Government of **Western Australia**
School Curriculum and Standards Authority

SAMPLE COURSE OUTLINE

PLANT PRODUCTION SYSTEMS
GENERAL YEAR 11

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	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 • propagation by seeds and vegetative parts, including tubers, cuttings, buds and grafts

Week	Key teaching points
	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