SAMPLE COURSE OUTLINE

PLANT PRODUCTION SYSTEMS
GENERAL YEAR 11
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Sample course outline

Plant Production Systems – General Year 11

Unit 1 and Unit 2

Semester 1 and Semester 2

<table>
<thead>
<tr>
<th>Week</th>
<th>Key teaching points</th>
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| 1–3  | Structure of the syllabus  
|      | • course outline  
|      | • assessment outline  
|      | Systems ecology  
|      | • structure of natural, urban and agricultural ecosystems  
|      | • natural resources used in agriculture, including soils, water and air  
|      | • water cycles in landscapes  
|      | Plant environment  
|      | • indicators of soil health and fertility  
|      | • factors affecting soil fertility  
|      | • soil profiles and textures  
|      | **Task 1:** Investigation – Soil characteristics  
|      | • conduct an investigation considering aspects of experimental design  
|      | • interpret data, including calculating means  
|      | • present data using appropriate methods  
|      | • draw conclusions based on experimental data  
|      | **NB:** Integrate the investigation process as appropriate with other content during the course of the year |
| 4–7  | Plant environment  
|      | • influences on the location of plant production including climate and growing system  
|      | • determinants of growing seasons of a region  
|      | Plant structure and function  
|      | • major agricultural and horticultural crops of Western Australia  
|      | Produce for purpose  
|      | • identify types and features of plant enterprises  
|      | • select and use equipment for a given enterprise  
|      | • identify quality criteria for selected plant products  
|      | • develop a calendar of operations for an enterprise production cycle  
|      | • monitor the physical environment, including the weather  
|      | **Task 2:** Production project – Choosing crop varieties  
|      | **Task 3:** Production project – Crop production enterprise (part 1) – Production plan |
| 8–12 | Plant environment  
|      | • macro-nutrients and micro-nutrients required for growth  
|      | • function of macro nutrients in plants and symptoms of deficiency  
|      | • symptoms of water stress  
|      | Plant structure and function  
|      | • life cycles of plants, including annuals and perennials  
|      | • reproductive and vegetative parts of plants  
|      | • photosynthesis process (inputs and outputs) and its purpose  
|      | • requirements for growth, including nutrients, water, light, heat and gases  
|      | • response of growth to temperature and nutrients  
|      | • water use by evapotranspiration  
<p>|      | • propagation by seeds and vegetative parts, including tubers, cuttings, buds and grafts |</p>
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|      | **Produce for purpose**  
|      | - select equipment and resources when working with plants  
|      | - comply with occupational safety and health requirements (OSH)  
|      | **Task 4:** Production project – Production practices project – Plant propagation techniques  
|      | **Task 5:** Test – Plant structure and function and plant environment  
| 13–18| **Plant health**  
|      | - identification of selected pests and diseases and their impact  
|      | - interpretation of information provided on labels for safe and effective use of registered products  
|      | - interpret agricultural chemical labels to determine which product to select  
|      | - application of codes of practice concerning chemical use  
|      | **Produce for purpose**  
|      | - monitor growth and development of plants  
|      | - monitor the impact of the weather on plant enterprises  
|      | - perform routine care of plants  
|      | - select equipment and resources when working with plants  
|      | - comply with occupational safety and health requirements (OSH)  
|      | **Task 6:** Production project – Crop production enterprise (part 2) – Plant health  
|      | **Task 7:** Test – Plant health  
| 19–23| **Breeding and improvement**  
|      | - natural selection and plant adaptation  
|      | - selection of plant types for specific purposes  
|      | - cultivars and their characteristics  
|      | - plant types, their origins and development into current cultivars  
|      | **Task 8:** Production project – Production practices report – Breeding and improvement report  
| 24–27| **Economics, finance and markets**  
|      | - farming as a business  
|      | - identify resources used in production, including land, labour, capital  
|      | - recording production costs and incomes  
|      | - identification of inputs and outputs  
|      | - farming systems and enterprises  
|      | - available markets  
|      | - calculation of costs, returns and profits  
|      | **Task 9:** Test – Marketing  
| 28–32| **Sustainable production**  
|      | - efficient use of resources without compromising the environment  
|      | - renewable and non-renewable resources  
|      | - identification of market requirements to be met for selected products  
|      | - the role of quarantine in preventing pests, diseases and weeds  
|      | - prevention of the spread of pests, diseases and weeds to natural ecosystems  
|      | **Task 10:** Production project – Sustainable production report  
|      | **Task 11:** Test – Grain sampling practical  
|      | **Task 12:** Test – End of year  |