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

PLANT PRODUCTION SYSTEMS

General course

Year 12 syllabus – What's changing: Rationale and Aims

For teaching in 2027

Acknowledgement of Country

Kaya. The School Curriculum and Standards Authority (the Authority) acknowledges that our offices are on Whadjuk Noongar boodjar and that we deliver our services on the country of many traditional custodians and language groups throughout Western Australia. The Authority acknowledges the traditional custodians throughout Western Australia and their continuing connection to land, waters and community. We offer our respect to Elders past and present.

Background

As part of the Western Australian Certificate of Education (WACE) Refreshment for reviewing the nomenclature of courses, the Authority has updated the rationale and aims of each syllabus.

The revised rationale and aims are aligned with the mapping of the general capabilities to provide clear connections between the rationale, aims and syllabus content. The rationale outlines what the subject is about and why it is important. It describes what students can expect to study in the course, along with the knowledge, skills and understandings they will develop throughout the course. It also explains how these can be applied in everyday life and references potential future pathways, outlining how students might connect what they learn in the course to further education, training and employment opportunities.

Important information

WACE Refreshment: Reviewing the nomenclature of courses

This document contains information that will be included in the syllabus effective from 1 January 2027.

Users of the syllabus are responsible for checking its currency.

Syllabuses are formally reviewed by the Authority on a cyclical basis, typically every five years.

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Rationale

The Plant Production Systems General course explores the production of food and fibre in the context of common agricultural plants. Agriculture is the world's biggest industry and is one of the most exciting as it embraces science and technology to supply high quality, safe food and fibre to a global population predicted to increase by 50 per cent by 2050. Along with the increase in on-farm production needed, there will be an increased need to cater for the off-farm (supply chain) infrastructure.

In this course, students study the sustainable use of resources in plant production systems and explore the ways that people manage natural resources, such as plants, soil and water, to meet global societal needs. They evaluate plant production systems, sustainable practices, new technologies, consumer-driven economics and product marketing.

The course enables students to develop knowledge, skills and understandings related to management of natural resources, the structure and function of major agricultural plants, their nutritional and health needs, breeding requirements and factors influencing management of plant production systems

Australian, regional and global communities rely on an understanding of agricultural sciences to manage the ecological and sustainability challenges facing society to maintain and increase agricultural production to feed and clothe people. These include the biosecurity and resilience of agricultural and natural ecosystems, the health and well-being of organisms, both agricultural and non-agricultural, and their populations, and the sustainability of biological resources. Students use their understanding of the interconnectedness of biological systems when evaluating both the impact of agricultural activity and the strategies proposed to address major biological challenges now and in the future in local, national and global contexts.

As the global human population grows, international demand, particularly from Asia, for high quality, safe food and natural fibre products offers a positive outlook for the agriculture and food sector. There is already strong demand across Australia and around the world for people skilled in combining scarce resources with innovative methods of production. This demand can only continue to grow. The study of Plant Production Systems can provide students with pathways to further tertiary level studies in agricultural, including at TAFE, and employment opportunities in the agricultural sector such as agronomist, wool classer, agricultural technician, dairy worker, stock handler and biosecurity officer.

Aims

The Plant Production Systems General course aims to develop students':

- ability to use investigative processes to address plant production challenges, including
  - investigating issues, needs and opportunities related to plant production challenges
  - generating proposals to address plant production challenges
  - collecting evidence and evaluating solutions and processes
  - communicating understandings and conclusions related to plant production systems.
- knowledge and understanding of principles and practices underpinning efficient and sustainable plant production systems, including
  - the structure and function of various plants and plant production systems
  - the interdependence of natural systems and plant production systems
  - management strategies.
- ability to apply skills and technologies to achieve efficient and sustainable plant production and marketing, including
  - selecting and safely using technologies and skills for plant production
  - applying skills to manage production in a sustainable manner
  - applying economic and management practices to optimise viable plant production.
- understanding that agricultural science knowledge is used in a variety of contexts and is influenced by social, economic, environmental, ethical and cultural considerations.