



## SAMPLE COURSE OUTLINE

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### 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

Week	Key teaching points
1–3	<p>Structure of the syllabus</p> <ul style="list-style-type: none"> <li>• course outline</li> <li>• assessment outline</li> </ul> <p>Systems ecology</p> <ul style="list-style-type: none"> <li>• structure of natural, urban and agricultural ecosystems</li> <li>• natural resources used in agriculture, including soils, water and air</li> <li>• water cycles in landscapes</li> </ul> <p>Plant environment</p> <ul style="list-style-type: none"> <li>• indicators of soil health and fertility</li> <li>• factors affecting soil fertility</li> <li>• soil profiles and textures</li> </ul> <p><b>Task 1:</b> Investigation – Soil characteristics</p> <ul style="list-style-type: none"> <li>• conduct an investigation considering aspects of experimental design</li> <li>• interpret data, including calculating means</li> <li>• present data using appropriate methods</li> <li>• draw conclusions based on experimental data</li> </ul> <p><b>NB:</b> Integrate the investigation process as appropriate with other content during the course of the year</p>
4–7	<p>Plant environment</p> <ul style="list-style-type: none"> <li>• influences on the location of plant production including climate and growing system</li> <li>• determinants of growing seasons of a region</li> </ul> <p>Plant structure and function</p> <ul style="list-style-type: none"> <li>• major agricultural and horticultural crops of Western Australia</li> </ul> <p>Produce for purpose</p> <ul style="list-style-type: none"> <li>• identify types and features of plant enterprises</li> <li>• select and use equipment for a given enterprise</li> <li>• identify quality criteria for selected plant products</li> <li>• develop a calendar of operations for an enterprise production cycle</li> <li>• monitor the physical environment, including the weather</li> </ul> <p><b>Task 2:</b> Production project – Choosing crop varieties</p> <p><b>Task 3:</b> Production project – Crop production enterprise (part 1) – Production plan</p>
8–12	<p>Plant environment</p> <ul style="list-style-type: none"> <li>• macro-nutrients and micro-nutrients required for growth</li> <li>• function of macro nutrients in plants and symptoms of deficiency</li> <li>• symptoms of water stress</li> </ul> <p>Plant structure and function</p> <ul style="list-style-type: none"> <li>• life cycles of plants, including annuals and perennials</li> <li>• reproductive and vegetative parts of plants</li> <li>• photosynthesis process (inputs and outputs) and its purpose</li> <li>• requirements for growth, including nutrients, water, light, heat and gases</li> <li>• response of growth to temperature and nutrients</li> <li>• water use by evapotranspiration</li> <li>• propagation by seeds and vegetative parts, including tubers, cuttings, buds and grafts</li> </ul>

Week	Key teaching points
	Produce for purpose <ul style="list-style-type: none"> <li>• select equipment and resources when working with plants</li> <li>• comply with occupational safety and health requirements (OSH)</li> </ul> <b>Task 4:</b> Production project – Production practices project – Plant propagation techniques <b>Task 5:</b> Test – Plant structure and function and plant environment
13–18	Plant health <ul style="list-style-type: none"> <li>• identification of selected pests and diseases and their impact</li> <li>• interpretation of information provided on labels for safe and effective use of registered products</li> <li>• interpret agricultural chemical labels to determine which product to select</li> <li>• application of codes of practice concerning chemical use</li> </ul> Produce for purpose <ul style="list-style-type: none"> <li>• monitor growth and development of plants</li> <li>• monitor the impact of the weather on plant enterprises</li> <li>• perform routine care of plants</li> <li>• select equipment and resources when working with plants</li> <li>• comply with occupational safety and health requirements (OSH)</li> </ul> <b>Task 6:</b> Production project – Crop production enterprise (part 2) – Plant health <b>Task 7:</b> Test – Plant health
19–23	Breeding and improvement <ul style="list-style-type: none"> <li>• natural selection and plant adaptation</li> <li>• selection of plant types for specific purposes</li> <li>• cultivars and their characteristics</li> <li>• plant types, their origins and development into current cultivars</li> </ul> <b>Task 8:</b> Production project – Production practices report – Breeding and improvement report
24–27	Economics, finance and markets <ul style="list-style-type: none"> <li>• farming as a business</li> <li>• identify resources used in production, including land, labour, capital</li> <li>• recording production costs and incomes</li> <li>• identification of inputs and outputs</li> <li>• farming systems and enterprises</li> <li>• available markets</li> <li>• calculation of costs, returns and profits</li> </ul> <b>Task 9:</b> Test – Marketing
28–32	Sustainable production <ul style="list-style-type: none"> <li>• efficient use of resources without compromising the environment</li> <li>• renewable and non-renewable resources</li> <li>• identification of market requirements to be met for selected products</li> <li>• the role of quarantine in preventing pests, diseases and weeds</li> <li>• prevention of the spread of pests, diseases and weeds to natural ecosystems</li> </ul> <b>Task 10:</b> Production project – Sustainable production report <b>Task 11:</b> Test – Grain sampling practical <b>Task 12:</b> Test – End of year