

## DIPLOMA IN ANIMAL SCIENCES

Dip (Animal Sciences) - NQF Level 6 (360 credits)

Qualification code: DPAA19

SAQA ID: 100974, CHE NUMBER: H16/14304/HEQSF

Campus where offered:

Pretoria Campus

### REMARKS

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

Acceptance is subject to available capacity according to the Student Enrolment Plan (SEP). Once a programme is full, a waiting list will be in place to provide an opportunity for applicants to fill places of those who did not register on time. Applicants will be informed of their status per official letter from the Office of the Registrar, alternatively, they can check their application status on the TUT website, [www.tut.ac.za](http://www.tut.ac.za).

• **APPLICANTS WITH A SENIOR CERTIFICATE OBTAINED BEFORE 2008:**

**Admission requirement(s):**

A Senior Certificate or an equivalent qualification, with at least an E symbol at Higher Grade or a D symbol at Standard Grade for English and Mathematics.

**Recommended subject(s):**

Preference will be given to applicants with Agricultural Science, Biology and/or Physical Science.

**Selection criteria:**

Applicants are selected by means of a formula for academic merit, based on scholastic performance. The formula for determination of academic merit are as follows:

SYMBOL	HG VALUE	SG VALUE
A	8	7
B	7	6
C	6	5
D	4	3
E	2	1

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

Agricultural Economics, Agricultural Science, Agriculture, Biology, Chemistry, Computer Principles, Computer Studies, Field Husbandry, Geography, Mathematics, Physical Science, Physics, Practical Agriculture and/or Statistics.

- Applicants with a score of 23 and more according to the formula for academic merit determination will be considered for admission.
- Applicants with a score of 20 to 22 according to the formula for academic merit determination will be kept on a waiting list from which the applicants with the highest scores will be selected. Waiting lists will be cleared at the end of September and November.

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

**Admission requirement(s):**

A National Senior Certificate with a bachelor's degree or a diploma endorsement, or an equivalent qualification, with an achievement level of at least 4 for English (home language or first additional language) and 3 for Mathematics or Technical Mathematics or 4 for Mathematical Literacy.



**Recommended subject(s):**

Preference will be given to applicants with Agricultural Sciences, Life Sciences, and/or Physical Sciences.

**Selection criteria:**

To be considered for this qualification, applicants must have an Admission Point Score (APS) of at least **19** (with Mathematics or Technical Mathematics) or **20** (with Mathematical Literacy). Life Orientation is excluded from the APS calculation.

**Assessment procedures(s):**

- Applicants with a score of 23 and more will be considered for admission.
- Applicants with a score of 20 (19 with Mathematics or Technical Mathematics) to 23 will be kept on a waiting list from which the applicants with the highest APS will be selected. Waiting lists will be cleared at the end of September and November.

- **APPLICANTS WITH A NATIONAL CERTIFICATE (VOCATIONAL) AT NQF LEVEL 4:**

**Admission requirement(s):**

A National Certificate (Vocational) at NQF Level 4 with a bachelor's degree or a diploma endorsement, with at least 50% for English (home language or first additional language) and 40% for Mathematics or 50% for Mathematical Literacy, 40% for Life Orientation (excluded for APS calculation), and 50% for any other three compulsory vocational subjects.

**Assessment procedures(s):**

- Applicants with a score of 23 and more will be considered for admission.
- Applicants with a score of 20 (19 with Mathematics or Technical Mathematics) to 23 will be kept on a waiting list from which the applicants with the highest APS will be selected. Waiting lists will be cleared at the end of September and November.

**Selection criteria:**

To be considered for this qualification, applicants must have an Admission Point Score (APS) of at least **19** (with Mathematics) or **20** (with Mathematical Literacy). Life Orientation is excluded from the APS calculation.

- b. *Recognition of Prior Learning (RPL), equivalence and status:*  
See Chapter 30 of Students' Rules and Regulations.
- c. *Intake for the qualification:*  
January only.
- d. *Presentation:*  
Day classes.
- e. *Minimum duration:*  
Three years.
- f. *Exclusion and readmission:*  
See Chapter 2 of Students' Rules and Regulations.
- g. *WIL in Animal Production:*  
See Chapter 5 of Students' Rules and Regulations.

## CURRICULUM

### FIRST YEAR

CODE	MODULE	NQF-L	CREDIT
11P105X	Communication for Academic Purposes	(5)	(10)
AAA105D	Animal Anatomy and Physiology I	(5)	(24)
CPL105X	Computer Literacy	(5)	(10)

INI125D	Information Literacy I (block module)	(5)	(2)
LF1125X	Life Skills I (block module)	(5)	(2)
MAS105X	Mathematics and Statistics I	(5)	(12)
SOR105D	Science for Occupational Purpose I	(5)	(12)

### FIRST SEMESTER

ENT115D	Entrepreneurship I	(5)	(12)
PAE115D	Pasture Science I	(5)	(12)

### SECOND SEMESTER

ABG115D	Animal Breeding and Genetics I	(5)	(12)
ANT115D	Animal Nutrition I	(5)	(12)

TOTAL CREDITS FOR THE FIRST YEAR: **120**

### SECOND YEAR

CODE	MODULE	NQF-L	CREDIT
BPA206D	Beef Production II	(6)	(24)
DPA206D	Dairy Production II	(6)	(24)
PDN206D	Poultry Production II	(6)	(24)
SSA206D	Small Stock Production II	(6)	(24)
VPA206D	Pig Production II	(6)	(24)

TOTAL CREDITS FOR THE SECOND YEAR: **120**

### THIRD YEAR

**On completion of all the modules.**

CODE	MODULE	NQF-L	CREDIT
WAP306D	WIL in Animal Production	(6)	(120)

TOTAL CREDITS FOR THE THIRD YEAR: **120**

TOTAL CREDITS FOR THE QUALIFICATION: **360**

## MODULE INFORMATION (OVERVIEW OF SYLLABUS)

The syllabus content is subject to change to accommodate industry changes. Please note that a more detailed syllabus is available at the Department or in the study guide that is applicable to a particular module. At time of publication, the syllabus content was defined as follows:

### A

#### **ANIMAL ANATOMY AND PHYSIOLOGY I (AAA105D)** **(Module custodian: Department of Animal Sciences)**

**1 X 3-HOUR PAPER**

An informed understanding of the principles of animal anatomy and physiology is important. Students will acquire knowledge, skills and applied competencies in areas such as: general anatomy and physiology of animals; animal cells, tissues and organs; musculoskeletal systems; animal body regulatory systems; haematology and body defense mechanisms; thoracic internal organs including cardiovascular and pulmonary systems; digestive system and accessory glands; male and female urogenital systems and mammary gland; applicable Acts and regulations; and how that knowledge relates to other fields, disciplines or practices. (Total notional time: 240 hours)

**ANIMAL BREEDING AND GENETICS I (ABG115D)**  
**(Module custodian: Department of Animal Sciences)**

**1 X 3-HOUR PAPER**

An informed understanding of the principles of animal breeding and genetics is important for livestock improvement. Students will acquire knowledge, skills and applied competencies in areas such as: basic concepts of animal breeding and genetics, qualitative and quantitative traits of inheritance, population genetics and evolution, selection methods, breeding programmes and mating systems, molecular genetics, Animal Improvement Schemes; applicable Acts and regulations; and how that knowledge relates to other fields, disciplines or practices. (Total notional time: 120 hours)

**ANIMAL NUTRITION I (ANT115D)**  
**(Module custodian: Department of Animal Sciences)**

**1 X 3-HOUR PAPER**

An informed understanding of nutrition and nutrients requirements of farm animals is important. Students will acquire knowledge, skills and applied competencies in the following areas: the components of feed, function of the digestive system, animal nutritional requirements, raw materials as feedstuffs, use of nutrients by farm animals, use of feed additives in animal feeding, feedstuff analysis and ration formulation, and processing of animal feeds; applicable Acts and regulations; and how that knowledge relates to other fields, disciplines or practices. (Total notional time: 120 hours)

**B**

**BEEF PRODUCTION II (BPA206D)**  
**(Module custodian: Department of Animal Sciences)**

**1 X 3-HOUR PAPER**

Students will acquire detailed knowledge, skills and applied competencies in areas such as: Beef cattle Industry and Beef Cattle Improvement Schemes; Evaluation of beef cattle breeds; Beef cattle breeding plans, genetic evaluation and visual appraisal; Reproductive system; Production management of beef cattle; Nutritional practices in beef cattle; Cattle handling equipment; Beef cattle diseases and disease control; Red meat classification system and red meat market; applicable Acts and regulations; and how that knowledge relates to other fields, disciplines or practices. (Total notional time: 240 hours)

**C**

**COMMUNICATION FOR ACADEMIC PURPOSES (11P105X)**  
**(Module custodian: Office of the Executive Dean)**

**1 X 3-HOUR PAPER**

A workable knowledge of English is an essential skill for any graduate who is required to conduct themselves successfully in a professional working environment. This module will equip students with the competencies required to compose a selection of written texts related to communicating both internally and externally within a professional environment. In addition, the module includes strategies that are essential for the effective communication in various situations, including small groups to avoid unproductive conflict, a multicultural context, etc. (Total notional time: 100 hours)

**COMPUTER LITERACY (CPL105X)**  
**(Module custodian: End User Computing Unit)**

**CONTINUOUS ASSESSMENT**

This module provides students with foundational knowledge in computing fundamentals, essential digital skills in key applications based on MS Office Suite and network basics (i.e. MS Outlook and Internet). Online exams are mapped with End-User Computing: SAQA 49077 (61591) Core Element as well as Internet and Computing Core Certification (IC3). (Total notional time: 100 hours)

**D**

**DAIRY PRODUCTION II (DPA206D)**  
**(Module custodian: Department of Animal Sciences)**

**1 X 3-HOUR PAPER**

Students will acquire detailed knowledge, skills and applied competencies in areas such as: Dairy cattle industry and Dairy Cattle Improvement Scheme; Major dairy cattle breeds; Dairy cattle breeding plans and genetic evaluation; Anatomy of the mammary glands; Dairy cattle reproduction and selection; Dairy cattle nutrition; Dairy herd management and health; Milk processing and marketing; applicable Acts and regulations; and how that knowledge relates to other fields, disciplines or practices. (Total notional time: 240 hours)

**E****ENTREPRENEURSHIP I (ENT115D)****1 X 3-HOUR PAPER****(Module custodian: Department of Management and Entrepreneurship)**

Students will acquire knowledge, skills and competence in various types of businesses, management functions, budgeting, accounting, administration, banking, personnel management, customer relations and entrepreneurship including drafting a business plan. These skills will assist entrepreneurs in successfully starting and running a business. (Total notional time: 120 hours)

**I****INFORMATION LITERACY I (INI125D)****CONTINUOUS ASSESSMENT****(Module custodian: Directorate of Library and Information Services)**

Introduction of information literacy. Development of a search strategy and application of a search string to search engines and academic databases. Evaluation of information sources. Ethical and legal use of information. (Total notional time: 20 hours)

**L****LIFE SKILLS I (LF1125X)****CONTINUOUS ASSESSMENT****(Module custodian: Directorate of Student Development and Support)**

Personal, socio-emotional and academic skills development for students in higher education. This module includes 1. Intra- and interpersonal skills (e.g. emotional intelligence, relationships, and conflict management); 2. General study skills (e.g. time management, goal setting, learning styles); 3. Health and wellness (e.g. HIV/AIDS, GBV issues, substance abuse); 4. Student life and adjustment (e.g. identity development, adjusting to a higher education environment); and 5. Financial management. (Total notional time: 20 hours)

**M****MATHEMATICS AND STATISTICS I (MAS105X)****1 X 3-HOUR PAPER****(Module custodian: Department of Mathematics and Statistics)**

Numerical computations, mensuration, equations, functions, descriptive statistics, linear regression and curve fitting. (Total notional time: 120 hours)

**P****PASTURE SCIENCE I (PAE115D)****1 X 3-HOUR PAPER****(Module custodian: Department of Animal Sciences)**

An informed understanding of natural and planted pastures for the nutrition of farm animals is important in livestock improvement. Students will acquire knowledge, skills and applied competencies in the following areas: Plant morphology, growth and development; Natural pastures; Plant nutrition and fertilisation; Pasture establishment and management; Fodder conservation; Environmental effects; Weeds and poisonous plants; Pasture production systems; applicable Acts and regulations; and how that knowledge relates to other fields, disciplines or practices. (Total notional time: 120 hours)

**PIG PRODUCTION II (VPA206D)****1 X 3-HOUR PAPER****(Module custodian: Department of Animal Sciences)**

Students will acquire detailed knowledge, skills and applied competencies in areas such as: Pig Industry and Pig Performance and Improvement Schemes; Evaluation of pig breeds; Pig breeding plans, genetic evaluation and judging pigs for functional efficiency; Reproductive system; Production management of pigs; Nutritional practices in pigs; Pig handling equipment and housing; Pig diseases and disease control; Pork and products classification and marketing; applicable Acts and regulations; and how that knowledge relates to other fields, disciplines or practices. (Total notional time: 240 hours)



**POULTRY PRODUCTION II (PDN206D)****1 X 3-HOUR PAPER****(Module custodian: Department of Animal Sciences)**

Students will acquire detailed knowledge, skills and applied competencies in areas such as: Poultry industry and the Poultry Improvement Programmes; Evaluation of poultry breeds; Poultry breeding plans and genetic evaluation; Reproductive system, production management of poultry; Poultry nutrition; Poultry farm planning and housing systems; Poultry health and disease control and Strategic planning and marketing of poultry products; applicable Acts and regulations; and how that knowledge relates to other fields, disciplines or practices. (Total notional time: 240 hours)

**S****SCIENCE FOR OCCUPATIONAL PURPOSE I (SOR105D)****1 X 3-HOUR PAPER****(Module custodian: Department of Chemistry)**

The role and importance of chemistry in everyday life. Classification and properties of matter. Atoms, molecules and ions. General properties of aqueous solutions and reactions in aqueous solutions. Motion. Forces. Energy and power. Density. Pressure. Temperature and heat. Basic Electricity. Basic Magnetism. Waves. (Total notional time: 120 hours)

**SMALL STOCK PRODUCTION II (SSA206D)****1 X 3-HOUR PAPER****(Module custodian: Department of Animal Sciences)**

Students will acquire detailed knowledge, skills and applied competencies in areas such as: Small stock Industry and Small Stock Improvement Schemes; Evaluation of Small stock breeds; Small stock breeding plans, genetic evaluation and visual appraisal; Reproductive system; Production management of Small stock; Nutritional practices in Small stock; Small stock handling equipment and housing; Small stock diseases and disease control; Product description, classification and marketing; applicable Acts and regulations; and how that knowledge relates to other fields, disciplines or practices. (Total notional time: 240 hours)

**W****WIL IN ANIMAL PRODUCTION (WAP306D)****WORK-INTEGRATED LEARNING****(Module custodian: Department of Animal Sciences)**

The module is designed to prepare students to function effectively in a working environment, which may include animal production units, research or any relevant work environment associated in the cognitive field. The students will demonstrate detailed knowledge, skills and applied competencies such as livestock production systems and improvement whilst placed in the range of livestock industries. (Total notional time: 1200 hours)

