



SAMPLE COURSE OUTLINE

ANIMAL PRODUCTION SYSTEMS GENERAL YEAR 12

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Sample course outline

Animal Production Systems – General Year 12

Unit 3 and Unit 4

Semester 1

Week	Syllabus content
1–2	Introduction to Animal Production Systems General Year 12 course outline and assessment outline Systems ecology <ul style="list-style-type: none"> • impact of animal production systems on natural ecosystems
3–4	Systems ecology <ul style="list-style-type: none"> • effects of pesticides on the environment • benefits to animal production systems of ecosystem components Produce for purpose <ul style="list-style-type: none"> • implement a calendar of operations for a selected enterprise • identify legal requirements of owning livestock Task 1: Production project – Audit of on-farm natural ecosystems and improvement plan Task 2: Production project – Calendar of operations
5–8	Sustainable production <ul style="list-style-type: none"> • maintaining and improving the quality of soil and water • stewardship of natural and farming resources, including technologies • complying with industry codes of practice • identify risks to sustainable production • review the sustainability of current management practices • Government legislation related to a selected enterprise Task 3: Test – Systems ecology and Sustainable production
9–11	Economics, finance and markets <ul style="list-style-type: none"> • quantity and value of domestic animal production • assess resources used in enterprises • marketing options for animal products • factors affecting supply and demand • interpretation of supply and demand information for a product Task 4: Test – Economics, finance and markets
12–15	Animal health <ul style="list-style-type: none"> • impact of pests and diseases on production systems • life cycles of selected external and internal pests and diseases • assess pest and disease risk • biosecurity measures to reduce risk from pests and diseases • factors influencing pest and disease control programs • immune system, including antibody, antigen, immunity, antitoxin, passive and active immunity • use of vaccination programs to promote immunity • monitoring pests and diseases in a production system • pest and disease management options, including integrated pest management (IPM) • factors affecting the selection of pesticides, including withholding periods Task 5: Investigation – Monitoring of blow fly population Task 6: Externally set task Task 7: Test – Animal health

Semester 2

Week	Syllabus content
1–3	Produce for purpose <ul style="list-style-type: none"> • select animals to meet market requirements • manage animals to optimise profitability • assess quality of produce against market specifications • identify quality assurance programs for selected animal production systems, including their purpose and major features • identify transport and storage and requirements for animal products Task 8: Production project – Managing animals to meet market requirements Task 9: Production project – Assessing animals for quality assurance
4–5	Economics, finance and markets <ul style="list-style-type: none"> • preparation of budgets for an enterprise and identification of items likely to impact on profit • applying the law of the minimum to animal production Task 10: Production project – Budgeting
6–7	Investigating animal production <ul style="list-style-type: none"> • develop hypotheses to test, based on prior information • design and conduct an investigation considering aspects of experimental design, including variables and controls • analyse and interpret data, including calculating means • present data using appropriate methods • draw conclusions based on experimental data and validate from other sources Task 11: Investigation – The effect of sheep age on fleece weight
8–11	Animal structure and function <ul style="list-style-type: none"> • processes of gastric digestion • microbial digestion in herbivores Animal nutrition <ul style="list-style-type: none"> • feed rations for maintenance, growth and reproduction • feed on offer (FOO), stocking rates, and dry sheep equivalent (DSE) • feed intake and feed conversion ratios Task 12: Production project – Feeding plan Task 13: Test – Animal structure and function and Animal nutrition
12–15	Animal structure and function <ul style="list-style-type: none"> • reproductive processes, including conception, pregnancy, birth, lactation • breeding cycles in selected livestock Breeding and improvement <ul style="list-style-type: none"> • aims of breeding and selection, including profitability, meeting market requirements and environmental conditions • sources of genetic variation • selection criteria, including subjective and objective characteristics • genetic terms • predict outcomes of crosses using punnett squares • interactions between genotype and environment (GxE) • breeding systems, including inbreeding, line breeding, and crossbreeding • management of natural breeding programs Task 14: Production project – Livestock breeding and improvement plan Task 15: Test – Breeding and improvement