



SAMPLE COURSE OUTLINE

ANIMAL PRODUCTION SYSTEMS
ATAR YEAR 11

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Sample course outline

Animal Production Systems – ATAR Year 11

Unit 1 and Unit 2

Semester 1

Week	Key teaching points
1	<p>Introduction to APS ATAR Year 11, course outline, assessment outlines</p> <p>Sustainable production</p> <ul style="list-style-type: none"> complying with industry codes of practice <p>Produce for purpose</p> <ul style="list-style-type: none"> identify legal requirements of owning livestock
2–4	<p>Economics, finance and markets</p> <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 <p>Produce for purpose</p> <ul style="list-style-type: none"> implement a calendar of operations for a selected enterprise
5–7	<p>Animal structure and function</p> <ul style="list-style-type: none"> reproductive processes, including conception, pregnancy, birth, lactation breeding cycles in selected livestock <p>Produce for purpose</p> <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
8–12	<p>Animal structure and function</p> <ul style="list-style-type: none"> processes of gastric digestion microbial digestion in herbivores <p>Animal nutrition</p> <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
13–14	<p>Economics, finance and markets</p> <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
15	Semester 1 revision
16	Semester 1 examination

Semester 2

Week	Key teaching points
1–3	<p>Animal health</p> <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
4–5	<p>Investigating animal production</p> <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
6–8	<p>Breeding and improvement</p> <ul style="list-style-type: none"> • aims of breeding and selection, including profitability and meeting market requirements • sources of genetic variation • selection criteria, including subjective and objective characteristics • genetic terms, including <ul style="list-style-type: none"> ▪ gametes ▪ chromosomes ▪ genes ▪ alleles ▪ dominant ▪ recessive ▪ genotype ▪ phenotype • 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
9–10	<p>Systems ecology</p> <ul style="list-style-type: none"> • impact of animal production systems on natural ecosystems, including <ul style="list-style-type: none"> ▪ the effects on soils ▪ water quality ▪ atmospheric and soil pollution ▪ loss of biodiversity • effects of pesticides on the environment

Week	Key teaching points
	<ul style="list-style-type: none">• benefits to animal production systems of ecosystem components, including<ul style="list-style-type: none">▪ clean water▪ plant pollination▪ nutrient cycling▪ pest and disease management
11–13	<p>Sustainable production</p> <ul style="list-style-type: none">• maintaining and improving the quality of soil and water• stewardship of natural and farming resources, including technologies• identify risks to sustainable production• review the sustainability of current management practices• Government legislation related to a selected enterprise
14–15	Revision of whole year
16	Semester 2 examination