and Regulations.

i. Subject credits: Subject credits are shown in brackets after every subject.
YEAR SUBJECTS

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALV400T</td>
<td>Athlete Development IV</td>
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</tr>
<tr>
<td>APS400T</td>
<td>Applied Sport Psychology IV</td>
<td>(0,200)</td>
</tr>
<tr>
<td>CEY400T</td>
<td>Coaching Effectiveness and Analysis IV</td>
<td>(0,200)</td>
</tr>
<tr>
<td>CHA400T</td>
<td>Coaching Management IV</td>
<td>(0,200)</td>
</tr>
<tr>
<td>OCS400T</td>
<td>Research Project</td>
<td>(0,200)</td>
</tr>
<tr>
<td>OCS40PT</td>
<td>Research Project: Theory</td>
<td>(0,100)</td>
</tr>
<tr>
<td>OCS40QT</td>
<td>Research Project: Practical</td>
<td>(0,100)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

14.6 NATIONAL DIPLOMA: SPORT AND EXERCISE TECHNOLOGY
Course code: NDSX05

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Senior Certificate or an equivalent qualification.

b. Selection criteria: Selection is based on an academic assessment and a psychometric Potential Assessment.

Selection on scholastic performance will be based on the student's M-score according to the following system:

<table>
<thead>
<tr>
<th>HIGHER GRADE</th>
<th>SYMBOL</th>
<th>M-SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>3</td>
<td></td>
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<tr>
<td>D</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>1</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>STANDARD GRADE</th>
<th>SYMBOL</th>
<th>M-SCORE</th>
</tr>
</thead>
<tbody>
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<tr>
<td>D</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

A minimum M-score of 12 points is required.

Potential Assessment:
Student potential will be assessed by means of a Potential Assessment on the student profile identified. The assessment will address, inter alia, the student's potential to solve problems, think creatively, demonstrate initiative and act responsibly. A minimum score will be determined by the Bureau for Student Development.

c. Recommended subject(s): None.

d. Minimum duration: Three years.
e. Presentation: First year: day classes and block course. Second and third year: day classes.

f. Intake for the course: January only.

g. Registration for the subjects of this course: January only.

h. Golf specialisation (only for Golf Academy students): Golf enthusiasts who wish to qualify as professional players, greenkeepers, coaches, golf club managers or directors of golf, may enrol simultaneously for an accredited course at the Professional Golfers Association (PGA). The following PGA subjects must be taken additionally: Rules of Golf, History of Golf, Fitness in Golf, Psychology of Golf, Fundamentals of Golf and Turf Management. Students will be enrolled at the Golf Academy. The selection criteria for the Golf Academy differ from the general criteria.

Enquiries: Christian Marais, cell 082 577 4535, or Johannes Mashinini, tel. (012) 382 4374.

i. Readmission: See Chapter 3 of Students’ Rules and Regulations.

j. Subject credits: Subject credits are shown in brackets after every subject.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRK130T</td>
<td>Marketing I</td>
<td>(0,200)</td>
<td></td>
</tr>
<tr>
<td>SDC110T</td>
<td>Sport Didactics and Coaching I</td>
<td>(0,200)</td>
<td></td>
</tr>
<tr>
<td>SET120T</td>
<td>Sport and Exercise Technology I</td>
<td>(0,200)</td>
<td></td>
</tr>
<tr>
<td>SFR100T</td>
<td>Sport and Physical Recreation Studies I</td>
<td>(0,200)</td>
<td></td>
</tr>
<tr>
<td>SRT100T</td>
<td>Sport Management I</td>
<td>(0,200)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE FIRST YEAR: 1,000

**SECOND YEAR**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMS200T</td>
<td>Human Movement Studies II</td>
<td>(0,250)</td>
<td>Sport and Physical Recreation Studies I</td>
</tr>
<tr>
<td>KIN200T</td>
<td>Kinesiology II</td>
<td>(0,250)</td>
<td>Sport and Exercise Technology I</td>
</tr>
<tr>
<td>SET220T</td>
<td>Sport and Exercise Technology II</td>
<td>(0,250)</td>
<td>Sport and Physical Recreation Studies I</td>
</tr>
<tr>
<td>WPY220T</td>
<td>Work Physiology II</td>
<td>(0,250)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SECOND YEAR: 1,000

**THIRD YEAR**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSN300T</td>
<td>Health Sciences III</td>
<td>(0,250)</td>
<td>Sport and Exercise Technology II</td>
</tr>
<tr>
<td>SET320T</td>
<td>Sport and Exercise Technology III</td>
<td>(0,250)</td>
<td></td>
</tr>
<tr>
<td>SRO100T</td>
<td>Sport Psychology I</td>
<td>(0,250)</td>
<td>Work Physiology II</td>
</tr>
<tr>
<td>WPY320T</td>
<td>Work Physiology III</td>
<td>(0,250)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE THIRD YEAR: 1,000
14.7 BACCALAUREUS TECHNOLOGIAE: SPORT AND EXERCISE TECHNOLOGY
Course code: BTSX01

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Sport and Exercise Technology or an equivalent qualification. However, this does not apply to students who registered for the National Diploma for the first time before 2007 and who have not since interrupted their studies.

b. Selection criteria: All applications are subject to selection.

c. Minimum duration: One year.

d. Presentation: Day classes.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January only.

g. Golf specialisation: (Only for Golf Academy students): Golf enthusiasts who wish to qualify as professional players, greenkeepers, coaches, golf club managers or directors of golf, may enrol simultaneously for an accredited course at the Professional Golfers Association (PGA). The following PGA subjects must be taken additionally: Rules of Golf, History of Golf, Fitness in Golf, Psychology of Golf, Fundamentals of Golf and Turf Management. Students will be enrolled at the Golf Academy. The selection criteria for the Golf Academy differ from the general criteria.

Enquiries: Christan Marais, cell 082 577 4535, or Johannes Mashinini, tel. (012) 382 4374.

h. Readmission: See Chapter 3 of Students’ Rules and Regulations.

i. Subject credits: Subject credits are shown in brackets after every subject.

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

YEAR SUBJECTS

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>APS400T</td>
<td>Applied* Sport Psychology IV</td>
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</tr>
<tr>
<td>ASE400T</td>
<td>Advanced Sport and Exercise Technology IV</td>
<td>(0,167)</td>
</tr>
<tr>
<td>AVS400T</td>
<td>Advanced Sport Physical Evaluation IV</td>
<td>(0,167)</td>
</tr>
<tr>
<td>SBV400T</td>
<td>Sport Injury Prevention IV</td>
<td>(0,167)</td>
</tr>
</tbody>
</table>
14.8 **DOCTOR TECHNOLOGIAE: SPORT AND EXERCISE TECHNOLOGY**  
**Course code: DTSX01**

Campus where offered: Pretoria Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

**NO NEW REGISTRATIONS FOR THIS COURSE ARE ACCEPTED AS FROM 2005. STUDENTS WHO ARE CURRENTLY REGISTERED FOR THIS QUALIFICATION WILL HAVE UNTIL 2008 TO OBTAIN IT, SUBJECT TO THE STIPULATIONS OF REGULATION 3.1.1(a) ON THE MAXIMUM DURATION OF STUDY.**

Phase-out date: 31 December 2008

**REMARKS**

a. Admission requirement(s): A Magister Technologiae: Sport and Exercise Technology, or an equivalent qualification.

b. Duration: A minimum of two years and a maximum of five years.

c. Enquiries: Further details may be obtained from the Head of the Department on request.

d. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SET700T</td>
<td>Thesis: Sport and Exercise Technology</td>
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</tr>
<tr>
<td>SET700R</td>
<td>Thesis: Sport and Exercise Technology (re-registration)</td>
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</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: **2,000**

14.9 **SUBJECT INFORMATION**

**SUBJECT NAME:** ADVANCED EXERCISE AND PHYSICAL EVALUATION IV  
**SUBJECT CODE:** AXP400T  
**EVALUATION METHOD:** 1 X 3-HOUR PAPER  
**TOTAL TUITION TIME:** ± 75 hours  
**OVERVIEW OF SYLLABUS:**

Students who successfully complete this subject will be competent in the physiological and anatomical evaluation and assessment of sports people and people suffering from various pathologies. The student will be equipped to identify various strengths and weaknesses and interpret the test results effectively in order to prescribe the necessary interventions. This includes both field and laboratory tests, and advanced techniques such as isokinetic testing, pulmonary function testing, EMG and ECG.
SUBJECT NAME: ADVANCED SPORT AND EXERCISE TECHNOLOGY IV
SUBJECT CODE: ASE400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 108 hours
OVERVIEW OF SYLLABUS:
This subject comprehensively covers the principles associated with safe and effective training and conditioning. In addition, a wide variety of case studies and the latest article and journal investigations enable the student to adopt an eclectic and pragmatic approach to the dynamic field of exercise technology. Students are equipped to complete the internationally recognised certificate of the National Strength and Conditioning Association (NSCA) (USA), namely the Certified Strength and Conditioning Specialist (CSCS) certificate.

SUBJECT NAME: ADVANCED SPORT PHYSICAL EVALUATION IV
SUBJECT CODE: AVS400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 162 hours
OVERVIEW OF SYLLABUS:
Students who have successfully completed this subject will be competent in the physiological testing and evaluation of sports people. This includes both laboratory and field tests, covering all possible performance-enhancing components. Students will be equipped to identify the strengths and weaknesses of the athlete and to interpret the test data effectively in order to prescribe the necessary interventions.

SUBJECT NAME: ANATOMY, PHYSIOLOGY AND KINESIOLOGY I
SUBJECT CODE: APK121T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 80 hours
OVERVIEW OF SYLLABUS:
An introduction to the various skeletal and muscular systems.

SUBJECT NAME: ANATOMY, PHYSIOLOGY AND KINESIOLOGY II
SUBJECT CODE: APK221T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 85 hours
OVERVIEW OF SYLLABUS:
A study of the most important skeletal, muscular and vascular systems, as well as the nervous system as applicable to this course.

SUBJECT NAME: APPLIED ANATOMY IV
SUBJECT CODE: ALN400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 75 hours
OVERVIEW OF SYLLABUS:
Students will learn the fundamental anatomical principles underlying the objective evaluation of joints, muscle, posture, and pain. These include joint and anatomical palpation techniques, assessment techniques for generalised joint range of motion and isolated muscle flexibility and strength assessment. Students will further gain a working knowledge of neural plexuses, spinal nerves, and the composition of muscle charts. Basic radiological/imaging interpretive skills will also be covered to aid the practitioner with the correct assessment of various bone and soft tissue conditions.

SUBJECT NAME: APPLIED PSYCHOLOGY AND PHARMACOLOGY II
SUBJECT CODE: TSF200T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 60 hours
OVERVIEW OF SYLLABUS:
Social development of rehabilitation patients and an introduction to and understanding of basic medicine.
SPORT AND PHYSICAL REHABILITATION SCIENCES

SUBJECT NAME: APPLIED SPORT PSYCHOLOGY IV  
SUBJECT CODE: APS400T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 54 hours  
OVERVIEW OF SYLLABUS: 
Students are equipped with the necessary skills to report and comment on the following:  
• The application of psychological principles in sport coaching  
• The principles of sport and exercise behaviour  
• Specific psychological dimensions of sport, play and exercise  
• The psychology of coaching  
• The psychology of injuries

SUBJECT NAME: ATHLETE DEVELOPMENT IV  
SUBJECT CODE: ALV400T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 51 hours  
OVERVIEW OF SYLLABUS: 

SUBJECT NAME: BASIC CONCEPTS OF ORTHOPAEDICS III  
SUBJECT CODE: BCO301T  
EVALUATION METHOD: 1 X 2-HOUR PAPER  
TOTAL TUITION TIME: ± 80 hours  
OVERVIEW OF SYLLABUS: 
The most important abnormalities and deformities of the body, as well as pre- and post-operative procedures.

SUBJECT NAME: BUSINESS PRACTICE I  
SUBJECT CODE: BNP110T  
EVALUATION METHOD: CONTINUOUS ASSESSMENT  
TOTAL TUITION TIME: ± 30 hours  
OVERVIEW OF SYLLABUS: 
Basic management skills, dealing with conflict, marketing, personnel management, stock control and cash flow.

SUBJECT NAME: CLINICAL EXERCISE SCIENCE IV  
SUBJECT CODE: CCX400T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 75 hours  
OVERVIEW OF SYLLABUS: 
The student will cover the theoretical and practical skills of the guidelines for exercise testing and prescription of the American College of Sports Medicine, including the areas of health appraisal, risk assessment, the safety of exercise and exercise testing and prescription. Following this introduction, students will cover the essentials of pathophysiology, starting with the foundations and concepts in pathophysiology, and covering the pathophysiology of the most common chronic and acute systemic conditions. The course finally covers exercise management for persons with chronic diseases and disabilities, including considerations regarding physical activity for children and the youth, considerations regarding physical activity during pregnancy and post-partum, cardiovascular diseases, pulmonary diseases, metabolic diseases, immunological/haematological diseases, orthopaedic diseases and disabilities, neuromuscular disorders, cognitive, psychological and sensory disorders.

SUBJECT NAME: CLINICAL ORTHOPAEDIC MANAGEMENT IV  
SUBJECT CODE: CNO400T  
EVALUATION METHOD: 1 X 3-HOUR PAPER  
TOTAL TUITION TIME: ± 75 hours  
OVERVIEW OF SYLLABUS: 
Both the theoretical knowledge and clinical skills to assess and successfully manage acute traumatic and overuse orthopaedic and sport injuries will be covered in this section. Special consideration will be given to the rehabilitation and management of musculoskeletal injuries, encompassing the prognoses and goals of rehabilitation, the various tools of rehabilitation, and scientific rehabilitation techniques for specific injuries.

SPORT AND PHYSICAL REHABILITATION SCIENCES
SUBJECT NAME: COACHING EFFECTIVENESS AND ANALYSIS IV
SUBJECT CODE: CEY400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 51 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: COACHING MANAGEMENT IV
SUBJECT CODE: CHA400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 51 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: COACHING SCIENCE II
SUBJECT CODE: CSI200T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: COACHING SCIENCE III
SUBJECT CODE: CSI300T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:

SUBJECT NAME: EXPERIENTIAL LEARNING I
SUBJECT CODE: EXP1MOP
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: 6 months
OVERVIEW OF SYLLABUS:
Practical application of theoretical subjects in the first year.

SUBJECT NAME: EXPERIENTIAL LEARNING II
SUBJECT CODE: EXP2MOP
EVALUATION METHOD: EXPERIENTIAL LEARNING
TOTAL TUITION TIME: 6 months
OVERVIEW OF SYLLABUS:
Practical application of theoretical subjects in the second year.

SUBJECT NAME: HEALTH SCIENCES III
SUBJECT CODE: HSN300T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 108 hours
OVERVIEW OF SYLLABUS:
A study of the interaction between nutrition, exercise and health. The emphasis is on general terminology and optimum nutrition for active people. Interdependent factors associated with obesity are studied, as well as the effectiveness of diet and exercise as treatment. Lastly, attention is given to the development of muscle strength and cardiovascular health.
SUBJECT NAME: HUMAN MOVEMENT STUDIES II
SUBJECT CODE: HMS200T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 108 hours
OVERVIEW OF SYLLABUS:
A study of motor learning (motor skill acquisition) from a behavioural and physiological perspective. The emphasis is on issues that are particularly relevant for application to human motor skill learning (e.g. sport skills acquisition) and exercise performance situations in a variety of contexts. Biodynamics of physical activity. Dynamics of motor skills acquisition. Physical growth and motor development (tactile development, vestibular system, bilateral integration, motor planning: fine and gross, perception).

SUBJECT NAME: KINESIOLOGY II
SUBJECT CODE: KIN200T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 108 hours
OVERVIEW OF SYLLABUS:
Kinesiology is the study of human movement in the physical sciences. The study of the human body as an organism for performing work is rooted in three major areas of study, namely mechanics, anatomy and physiology. The following aspects are highlighted: Biomechanics: description of human motion. Condition of linear motion. Condition of rotary motion. Centre of gravity and stability. Musculoskeletal anatomy: the upper extremities (shoulders and elbows). The lower extremities (hips, knees and ankles). The spinal column and thorax. Neuromuscular physiology (skills): standing posture. Kinesiology of fitness and exercise. Throwing, striking and kicking skills. Movement on solid surfaces. Movement in the aquatic environment. Movement when suspended and free of support. The accumulated knowledge of these fields forms the foundation of the study of human movement.

SUBJECT NAME: MARKETING I
SUBJECT CODE: MRK130T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 72 hours
OVERVIEW OF SYLLABUS:
Introduction to marketing and the market in which businesses function. Background to the functional interaction between the marketing department and the other departments in the organisation. Directives are given on dealing with case studies and the subject terminology used in marketing. An introduction to entrepreneurship. The decision-making areas of the marketing strategy, namely the product, price, distribution, and marketing communication, are studied in depth.

SUBJECT NAME: ORTHOTICS AND PROSTHETICS MATERIAL SCIENCE I
SUBJECT CODE: OPS101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 72 hours
OVERVIEW OF SYLLABUS:
The different types of materials that can be used in orthotics and prosthetics.

SUBJECT NAME: ORTHOTICS AND PROSTHETICS MATERIAL SCIENCE II
SUBJECT CODE: OPS201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 92 hours
OVERVIEW OF SYLLABUS:
The most important materials currently used in practice (e.g. plastic, POP, metals) are covered in detail.

SUBJECT NAME: ORTHOTICS AND PROSTHETICS PRACTICE I
SUBJECT CODE: OPC101T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 160 hours
OVERVIEW OF SYLLABUS:
Students will apply their theoretical knowledge to manufacture the different orthoses and prostheses.
SUBJECT NAME: ORTHOTICS AND PROSTHETICS PRACTICE II
SUBJECT CODE: OPC211T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 170 hours
OVERVIEW OF SYLLABUS:
Students will apply in practice what they learned in theory in Orthotics II and Prosthetics II.

SUBJECT NAME: ORTHOTICS AND PROSTHETICS PRACTICE III
SUBJECT CODE: OPC311T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 160 hours
OVERVIEW OF SYLLABUS:
Splints, braces and upper-limb prostheses are manufactured.

SUBJECT NAME: ORTHOTICS AND PROSTHETICS PRACTICE IV
SUBJECT CODE: OPC400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 120 hours
OVERVIEW OF SYLLABUS:
Students will apply in practice the theoretical knowledge of Orthotics and Prosthetics Theory IV.

SUBJECT NAME: ORTHOTICS AND PROSTHETICS THEORY IV
SUBJECT CODE: ORP400T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 30 hours
OVERVIEW OF SYLLABUS:
Advanced orthotic and prosthetic devices and the related theory.

SUBJECT NAME: ORTHOTICS THEORY I
SUBJECT CODE: OTT101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 96 hours
OVERVIEW OF SYLLABUS:
The theory of the manufacturing of lower-limb splints (orthoses) from metal or plastic, and the manufacturing of bow orthoses.

SUBJECT NAME: ORTHOTICS THEORY II
SUBJECT CODE: OTT201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 102 hours
OVERVIEW OF SYLLABUS:
The theory of the manufacturing of long leg callipers, hand and arm splints (orthoses).

SUBJECT NAME: ORTHOTICS THEORY III
SUBJECT CODE: OTT301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 112 hours
OVERVIEW OF SYLLABUS:
Theory of the manufacturing of spinal braces, neck braces, corsets and hernial trusses.

SUBJECT NAME: PHYSIOLOGICAL DEVELOPMENT III
SUBJECT CODE: PDM300T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
Principles of sport injury prevention. Topics on human nutrition, supplements and performance-enhancing drugs. Conditioning for sport and physical activity. Dealing with special medical conditions (asthmatic and epileptic conditions, back problems, knee and ankle injuries, etc.).
OVERVIEW OF SYLLABUS:
This subject covers various aspects of the general management and workings of a biokineticist in a private practice/multidisciplinary environment. These aspects include basic principles of financial management for a small business, the code of ethics and scope of practice for biokinetics, and selected readings in medical law as suggested by the Health Professions Council of South Africa (HPCSA) and Biokinetics Association of South African (BASA).

OVERVIEW OF SYLLABUS:
Theory of the manufacture of below-knee limbs (prostheses).

OVERVIEW OF SYLLABUS:
Theory of the manufacture of through-knee, above-knee and through-hip prostheses.

OVERVIEW OF SYLLABUS:
Theory of the manufacture of all upper limbs, as well as the treatment of all special cases.

OVERVIEW OF SYLLABUS:
A basic course in psychology forms part of the curriculum, because patients treated by an orthotist or prosthetist often have psychological problems due to the fact that they have to wear visible support. Emphasis is placed on social development and dealing with personal problems.

OVERVIEW OF SYLLABUS:
An occupation that relates mainly to image building. The student's image, the image of the department and the University, as well as that of the organisation that will eventually employ the student, will therefore form an intrinsic and important whole.

OVERVIEW OF SYLLABUS:
An occupation that relates mainly to image building. The student's image, the image of the department and the University, as well as that of the organisation that will eventually employ the student, will therefore form an intrinsic and important whole.
SUBJECT NAME: RESEARCH METHODOLOGY
SUBJECT CODE: RMD110T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 35 hours
OVERVIEW OF SYLLABUS:
The subject provides an overview of the research process, including types of research, the literature survey, research hypothesis, etc. Basic statistics and statistical analysis will also be covered to help the student complete his or her research project successfully.

SUBJECT NAME: RESEARCH METHODS AND TECHNIQUES I
SUBJECT CODE: RMQ110C
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: ± 30 hours
OVERVIEW OF SYLLABUS:
Theory of research and statistics, as well as statistic calculations. An additional requirement for obtaining the full qualification is a research article by the candidate at the end of the study period.

SUBJECT NAME: RESEARCH PROJECT IV
SUBJECT CODE: SET410T
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
This subject relates to the research project the student will have to complete in order to pass the subject. A short research proposal, mini-dissertation and research article, of limited scope, will be written under the guidance of a supervising lecturer.

SUBJECT NAME: RESEARCH PROJECT: PRACTICAL
SUBJECT CODE: OCS40QT
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
This subject relates to the research project that the student will have to complete in order to pass the course. A short research proposal, mini-thesis and article will be written under the guidance of the lecturer.

SUBJECT NAME: RESEARCH PROJECT: PRACTICAL IV
SUBJECT CODE: SET40QT
EVALUATION METHOD: PROJECT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
This subject relates to the research project that the student will have to complete in order to pass the course. A short research proposal, mini-thesis and article will be written under the guidance of the lecturer.

SUBJECT NAME: RESEARCH PROJECT: THEORY
SUBJECT CODE: OCS40PT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 51 hours
OVERVIEW OF SYLLABUS:
An overview of the research process, including types of research, the literature survey, defining the problem, research hypothesis, etc. The role of valid and reliable measurements in research, as applied to management principles, market factors and financial influences within the sport environment, is emphasised. The statistical concepts of research are also covered.

SUBJECT NAME: RESEARCH PROJECT: THEORY IV
SUBJECT CODE: SET40PT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 72 hours
OVERVIEW OF SYLLABUS:
An overview of the research process, including types of research, the literature survey, defining the problem, research hypothesis, etc. The role of valid and reliable measurements in research, as applied to management principles, market factors and financial influences within the sport environment, is emphasised. The statistical concepts of research are also covered.

SPORT AND PHYSICAL REHABILITATION SCIENCES
<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>SPORT AND EXERCISE TECHNOLOGY I</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>SET110T, SET120T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>± 108 hours</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Design of strengthening and conditioning programmes. Dealing with the athlete. On completion of this subject, the student will be able to work as a gymnasium instructor and develop exercise programmes. The student also obtains the required basic practical knowledge.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>SPORT AND EXERCISE TECHNOLOGY II</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>SET220T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>± 108 hours</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>On completion of the subject, students will be able to design a seasonal year-round programme for resistance exercise, plan athletic-type functional strength exercises for developing optimum potential, and will have theoretical knowledge on how to test an athlete for muscle strength and cardiovascular endurance. Students will also develop a broader knowledge base for the application of finer, specific exercise techniques and programme designs and the prescription of metabolic exercises.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>SPORT AND EXERCISE TECHNOLOGY III</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>SET320T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>± 198 hours</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>On completion of the subject, students will have a theoretical basis for the further testing of anaerobic power and capacity, kinanthropometry and flexibility, as well as the general health status of a sports person. Students will also learn to prescribe exercises for the improvement of all the above parameters from the existing test data. In addition, students will gain experience in monitoring and testing at least 15 sports people and prescribing exercises for them.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>SPORT AND PHYSICAL RECREATION STUDIES I</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>SFR100T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>± 108 hours</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Orientation to the human body. Anatomy of the human body. The study of human anatomy. Students are introduced to the basic structures and functions of the body, from the chemical level to the systemic level. Anatomical terminology plays an important role. This knowledge is applied to the functioning of the human body. The second component of the subject focuses on the history of sport. Students acquire insight into the development of sport from ancient times to the present time.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>SPORT DIDACTICS AND COACHING I</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>SDC110T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>± 108 hours</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Foundations of coaching. Coaching techniques (part 1). Introduction to the psychology of sport. Basic sport psychology. The steps to a successful activity series, which means that activities are the primary building blocks of the curriculum. Each activity block has been designed from a knowledgebased perspective that reflects across the disciplinary framework; that is, it identifies skills and strategies and shows how scientific concepts in exercise physiology, motor learning, biomechanics, psychology, history, sociology and other areas have affected performance, teaching and coaching. The course contains a rationale for fitness, the basic concepts behind fitness programmes, and the practical application of the basic principles in constructing a basic training programme for diverse population groups. The increasingly formalised sports structures have led to a greater commitment among coaches to the care and preparation of athletes. Didactic aspects place the learning of skills and strategies into the context of game play as soon as possible. It is also the approach used by most of the master teachers and coaches.</td>
</tr>
</tbody>
</table>
SUBJECT NAME:       SPORT INJURY PREVENTION IV
SUBJECT CODE:       SBV400T
EVALUATION METHOD:  1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 108 hours
OVERVIEW OF SYLLABUS:
This course contains aspects relating to sport injuries, the principles involved in the prevention of injuries, and the management of an athlete with injuries. The focus is placed on the field of sport injuries through literature discussions and reviews.

SUBJECT NAME:       SPORT MANAGEMENT I
SUBJECT CODE:       SRT100T
EVALUATION METHOD:  1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 108 hours
OVERVIEW OF SYLLABUS:
An introduction to the basic principles of sport management and of entrepreneurship with special attention to the establishment of a small business enterprise and/or sport club.

SUBJECT NAME:       SPORT PSYCHOLOGY I
SUBJECT CODE:       SRO100T
EVALUATION METHOD:  1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 72 hours
OVERVIEW OF SYLLABUS:
Human development across the lifespan. The psychology of human movement. Personality research in sport psychology. Sport psychology and athletic performance: learning in sport, information processing and attention in sport, arousal, stress and anxiety in sport.

SUBJECT NAME:       SPORT PSYCHOLOGY II
SUBJECT CODE:       SYC200T
EVALUATION METHOD:  1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
Human development across the lifespan. The psychology of human movement. Personality research in sport psychology. Sport psychology and athletic performance: learning in sport, information processing and attention in sport, arousal, stress and anxiety in sport.

SUBJECT NAME:       SPORT PSYCHOLOGY III
SUBJECT CODE:       SYC300T
EVALUATION METHOD:  1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 70 hours
OVERVIEW OF SYLLABUS:
Sport psychology interventions: interventions targeting arousal and anxiety regulation and athletic injury management, interventions targeting self-confidence, imagery, attention control and psychological skills training. The social psychology of sport: player aggression in sport, leadership in sport, the social nature of sport, team cohesion, audience effects and self-presentation. Sport fans and sport spectators: the psychology of sport fans and sport spectators, the emotional and aggressive reactions of sport spectators.

SUBJECT NAME:       WORK PHYSIOLOGY II
SUBJECT CODE:       WPY220T
EVALUATION METHOD:  1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 108 hours
OVERVIEW OF SYLLABUS:
An extension of the anatomy course of the first year. The functioning of the body is discussed in detail with special reference to the interdependence of the different systems (respiratory, cardiovascular, etc.). On completion of this subject, the student will be able to describe the complementarity of anatomy and physiology. The effects of exercise on the systems will be discussed in detail in the second course.
SUBJECT NAME: WORK PHYSIOLOGY III
SUBJECT CODE: WPY320T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 216 hours
OVERVIEW OF SYLLABUS:
An extension of the anatomy course of the first year. The functioning of the body is discussed in detail with special reference to the interdependence of the different systems (respiratory, cardiovascular, etc.). On completion of this subject, the student will be able to describe the complementarity of anatomy and physiology.

SUBJECT NAME: WORK PHYSIOLOGY IV
SUBJECT CODE: WPY400T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: ± 108 hours
OVERVIEW OF SYLLABUS:
The subject focuses on applying human physiology to the sport and exercise environments. An in-depth study of the functioning of the different body systems during sport and exercise and their adaptations to conditioning. This knowledge is applied to specific sport and exercise events.
15. DEPARTMENT OF WATER CARE

15.1 NATIONAL DIPLOMA: FIRE TECHNOLOGY
Course code: NDFY01

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s):
   For 2007: A Senior Certificate or an equivalent qualification with a pass in Mathematics and Physical Science. Prospective students must be employed by an approved fire or emergency service.

   As from 2008: A Senior Certificate or an equivalent qualification with a pass in English, Mathematics and Physical Science. Prospective students must be employed by an approved fire or emergency service.

b. Selection criteria:
   For 2007: None.

   As from 2008: Students without Mathematics and Physical Science will be selected for admission based on the successful completion of a Potential Assessment test and a science skills knowledge test.

c. Minimum duration: Three years.

d. Presentation: Block course.

e. Intake for the course: January only.

f. Registration for the subjects of this course: January and July.

g. Textbooks: Textbooks and other educational material will be required.

h. Readmission: See Chapter 3 of Students’ Rules and Regulations.

i. Subject credits: Subject credits are shown in brackets after every subject.

FIRST YEAR

FIRST SEMESTER

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEM101T</td>
<td>Chemistry: Emergency Services I</td>
<td>(0,143)</td>
<td></td>
</tr>
<tr>
<td>EMR101T</td>
<td>Emergency Management I</td>
<td>(0,143)</td>
<td></td>
</tr>
<tr>
<td>FBH111T</td>
<td>Fire Hydraulics I</td>
<td>(0,143)</td>
<td></td>
</tr>
<tr>
<td>FTC101T</td>
<td>Fire Technology: Practical I</td>
<td>(0,142)</td>
<td></td>
</tr>
</tbody>
</table>

(offered in both semesters)

TOTAL CREDITS FOR THE SEMESTER: 0,571
### SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBO111T</td>
<td>Fire Construction I</td>
<td>(0,143)</td>
</tr>
<tr>
<td>FBT111T</td>
<td>Fire Technology I</td>
<td>(0,143)</td>
</tr>
<tr>
<td>FTC201T</td>
<td>Fire Technology: Practical II</td>
<td>(0,142)</td>
</tr>
<tr>
<td></td>
<td>(offered in both semesters)</td>
<td></td>
</tr>
<tr>
<td>PHV101T</td>
<td>Physics: Emergency Services I</td>
<td>(0,143)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,571

**TOTAL CREDITS FOR THE FIRST YEAR:** 1,142

### SECOND YEAR

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBH211T</td>
<td>Fire Hydraulics II</td>
<td>(0,143)</td>
</tr>
<tr>
<td>FBP211T</td>
<td>Fire Physics II</td>
<td>(0,143)</td>
</tr>
<tr>
<td>FBT211T</td>
<td>Fire Technology II</td>
<td>(0,143)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,429

#### SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMR201T</td>
<td>Emergency Management II</td>
<td>(0,143)</td>
</tr>
<tr>
<td>FBC211T</td>
<td>Fire Chemistry II</td>
<td>(0,143)</td>
</tr>
<tr>
<td>FBO211T</td>
<td>Fire Construction II</td>
<td>(0,143)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,429

**TOTAL CREDITS FOR THE SECOND YEAR:** 0,858

### THIRD YEAR

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBC311T</td>
<td>Fire Chemistry III</td>
<td>(0,166)</td>
</tr>
<tr>
<td>FBO311T</td>
<td>Fire Construction III</td>
<td>(0,167)</td>
</tr>
<tr>
<td>FBT311T</td>
<td>Fire Technology III</td>
<td>(0,167)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,500

#### SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMR301T</td>
<td>Emergency Management III</td>
<td>(0,167)</td>
</tr>
<tr>
<td>FBH311T</td>
<td>Fire Hydraulics III</td>
<td>(0,167)</td>
</tr>
<tr>
<td>FBP311T</td>
<td>Fire Physics III</td>
<td>(0,166)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,500

**TOTAL CREDITS FOR THE THIRD YEAR:** 1,000
15.2 BACCALAUREUS TECHNOLOGIAE: FIRE TECHNOLOGY
Course code: BTFY01

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Fire Technology or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required. Students who are in possession of a National Diploma: Fire Service Technology may be admitted to the Baccalaureus Technologiae: Fire Technology, provided that they complete Emergency Management III successfully.

b. Selection criteria: A personal interview with a departmental selection panel may be required.

c. Minimum duration: One year.

d. Presentation: Block course offered over a period of one and a half year.

e. Intake for the course: January and July.

f. Registration for the subjects of this course: January and July.

g. Readmission: See Chapter 3 of Students’ Rules and Regulations.

h. Subject credits: Subject credits are shown in brackets after every subject.

FIRST YEAR

FIRST SEMESTER (2007)

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBT411T</td>
<td>Fire Technology IV</td>
<td>(0,150)</td>
<td></td>
</tr>
<tr>
<td>FIN411T</td>
<td>Fire Technology: Investigations IV</td>
<td>(0,150)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(offered in both semesters)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRM201T</td>
<td>Human Resource Management II</td>
<td>(0,092)</td>
<td></td>
</tr>
<tr>
<td>LES201T</td>
<td>Legislation: Emergency Services II</td>
<td>(0,092)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,484

SECOND SEMESTER (2007)

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
<th>PREREQUISITE SUBJECT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMR401T</td>
<td>Emergency Management IV</td>
<td>(0,150)</td>
<td></td>
</tr>
<tr>
<td>PYE201T</td>
<td>Psychology: Emergency Services II</td>
<td>(0,092)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Research Methodology</td>
<td>(0,045)</td>
<td></td>
</tr>
<tr>
<td>RMD110E</td>
<td>Research Methodology</td>
<td>(0,045)</td>
<td></td>
</tr>
<tr>
<td>RMD11XE</td>
<td>Research Methodology: Fire Technology</td>
<td>(0,045)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE SEMESTER: 0,287
SECOND YEAR

FIRST SEMESTER (2008)

FMN211T Financial Management II (0,092)
MIS201T Management Information Systems II (0,092)
RMD110E Research Methodology
RMD11YE Research Methodology: Statistics (0,045)

TOTAL CREDITS FOR THE SEMESTER: 0,229
TOTAL CREDITS FOR THE QUALIFICATION: 1,000

15.3 MAGISTER TECHNOLOGIAE: FIRE TECHNOLOGY
Course code: MTFY01

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Fire Technology or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. These procedures will be fully explained to each prospective student during the personal interview.

c. Duration: A minimum of one year and a maximum of three years. Students must re-register annually for this programme.

d. Structure: This programme consists of a research project that must be recorded in the form of a dissertation. Before the dissertation will be accepted for evaluation, a draft article, based on the research carried out and approved by the supervisor, must be ready for submission to a peer-evaluated accredited journal. The student must present a colloquium before submission of the dissertation. In addition, the student must successfully complete a course in Research Methodology in the first year of the magister technologiae degree, if this was not done as part of a previous qualification.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIT500T</td>
<td>Dissertation: Fire Technology</td>
<td>(1,000)</td>
</tr>
<tr>
<td>FIT500R</td>
<td>Dissertation: Fire Technology</td>
<td>(0,000)</td>
</tr>
<tr>
<td></td>
<td>(re-registration)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 1,000
15.4 NATIONAL DIPLOMA: WATER CARE
Course code: NDWC02

Campus where offered: Arcadia Campus
Soshanguve Campus (Pipeline students only - no new first-years/new intake)

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Senior Certificate or an equivalent qualification, with a pass in English and at least D symbols at Standard Grade or E symbols at Higher Grade for Mathematics and Physical Sciences. An N3 Certificate with two languages (including English) and pass marks of 50% for Mathematics N3 and Engineering Science N3 may also be considered, or the successful completion of a relevant foundation programme at an institute of higher education is required for entrance into the National Diploma: Water Care.

b. Recommended subject(s): Biology.

c. Selection criteria: Admission is subject to evaluation and applicants will have to take a potential test and an additional entrance examination. Based on their results in the above, they will either be admitted directly to their programme of choice, or to a foundation programme linked to that programme. The latter would result in an extension of the minimum period of study (not applicable to employed students). Prospective students currently in Grade 12 will be provisionally selected on their Grade 11 results.

d. Minimum duration: Three years.

e. Presentation: Seven semesters of block course or six semesters of day classes.

f. Intake for the course: January only: day classes.
January and July: block course.

g. Registration for the subjects of this course: January and July.

h. Practical: It is compulsory for students to attend 100% of the practicals. Where applicable, students must pass the practical component of a subject in order to gain admission to the examination of that particular subject.

i. Textbooks: Textbooks and other educational material will be required.

j. Safety wear: Specific safety wear is compulsory (where applicable) and students must purchase it themselves.

k. Readmission: See Chapter 3 of Students’ Rules and Regulations.

l. Subject credits: Subject credits are shown in brackets after every subject.

Key to asterisks:
* Subjects must be passed simultaneously.
# Option A: Arcadia Campus (Block Course)

## First Year

### First Semester

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>Credit</th>
<th>Prerequisite Subject(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE141D</td>
<td>Chemistry IC</td>
<td>(0,160)</td>
<td></td>
</tr>
<tr>
<td>COW101T</td>
<td>Computations: Water I</td>
<td>(0,160)</td>
<td></td>
</tr>
<tr>
<td>WCT101T</td>
<td>Water Care Technology I</td>
<td>(0,160)</td>
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</tr>
<tr>
<td></td>
<td><strong>Total Credits for the Semester:</strong></td>
<td>0,480</td>
<td></td>
</tr>
</tbody>
</table>

### Second Semester

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>Credit</th>
<th>Prerequisite Subject(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COS101B</td>
<td>Communication Skills I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>MBI101B</td>
<td>Microbiology I</td>
<td>(0,120)</td>
<td></td>
</tr>
<tr>
<td>MBI10XB</td>
<td>Microbiology: Theory I</td>
<td>(0,040)</td>
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<tr>
<td>MBI10YB</td>
<td>Microbiology: Practical I</td>
<td>(0,120)</td>
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</tr>
<tr>
<td>PHU161F</td>
<td>Physics IB</td>
<td>(0,160)</td>
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<td></td>
<td><strong>Total Credits for the Semester:</strong></td>
<td>0,420</td>
<td></td>
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</tbody>
</table>

## Second Year

### First Semester

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>Credit</th>
<th>Prerequisite Subject(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGA201T</td>
<td>Legal Aspects: Water II</td>
<td>(0,133)</td>
<td>Communication Skills I</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Water Care Technology I</td>
</tr>
<tr>
<td>PTN201T</td>
<td>Potable Water Purification II</td>
<td>(0,134)</td>
<td>Chemistry IC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Computations: Water I</td>
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<td></td>
<td></td>
<td></td>
<td>Microbiology: Practical I</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Microbiology: Theory I</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Water Care Technology I</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits for the Semester:</strong></td>
<td>0,500</td>
<td></td>
</tr>
</tbody>
</table>

### Second Semester

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>Credit</th>
<th>Prerequisite Subject(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSK101B</td>
<td>Computer Skills I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>PMW101T</td>
<td>Principles of Management: Water I</td>
<td>(0,100)</td>
<td></td>
</tr>
<tr>
<td>WSA201T</td>
<td>Wastewater Analysis II</td>
<td>(0,067)</td>
<td></td>
</tr>
<tr>
<td>WSA20XT</td>
<td>Wastewater Analysis: Theory II</td>
<td>(0,067)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits for the Semester:</strong></td>
<td>0,500</td>
<td></td>
</tr>
</tbody>
</table>
WATER CARE

WSA20YT  Wastewater Analysis: Practical II*  (0,066)
Chemistry IC
Potable Water Analysis: Practical II
Potable Water Analysis: Theory II
Water Care Technology I

WTR201T  Wastewater Treatment II  (0,134)
Chemistry IC
Microbiology: Practical I
Microbiology: Theory I
Water Care Technology I

TOTAL CREDITS FOR THE SEMESTER: 0,467
TOTAL CREDITS FOR THE SECOND YEAR: 0,967

THIRD YEAR

FIRST SEMESTER

GRW201T  Groundwater II  (0,100)
Chemistry IC
Water Care Technology I

RMN200T  Research Methodology: Natural Sciences
RMN20XT  Research Methodology: Natural Sciences: Water Care  (0,050)
Chemistry IC
Microbiology: Practical I
Microbiology: Theory I
Physics IB

RMN20YT  Research Methodology: Natural Sciences: Statistics  (0,050)
Chemistry IC
Microbiology: Practical I
Microbiology: Theory I
Physics IB

WTR301T  Wastewater Treatment III  (0,117)
Chemistry IC
Microbiology: Practical I
Microbiology: Theory I

TOTAL CREDITS FOR THE SEMESTER: 0,317

SECOND SEMESTER

WHY201T  Water Hydraulics II  (0,133)
Computations: Water I
Physics IB

WATER CARE
<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE NAME</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIP201T</td>
<td>Water Industry: Practical II</td>
<td>(0,100)</td>
</tr>
<tr>
<td>WPL201T</td>
<td>Water Plant II</td>
<td>(0,117)</td>
</tr>
<tr>
<td>WTN301T</td>
<td>Water Treatment III</td>
<td>(0,117)</td>
</tr>
<tr>
<td>CBW301T</td>
<td>Cooling and Boiler Water Technology III</td>
<td>(0,116)</td>
</tr>
<tr>
<td>INE301T</td>
<td>Industrial Effluents III</td>
<td>(0,116)</td>
</tr>
<tr>
<td>WTI201T</td>
<td>Water Treatment: Investigations II</td>
<td>(0,117)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,467

**TOTAL CREDITS FOR THE THIRD YEAR:** 0,784

**FOURTH YEAR**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE NAME</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIP201T</td>
<td>Potable Water Analysis: Practical II</td>
<td>(0,100)</td>
</tr>
<tr>
<td>WPL201T</td>
<td>Potable Water Analysis: Theory II</td>
<td>(0,117)</td>
</tr>
<tr>
<td>WTN301T</td>
<td>Potable Water Analysis: Practical II</td>
<td>(0,117)</td>
</tr>
<tr>
<td>CBW301T</td>
<td>Potable Water Analysis: Theory II</td>
<td>(0,116)</td>
</tr>
<tr>
<td>INE301T</td>
<td>Legal Aspects: Water II</td>
<td>(0,116)</td>
</tr>
<tr>
<td>WTI201T</td>
<td>Potable Water Analysis: Practical II</td>
<td>(0,117)</td>
</tr>
<tr>
<td>WTI201T</td>
<td>Potable Water Analysis: Theory II</td>
<td>(0,117)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,349

**TOTAL CREDITS FOR THE FOURTH YEAR:** 0,349

**FOURTH YEAR**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE NAME</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIP201T</td>
<td>Potable Water Analysis: Practical II</td>
<td>(0,100)</td>
</tr>
<tr>
<td>WPL201T</td>
<td>Potable Water Analysis: Theory II</td>
<td>(0,117)</td>
</tr>
<tr>
<td>WTN301T</td>
<td>Potable Water Analysis: Practical II</td>
<td>(0,117)</td>
</tr>
<tr>
<td>CBW301T</td>
<td>Potable Water Analysis: Theory II</td>
<td>(0,116)</td>
</tr>
<tr>
<td>INE301T</td>
<td>Legal Aspects: Water II</td>
<td>(0,116)</td>
</tr>
<tr>
<td>WTI201T</td>
<td>Potable Water Analysis: Practical II</td>
<td>(0,117)</td>
</tr>
<tr>
<td>WTI201T</td>
<td>Potable Water Analysis: Theory II</td>
<td>(0,117)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,349

**TOTAL CREDITS FOR THE FOURTH YEAR:** 0,349
**OPTION B: ARCADIA AND SOSHANGUVE CAMPUS (FULL-TIME)**

No new registrations for this option are accepted as from 2007. Students who are currently registered for these options will have until 2011 to obtain the qualification, subject to the stipulations of Regulation 3.1.1(a) on the maximum duration of study.

Phase-out date: 31 December 2011

**FIRST YEAR**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE141D</td>
<td>Chemistry IC</td>
<td>(0,160)</td>
</tr>
<tr>
<td>COW101T</td>
<td>Computations: Water I</td>
<td>(0,160)</td>
</tr>
<tr>
<td>CSK101B</td>
<td>Computer Skills I</td>
<td>(0,100)</td>
</tr>
<tr>
<td>WCT101T</td>
<td>Water Care Technology I</td>
<td>(0,160)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,580

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COS101B</td>
<td>Communication Skills I</td>
<td>(0,100)</td>
</tr>
<tr>
<td>MBI101B</td>
<td>Microbiology I</td>
<td></td>
</tr>
<tr>
<td>MBI10XB</td>
<td>Microbiology: Theory I</td>
<td>(0,120)</td>
</tr>
<tr>
<td>MBI10YB</td>
<td>Microbiology: Practical I</td>
<td>(0,040)</td>
</tr>
<tr>
<td>PHU161F</td>
<td>Physics IB</td>
<td>(0,160)</td>
</tr>
<tr>
<td>PMW101T</td>
<td>Principles of Management: Water I</td>
<td>(0,100)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,520

**TOTAL CREDITS FOR THE FIRST YEAR:** 1,100

**SECOND YEAR**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRW201T</td>
<td>Groundwater II</td>
<td>(0,100)</td>
</tr>
<tr>
<td>LGA201T</td>
<td>Legal Aspects: Water II</td>
<td>(0,133)</td>
</tr>
<tr>
<td>PTN201T</td>
<td>Potable Water Purification II</td>
<td>(0,134)</td>
</tr>
<tr>
<td>PWA201T</td>
<td>Potable Water Analysis II</td>
<td></td>
</tr>
<tr>
<td>PWA20XT</td>
<td>Potable Water Analysis: Theory II*</td>
<td>(0,066)</td>
</tr>
<tr>
<td>PWA20YT</td>
<td>Potable Water Analysis: Practical II*</td>
<td>(0,067)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS FOR THE SEMESTER:** 0,500
SECOND SEMESTER

WBI201T Water Biology II (0,100)
Microbiology: Practical I
Microbiology: Theory I
Water Care Technology I

WHY201T Water Hydraulics II (0,133)
Computations: Water I
Physics IB
Water Care Technology I

WSA201T Wastewater Analysis II
WSA20XT Wastewater Analysis: Theory II* (0,067)
Chemistry IC
Computations: Water I
Potable Water Analysis: Practical II
Potable Water Analysis: Theory II
Water Care Technology I

WSA20YT Wastewater Analysis: Practical II* (0,066)
Chemistry IC
Computations: Water I
Microbiology: Practical I
Microbiology: Theory I
Water Care Technology I

WTR201T Wastewater Treatment II (0,134)
Chemistry IC
Computations: Water I
Microbiology: Practical I
Microbiology: Theory I
Water Care Technology I

TOTAL CREDITS FOR THE SEMESTER: 0,500
TOTAL CREDITS FOR THE SECOND YEAR: 1,000

THIRD YEAR

FIRST SEMESTER

CBW301T Cooling and Boiler Water Technology III (0,116)
Computer Skills I
Potable Water Analysis: Practical II
Potable Water Analysis: Theory II
Potable Water Purification II

INE301T Industrial Effluents III (0,116)
Legal Aspects: Water II
Potable Water Purification II
Wastewater Treatment II

RMN200T Research Methodology: Natural Sciences
RMN20YT Research Methodology: Natural Sciences: Statistics (0,050)
Chemistry IC
Communication Skills I
Computations: Water I
Computer Skills I
Microbiology: Practical I
Microbiology: Theory I
Physics IB
Water Care Technology I

WTI201T Water Treatment: Investigations II (0,117)
Potable Water Analysis: Practical II
Potable Water Analysis: Theory II
Potable Water Purification II
Wastewater Analysis: Practical II
Wastewater Analysis: Theory II
Wastewater Treatment II
WTR301T Wastewater Treatment III (0,117) Computer Skills I
Potable Water Analysis: Practical II
Potable Water Analysis: Theory II
Wastewater Analysis: Practical II
Wastewater Analysis: Theory II
Wastewater Treatment II

TOTAL CREDITS FOR THE SEMESTER: 0,516

SECOND SEMESTER

RMN200T Research Methodology: Natural Sciences
RMN20XT Research Methodology: Natural Sciences: Water Care (0,050) Chemistry IC
Communication Skills I
Computations: Water I
Computer Skills I
Microbiology: Practical I
Microbiology: Theory I
Physics IB
Water Care Technology I
Potable Water Analysis: Practical II
Potable Water Analysis: Theory II
Potable Water Purification II
Wastewater Analysis: Practical II
Wastewater Analysis: Theory II
Wastewater Treatment II

WIP201T Water Industry: Practical II (0,100)
Potable Water Analysis: Practical II
Potable Water Analysis: Theory II
Potable Water Purification II
Wastewater Analysis: Practical II
Wastewater Analysis: Theory II
Wastewater Treatment II

WPL201T Water Plant II (0,117) Chemistry IC
Computations: Water I
Physics IB
Water Care Technology I
Computer Skills I
Potable Water Analysis: Practical II
Potable Water Analysis: Theory II
Potable Water Purification II

WTN301T Water Treatment III (0,117) Potable Water Analysis: Practical II
Potable Water Analysis: Theory II
Potable Water Purification II
Wastewater Analysis: Practical II
Wastewater Analysis: Theory II
Wastewater Treatment II

TOTAL CREDITS FOR THE SEMESTER: 0,384
TOTAL CREDITS FOR THE THIRD YEAR: 0,900

15.5 BACCALAUREUS TECHNOLOGIAE: WATER CARE
Course code: BTWC02

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A National Diploma: Water Care or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: A personal interview with a departmental selection panel may be required.

c. Minimum duration: One year.

d. Presentation: Block course offered over a period of one and a half years.
e. Intake for the course: July only.
f. Registration for the subjects of this course: January and July.
g. Readmission: See Chapter 3 of Students’ Rules and Regulations.
h. Subject credits: Subject credits are shown in brackets after every subject.

**FIRST YEAR**

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>BWT401T</td>
<td>Biological Water Treatment IV</td>
<td>(0,125)</td>
</tr>
<tr>
<td>PMN401T</td>
<td>Practice of Management IV</td>
<td>(0,125)</td>
</tr>
</tbody>
</table>

**plus one of the following subjects:**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMW211T</td>
<td>Manpower Management: Water II</td>
<td>(0,125)</td>
</tr>
<tr>
<td>WUM201T</td>
<td>Water Utility Management II</td>
<td>(0,125)</td>
</tr>
</tbody>
</table>

Total credits for the first year: **0,375**

**SECOND YEAR**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWT401T</td>
<td>Chemical/Physical Water Treatment IV</td>
<td>(0,125)</td>
</tr>
<tr>
<td>WQM401T</td>
<td>Water Quality Management IV</td>
<td>(0,125)</td>
</tr>
<tr>
<td>WTO401T</td>
<td>Water Treatment: Project IV</td>
<td>(0,125)</td>
</tr>
</tbody>
</table>

(Offered in both semesters)

Total credits for the semester: **0,375**

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICM401T</td>
<td>Integrated Catchment Management IV</td>
<td>(0,125)</td>
</tr>
<tr>
<td>WTI301T</td>
<td>Water Treatment: Investigations III</td>
<td>(0,125)</td>
</tr>
</tbody>
</table>

(Offered in both semesters)

Total credits for the semester: **0,250**

Total credits for the second year: **0,625**

Total credits for the qualification: **1,000**
15.6 MAGISTER TECHNOLOGIAE: WATER CARE
Course code: MTWC99

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Baccalaureus Technologiae: Water Care or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.

b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. These procedures will be fully explained to each prospective student during the personal interview.

c. Duration: A minimum of one year and a maximum of three years. Students must re-register annually for this programme.

d. Structure: This programme consists of a research project that must be recorded in the form of a dissertation. Before the dissertation will be accepted for evaluation, a draft article, based on the research carried out and approved by the supervisor, must be ready for submission to a peer-evaluated accredited journal. The candidate must present a colloquium before submitting the dissertation. In addition, he or she must successfully complete a programme in Research Methodology in the first year of the magister technologiae degree, if this was not done as part of a previous qualification.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>WCT500T</td>
<td>Dissertation: Water Care</td>
<td>(1,000)</td>
</tr>
<tr>
<td>WCT500R</td>
<td>Dissertation: Water Care</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

(re-registration)

TOTAL CREDITS FOR THE QUALIFICATION: 1,000

15.7 DOCTOR TECHNOLOGIAE: WATER CARE
Course code: DTWC99

Campus where offered: Arcadia Campus

Please note that the site(s) of delivery (campus(es)) indicated is/are subject to change and will still be confirmed.

REMARKS

a. Admission requirement(s): A Magister Technologiae: Water Care or an equivalent qualification. Depending on the equivalent qualification, completion of certain additional subjects may be required.
b. Selection criteria: Selection is based on a personal interview with a departmental selection panel. Registration prior to the approval of a protocol is provisional and will only be made official once the protocol has been approved by the Faculty Research and Innovation Committee. Procedures will be fully explained to each prospective student during the personal interview.

c. Duration: A minimum of two years and a maximum of five years. Students must re-register annually for this programme.

d. Structure: This course consists of a research project that must be recorded in the form of a thesis. Before the thesis will be accepted for evaluation, at least two articles, based on the research carried out and approved by the supervisor, must have been submitted to a peer-evaluated accredited journal (or a patent or artefact must have been successful). One of the two articles must already have been accepted for publication, and written proof of it must be submitted as part of the requirements of the degree. The candidate must present a colloquium before submitting the thesis. He or she must subsequently defend the thesis successfully before the degree will be awarded.

e. Subject credits: Subject credits are shown in brackets after every subject.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SUBJECT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>WCT700T</td>
<td>Thesis: Water Care</td>
<td>(2,000)</td>
</tr>
<tr>
<td>WCT700R</td>
<td>Thesis: Water Care (re-registration)</td>
<td>(0,000)</td>
</tr>
</tbody>
</table>

TOTAL CREDITS FOR THE QUALIFICATION: 2,000

15.8 SUBJECT INFORMATION

SUBJECT NAME: BIOLOGICAL WATER TREATMENT IV
SUBJECT CODE: BWT401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: CHEMICAL/PHYSICAL WATER TREATMENT IV
SUBJECT CODE: CWT401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Reaction kinetics, coagulation, flocculation, sedimentation, flotation, filtration, gas transfer, ion exchange, adsorption, membrane technology, chemical phosphate removal.

SUBJECT NAME: CHEMISTRY IC
SUBJECT CODE: CHE141D
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Matter and energy: atomic theory, the periodic table, chemical bonding, chemical compositions and nomenclature. Reaction equations and stoichiometry, solutions, acids, bases and salts, chemical equilibrium, electrochemistry and redox theory, descriptive chemistry of selected elements, organic chemistry, chemistry practicals.
SUBJECT NAME: CHEMISTRY: EMERGENCY SERVICES I
SUBJECT CODE: CEM101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Matter and energy: atomic theory, the periodic table. Reaction equations and stoichiometry. Solutions, acids, bases and salts. Chemical equilibrium, electrochemistry and redox theory. Descriptive chemistry of selected elements, organic chemistry.

SUBJECT NAME: COMMUNICATION SKILLS I
SUBJECT CODE: COS101B
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Communication theory. Oral presentation. Technical writing skills. Group communication skills.

SUBJECT NAME: COMPUTATIONS: WATER I
SUBJECT CODE: COW101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Arithmetic, equations, graphs, volumes and areas. Retention time, flow calculations. SI units, statistics, concentration calculations.

SUBJECT NAME: COMPUTER SKILLS I
SUBJECT CODE: CSK101B
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Components of a microcomputer. Applications of software. Managing personal computers.

SUBJECT NAME: COOLING AND BOILER WATER TECHNOLOGY III
SUBJECT CODE: CBW301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: EMERGENCY MANAGEMENT I
SUBJECT CODE: EMR101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: EMERGENCY MANAGEMENT II
SUBJECT CODE: EMR201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Incident management: air, sea, rescue, fire suppression, communication.

SUBJECT NAME: EMERGENCY MANAGEMENT III
SUBJECT CODE: EMR301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
SUBJECT NAME: EMERGENCY MANAGEMENT IV
SUBJECT CODE: EMR401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: FINANCIAL MANAGEMENT II
SUBJECT CODE: FMN211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: FIRE CHEMISTRY II
SUBJECT CODE: FBC211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Solutions, chemical kinetics, flammable liquids, gases and vapours.

SUBJECT NAME: FIRE CHEMISTRY III
SUBJECT CODE: FBC311T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Chemical incident management, organic chemistry, chemical radioactivity, fire retardants, plastics, poisonous materials.

SUBJECT NAME: FIRE CONSTRUCTION I
SUBJECT CODE: FBO111T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: FIRE CONSTRUCTION II
SUBJECT CODE: FBO211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: FIRE CONSTRUCTION III
SUBJECT CODE: FBO311T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: FIRE HYDRAULICS I
SUBJECT CODE: FBH111T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Mathematical concepts. Introduction to hydraulics, hydrostatics, hydrodynamics.
SUBJECT NAME: FIRE HYDRAULICS II
SUBJECT CODE: FBH211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Hydrodynamics, nozzles, energy loss in pipelines, water relaying, field calculations.

SUBJECT NAME: FIRE HYDRAULICS III
SUBJECT CODE: FBH311T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Hydrostatics, hydrodynamics, pumps.

SUBJECT NAME: FIRE PHYSICS II
SUBJECT CODE: FBP211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Mechanics, electricity, magnetism.

SUBJECT NAME: FIRE PHYSICS III
SUBJECT CODE: FBP311T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Transfer of heat, mechanics, thermodynamics, radioactivity, fire detectors.

SUBJECT NAME: FIRE TECHNOLOGY I
SUBJECT CODE: FBT111T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Fire apparatus maintenance, fleet administration, air devices, fire boats, explosions.

SUBJECT NAME: FIRE TECHNOLOGY II
SUBJECT CODE: FBT211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Legislation, regulations, codes, ventilation.

SUBJECT NAME: FIRE TECHNOLOGY III
SUBJECT CODE: FBT311T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: FIRE TECHNOLOGY IV
SUBJECT CODE: FBT411T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>FIRE TECHNOLOGY: INVESTIGATIONS IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>FIN411T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>CONTINUOUS ASSESSMENT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>Not available</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS</td>
<td>Students must undertake an investigation of a practical/applied research nature of at least 120 hours. A written report/dissertation must be submitted for evaluation, examination and moderation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>FIRE TECHNOLOGY: PRACTICAL I</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>FTC101T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>CONTINUOUS ASSESSMENT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>Not available</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS</td>
<td>Fire Fighter I: fire hose basic training, fire water streams, ladders, fire behaviour, fire ground safety, forcible entry, SCBA 1 and 2, ventilation procedures. Basic Ambulance Course (BAC) or Level 3 First Aid Certificate.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>FIRE TECHNOLOGY: PRACTICAL II</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>FTC201T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>CONTINUOUS ASSESSMENT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>Not available</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS</td>
<td>Fire Fighter II: advanced ventilation techniques, building construction, fire alarm and communications, fire cause determination, fire hose appliances, rescue, water supplies.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>GROUNDWATER II</th>
</tr>
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<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>GRW201T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>Not available</td>
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<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>HUMAN RESOURCE MANAGEMENT II</th>
</tr>
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<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>HRM201T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>Not available</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>INDUSTRIAL EFFLUENTS III</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>INE301T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>Not available</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS</td>
<td>Legal aspects and tariffs, purification policy, re-use and disposal, treatment of wastewater, specific problems with industrial effluent, water economy in industry and the assimilation of effluents.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBJECT NAME</th>
<th>INTEGRATED CATCHMENT MANAGEMENT IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE</td>
<td>ICM401T</td>
</tr>
<tr>
<td>EVALUATION METHOD</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME</td>
<td>Not available</td>
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</tbody>
</table>
SUBJECT NAME: LEGAL ASPECTS: WATER II
SUBJECT CODE: LGA201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: LEGISLATION: EMERGENCY SERVICES II
SUBJECT CODE: LES201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: MANAGEMENT INFORMATION SYSTEMS II
SUBJECT CODE: MIS201T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: MANPOWER MANAGEMENT: WATER II
SUBJECT CODE: MMW211T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Personnel management, labour legislation, manpower development, training and use, manpower budgeting, manpower problems, personal relations.

SUBJECT NAME: MICROBIOLOGY: PRACTICAL I
SUBJECT CODE: MBI10YB
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Microbial diversity, bacteria, fungi, protozoa, viruses, microbial growth and culture techniques, microscopy, staining techniques, sterilisation, disinfection and control, enumeration of bacteria and fungi.

SUBJECT NAME: MICROBIOLOGY: THEORY I
SUBJECT CODE: MBI10XB
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Microbial diversity, bacteria, fungi, protozoa, viruses, microbial growth and culture techniques, microscopy, staining techniques, sterilisation, disinfection and control, enumeration of bacteria and fungi.

SUBJECT NAME: PHYSICS IB
SUBJECT CODE: PHU161F
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Remedial mathematics, basic units, vectors and scalars. Kinetics, momentum, moments, work, energy and power. Pressure, density, magnetism, optics, current electricity.
SUBJECT NAME: PHYSICS: EMERGENCY SERVICES I
SUBJECT CODE: PHV101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Remedial mathematics, basic units, vectors and scalars. Kinetics, momentum, moments, work, energy and power. Pressure, density, magnetism.

SUBJECT NAME: POTABLE WATER ANALYSIS: PRACTICAL II
SUBJECT CODE: PWA20YT
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Application of the following methods to potable water: physical parameters, titrimetric methods, colorimetric methods and other instrumental methods.

SUBJECT NAME: POTABLE WATER ANALYSIS: THEORY II
SUBJECT CODE: PWA20XT
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Determination of physical parameters. Titrimetric methods, colorimetric methods, other instrumental methods. Process control analysis.

SUBJECT NAME: POTABLE WATER PURIFICATION II
SUBJECT CODE: PTN201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Pretreatment, coagulation, flocculation, sedimentation, filtration, disinfection.

SUBJECT NAME: PRACTICE OF MANAGEMENT IV
SUBJECT CODE: PMN401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Evolution of management, management practices, styles of management, management by objectives, top management and team work, external relations, protocol, case studies.

SUBJECT NAME: PRINCIPLES OF MANAGEMENT: WATER I
SUBJECT CODE: PMW101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Management principles: introduction to management, the business economics environment, the enterprise and its functions, introduction to management functions. Human resource functions: introduction to the human as employer. Basic labour relations for supervisors.

SUBJECT NAME: PSYCHOLOGY: EMERGENCY SERVICES II
SUBJECT CODE: PYE201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
<table>
<thead>
<tr>
<th>SUBJECT NAME:</th>
<th>RESEARCH METHODOLOGY: FIRE TECHNOLOGY</th>
</tr>
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<tbody>
<tr>
<td>SUBJECT CODE:</td>
<td>RMD11XE</td>
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<tr>
<td>EVALUATION METHOD:</td>
<td>CONTINUOUS ASSESSMENT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME:</td>
<td>Not available</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>A general introduction to research methodology, including the planning and execution of the research process, as well as the different types of research strategies. Basic principles of measurement and methods of data collection.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBJECT NAME:</th>
<th>RESEARCH METHODOLOGY: NATURAL SCIENCES: STATISTICS</th>
</tr>
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<tbody>
<tr>
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<td>RMN20YT</td>
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<tr>
<td>EVALUATION METHOD:</td>
<td>CONTINUOUS ASSESSMENT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME:</td>
<td>Not available</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Statistical methods for the preparation and processing of data, which include descriptive statistical methods.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBJECT NAME:</th>
<th>RESEARCH METHODOLOGY: NATURAL SCIENCES: WATER CARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE:</td>
<td>RMN20XT</td>
</tr>
<tr>
<td>EVALUATION METHOD:</td>
<td>CONTINUOUS ASSESSMENT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME:</td>
<td>Not available</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>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.</td>
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</table>

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<tr>
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<th>RESEARCH METHODOLOGY: STATISTICS</th>
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<tbody>
<tr>
<td>SUBJECT CODE:</td>
<td>RMD11YE</td>
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<tr>
<td>EVALUATION METHOD:</td>
<td>CONTINUOUS ASSESSMENT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME:</td>
<td>Not available</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Statistical methods for the preparation and processing of data, which include descriptive statistical methods.</td>
</tr>
</tbody>
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<tr>
<th>SUBJECT NAME:</th>
<th>WASTEWATER ANALYSIS: PRACTICAL II</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE:</td>
<td>WSA20YT</td>
</tr>
<tr>
<td>EVALUATION METHOD:</td>
<td>CONTINUOUS ASSESSMENT</td>
</tr>
<tr>
<td>TOTAL TUITION TIME:</td>
<td>Not available</td>
</tr>
<tr>
<td>OVERVIEW OF SYLLABUS:</td>
<td>Application of the following methods on waste-water, industrial effluents and mine water: physical parameters, titrimetric methods, gravimetric methods, colorimetric methods and other instrumental methods.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBJECT NAME:</th>
<th>WASTEWATER ANALYSIS: THEORY II</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE:</td>
<td>WSA20XT</td>
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<tr>
<td>EVALUATION METHOD:</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME:</td>
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<table>
<thead>
<tr>
<th>SUBJECT NAME:</th>
<th>WASTEWATER TREATMENT II</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT CODE:</td>
<td>WTR201T</td>
</tr>
<tr>
<td>EVALUATION METHOD:</td>
<td>1 X 3-HOUR PAPER</td>
</tr>
<tr>
<td>TOTAL TUITION TIME:</td>
<td>Not available</td>
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</tbody>
</table>
SUBJECT NAME: WASTEWATER TREATMENT III
SUBJECT CODE: WTR301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: WATER BIOLOGY II
SUBJECT CODE: WBI201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Bacteria, the biosphere, bacteriological investigations of water, diseases and water, limnology, dams and lakes, ecology of sewage treatment systems, communities, practicals.

SUBJECT NAME: WATER CARE TECHNOLOGY I
SUBJECT CODE: WCT101T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Sources of water, water pollution, sources of pollution, water treatment, simple drinking water and sanitary systems, solid waste, treated water.

SUBJECT NAME: WATER HYDRAULICS II
SUBJECT CODE: WHY201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Operation of pumps. Sluice gates. Types of pumps. Flow measurement, valves, level measurement, head, water hammer/cavitation. Operational procedures, calculations, liquids and fluids, pipelines, canals and hydraulic structures.

SUBJECT NAME: WATER INDUSTRY: PRACTICAL II
SUBJECT CODE: WIP201T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Practicals at selected wastewater treatment plants, including relevant wastewater analysis.

SUBJECT NAME: WATER PLANT II
SUBJECT CODE: WPL201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: WATER QUALITY MANAGEMENT IV
SUBJECT CODE: WQM401T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: WATER TREATMENT III
SUBJECT CODE: WTN301T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Stabilisation, softening, iron and manganese removal, demineralisation. Membrane technology, adsorption, ozone, fluoridation, ion exchange, sludge disposal.
SUBJECT NAME: WATER TREATMENT: INVESTIGATIONS II
SUBJECT CODE: WTI201T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
Practicals at selected potable water purification plants, including relevant water analysis.

SUBJECT NAME: WATER TREATMENT: INVESTIGATIONS III
SUBJECT CODE: WTI301T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:

SUBJECT NAME: WATER TREATMENT: PROJECT IV
SUBJECT CODE: WTO401T
EVALUATION METHOD: CONTINUOUS ASSESSMENT
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS:
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.

SUBJECT NAME: WATER UTILITY MANAGEMENT II
SUBJECT CODE: WUM201T
EVALUATION METHOD: 1 X 3-HOUR PAPER
TOTAL TUITION TIME: Not available
OVERVIEW OF SYLLABUS: