Subject information (overview of syllabus)
The syllabus content is subject to change to accommodate industry changes. Please note: A more detailed syllabus is available at the department or in the study guide that is applicable to a particular subject.

A

AGRICULTURAL ANATOMY AND PHYSIOLOGY I (AAP101T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Animal Sciences)
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. (Total tuition time: ± 70 hours)

AGRICULTURAL BOTANY I (AGB101T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Crop Sciences)
A review of the importance of plants in general and crop plants in particular. The morphology of crop plants: seed and germination, roots, stems, leaves, inflorescence, flowers and fruit. Crop anatomy: the plant cell, roots, stems and leaves. Classification: common and botanical names, development of the botanical classification, plant identification and nomenclature. Crop physiology: photosynthesis, respiration, water absorption and transport, translocation of sugars. (Total tuition time: ± 70 hours)

AGRICULTURAL CALCULATIONS I (AGA111T) 1 X 2-HOUR PAPER
(Subject custodian: Department of Mathematics and Statistics)
Quantifying information through applied mathematics. Elaboration on and presentation of information through appropriate computer programmes. Computer literacy. Agricultural calculations: the use of pocket calculators, fractions, decimals, formulae, exponents, ratios, length, circumference, area, volume, mass, time, percentages and graphs. Computer literacy: the extension and presentation of information by means of applied computer programmes. (Total tuition time: ± 70 hours)

AGRICULTURAL COMMUNICATION I (AGC100T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Crop Sciences)
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. (Total tuition time: ± 70 hours)

AGRICULTURAL ECONOMICS I (AGE111T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Crop Sciences)
A study of agricultural economics with the emphasis on micro-economics 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. (Total tuition time: ± 70 hours)

AGRICULTURAL EXTENSION I (AEX101C) 1 X 3-HOUR PAPER
(Subject custodian: Department of Crop Sciences)
Description of the South African agricultural environment. Role-players in the South African agricultural industry. An introduction to agricultural extension and its relation to technology and rural development. An introduction to different extension methods. An introduction to communication theory and practice, including administrative communication. The use of extension programmes. (Total tuition time: ± 70 hours)

AGRICULTURAL EXTENSION II (AEX201C) 1 X 3-HOUR PAPER
(Subject custodian: Department of Crop Sciences)
Agricultural extension in greater detail. Analysis of the concept of the nature and purpose of agricultural extension. Search for an ethically accountable approach to development. Principles and elements of the science of communication. Investigation of the phenomenon of credibility and its importance in persuasion. Analysis of the different methods and their application in practice. (Total tuition time: ± 70 hours)
AGRICULTURAL EXTENSION III (AEX301C) 1 X 3-HOUR PAPER
*(Subject custodian: Department of Crop Sciences)*
An introduction to group dynamics and leadership. The use of leaders and groups in agricultural extension. Relationship between behavioural change and innovativeness. An in-depth study of the communication of innovation. The theory and practice of diffusion and acceptance. The use of sources of innovations. (Total tuition time: ± 70 hours)

AGRICULTURAL EXTENSION IV (AEX400T) 1 X 3-HOUR PAPER
*(Subject custodian: Department of Crop Sciences)*

AGRICULTURAL MARKETING II (AGR201T) 1 X 3-HOUR PAPER
*(Subject custodian: Department of Crop Sciences)*
Principles of price-forming theory and agricultural marketing, with the emphasis on the marketing function, institutions, competition, marketing costs and margins from the enterprise point of view. Purchasing principles and procedures in buying agricultural inputs (especially farm firms and cooperatives). (Total tuition time: ± 70 hours)

AGRICULTURAL MECHANISATION I (AGH101T) 1 X 3-HOUR PAPER
*(Subject custodian: Department of Crop Sciences)*
Principles and operation of the basic power units applicable to agriculture. (Total tuition time: ± 70 hours)

AGRICULTURAL PRODUCTION MANAGEMENT III (APN301T) 1 X 3-HOUR PAPER
*(Subject custodian: Department of Crop Sciences)*
The purpose of this course is to equip students with skill in and knowledge of farm management, financial management and contemporary issues that are essential to tackle the economic problems related to the farm and agribusiness. (Total tuition time: ± 70 hours)

AGRONOMY II (AGN201T) 1 X 3-HOUR PAPER
*(Subject custodian: Department of Crop Sciences)*
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. (Total tuition time: ± 70 hours)

AGRONOMY III (AGN301T) 1 X 3-HOUR PAPER
*(Subject custodian: Department of Crop Sciences)*
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. (Total tuition time: ± 70 hours)

ANIMAL PRODUCTION IV (DPS400T) CONTINUOUS ASSESSMENT
*(Subject custodian: Department of Animal Sciences)*
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. (Total tuition time: ± 300 hours)

BEEFER PRODUCTION II (BPD201T) 1 X 3-HOUR PAPER
*(Subject custodian: Department of Animal Sciences)*
An introductory study of beef production with the emphasis on the beef industry, breeds, breeding, reproduction, equipment, marketing, diseases and nutrition. (Total tuition time: ± 96 hours)

BEEFER PRODUCTION III (BPD301T) 1 X 3-HOUR PAPER
*(Subject custodian: Department of Animal Sciences)*
An in-depth study of management programmes, marketing, seminars, applied nutrition, the efficiency of farming, judging, farm planning, beeper production and computer application. (Total tuition time: ± 70 hours)
CROP PRODUCTION I (CRO101T)  
(Subject custodian: Department of Crop Sciences)  
1 X 3-HOUR PAPER  
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. (Total tuition time: ± 70 hours)

CROP PRODUCTION IV (CRO400T)  
(Subject custodian: Department of Crop Sciences)  
CONTINUOUS ASSESSMENT  
An in-depth study of 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. (Total tuition time: ± 50 hours)

CROP PROTECTION I (OBS101T)  
(Subject custodian: Department of Crop Sciences)  
1 X 3-HOUR PAPER  
Basic entomology: a review of the morphology, development, reproduction, biology and classification of insects and mites, and collection and mounting of insect specimens. 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. A review of the biology of weeds and methods of weed control: chemical weed control regarding classification, choice and the effectiveness of herbicides. (Total tuition time: ± 70 hours)

CROP PROTECTION II (OBS201T)  
(Subject custodian: Department of Crop Sciences)  
1 X 3-HOUR PAPER  
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. Disease control: a review of different disease management strategies, separation of host and pathogen, cultural control, biological control, physical control, immunisation and resistance, and chemical control, with appropriate examples. Pathogen resistance: mechanisms of resistance and management of resistance. Application: a review of the different types of application equipment and the principles of application, and calibration of application equipment, with appropriate examples. Legislation and the safe use of agrochemicals: discussion of Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (Act No. 36 of 1947) and Hazardous Substances Amendment Act (Act No. 53 of 1992) and various other important agricultural laws relating to pest control, a review of the safe use of agrochemicals. (Total tuition time: ± 70 hours)

CROP PROTECTION III (OBS301T)  
(Subject custodian: Department of Crop Sciences)  
1 X 3-HOUR PAPER  
Pest control: a review of insect behaviour relevant to pest control in agriculture, a comprehensive explanation of the principles of biological and integrated control, insect pest management (IPM). Disease epidemiology: a study of various epidemics and the disease management strategies they require, the influence of environmental, human, pathogen, host and time span factors on the development of epidemics, classification of epidemics, development of integrated disease management strategies through applicable case studies. (Total tuition time: ± 70 hours)

CROP SCIENCE PROJECT IV (PJG400F)  
(Subject custodian: Department of Crop Sciences)  
CONTINUOUS ASSESSMENT  
Syllabus content not available. Please contact the Head of the Department.

E

EXPERIENTIAL LEARNING I (EXP1AGR)  
EXPERIENTIAL LEARNING II (EXP2AGR)  
(Subject custodian: Department of Crop Sciences)  
EXPERIENTIAL LEARNING  
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. An oral examination is taken at the end of the period. (Total tuition time: 6 months)
F

FARM PLANNING I (FMP101T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Crop Sciences)
The planning of a farm to satisfy the principles of optimal resource utilisation. (Total tuition time: ± 70 hours)

FINANCIAL MANAGEMENT: AGRICULTURE IV (FBL400T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Crop Sciences)
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. (Total tuition time: ± 70 hours)

FRUIT AND VEGETABLE PRODUCTION IV (FVP400T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Crop Sciences)
Introduction to postharvest losses of fruit and vegetables: Describing the type and extent of losses; the causes, where and how the losses occur. Basic postharvest management protocols to reduce food loss in the supply chain. Quality assurance: quality components; quality criteria in standard for fresh fruit and vegetables; factors affecting quality; methods for quality evaluation. (Total tuition time: not available)

FRUIT PRODUCTION II (FPR201T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Crop Sciences)
An introduction to the South African fruit industry and the classification of the fruit. Important climatic factors for fruit production. Establishment and maintenance of the orchard. Structure growth development and production of tree fruit, maturity indices for harvesting, basics of harvesting, field handling and determining the fruit quality parameters with an emphasis of popular temperate fruit. (Total tuition time: ± 70 hours)

FRUIT PRODUCTION III (FPR301T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Crop Sciences)
Introduction to a nursery practice. Pre-harvest quality improvement measures. Growth regulators of tree fruit and the harvest and postharvest control of fruit. Important climatic factors for fruit production. Structure growth development and production of tree fruit, maturity indices for harvesting, basics of harvesting, field handling and determining the fruit quality parameters with an emphasis of popular tropical and subtropical fruit. (Total tuition time: ± 70 hours)

L

LEADERSHIP DEVELOPMENT II (LDV200T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Crop Sciences)
Students will learn the fundamental concepts and theories of leadership that are essential to tackle problems and challenges in the organisation such as developing personal skills, interpersonal skills and group skills. (Total tuition time: ± 70 hours)

N

NATURAL PASTURES I (NPT101T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Animal Sciences)
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. (Total tuition time: ± 120 hours)

R

RESEARCH METHODOLOGY: AGRICULTURE (RMD10PC) 1 X 2-HOUR PAPER
(Subject custodian: Department of Crop Sciences)
Planning, designing and conducting research; meaning of research; tools in research; research paradigms; research and society; research project cycle; review of literature and citing sources; quantitative research including the survey method and the experimental method; qualitative research; ethics in research: the research proposal. (Total tuition time: ± 48 hours)
RESEARCH METHODOLOGY: BIOMETRY (RMD10QC)  
**1 X 2-HOUR PAPER**  
*(Subject custodian: Department of Crop Sciences)*  
Introduction to statistics and biometry; general concepts in statistics; presenting and summarising data; relationships between variables (regression); probability theory; probability distributions; estimating population parameters; hypothesis testing. (Total tuition time: ± 48 hours)

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SMALL STOCK PRODUCTION II (SSP201T)  
**1 X 3-HOUR PAPER**  
*(Subject custodian: Department of Animal Sciences)*  
Introduction to small stock production with the emphasis on the small stock industry, small stock races, breeding, reproduction, diseases, nutrition and production systems. (Total tuition time: ± 70 hours)

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SMALL STOCK PRODUCTION III (SSP301T)  
**1 X 3-HOUR PAPER**  
*(Subject custodian: Department of Animal Sciences)*  
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. (Total tuition time: ± 96 hours)

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SOIL SCIENCE I (SSC111T)  
**1 X 3-HOUR PAPER**  
*(Subject custodian: Department of Crop Sciences)*  
Basic principles of chemistry: a basic introduction to the structure of an atom and the properties of the periodic table, including the naming of inorganic compound, properties and the influence of soil pH on nutrient availability with special emphasis on the sources and properties of different fertilisers used. (Total tuition time: ± 100 hours)

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SOIL SCIENCE III (SSC301T)  
**1 X 3-HOUR PAPER**  
*(Subject custodian: Department of Crop Sciences)*  
Plant nutrition and the properties of fertilisers: properties of plant nutrients and their role in plant growth, properties of fertilisers. 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. Irrigation scheduling: soil-water relationships, classification of soil water, measurement of water content, infiltration water movement in soils, evapotranspiration, plant-water relationships, irrigation scheduling. (Total tuition time: ± 70 hours)

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SOIL SURVEYS II (SSV201T)  
**1 X 3-HOUR PAPER**  
*(Subject custodian: Department of Physics)*  
The systematic investigation, description, classification and mapping of soils. The agricultural potential of the most important soils. Basic principles of physics: measurements, units and conversions, mechanics, heat and electricity. (Total tuition time: ± 100 hours)

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STRATEGIC MANAGEMENT: AGRICULTURE IV (SBL400T)  
**1 X 3-HOUR PAPER**  
*(Subject custodian: Department of Crop Sciences)*  
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. (Total tuition time: ± 50 hours)

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VEGETABLE PRODUCTION I (VEG101T)  
**1 X 3-HOUR PAPER**  
*(Subject custodian: Department of Crop Sciences)*  
An introduction to the vegetable industry. The structure, growth, development and production of important vegetable crops in South Africa. (Total tuition time: ± 70 hours)