



Master of Agricultural Science

by coursework
or coursework and dissertation



Master of Agricultural Science with specialisations in:

- Agricultural Economics
- Crop and Livestock Farming Systems
- Genetics and Breeding
- Soil Science and Plant Nutrition

Students nominate a specialisation on application.

Course description, features and facilities

Agricultural Science provides the research, technology and information for the sustainable, profitable and ethical development of agricultural industries. Studies in agricultural science include soil science, plant breeding, animal breeding, crop and pasture systems, soil-plant interactions, plant nutrition, integrated pest management, livestock production, scientific modelling, agricultural economics and agri-business, data management, science communication and other topics.

UWA is well equipped for teaching

and research in agricultural science, with a field station at Shenton Park, a research farm near Pingelly, and the outstanding research and outreach activities of the UWA School of Agriculture and Environment, the Institute of Agriculture, the Centre for Plant Genetics and Breeding, SoilsWest and the Australian Herbicide Resistance Initiative.

Specialisations

Agricultural Economics

The application of economics, risk management and marketing within agricultural enterprises and the wider international industry and social contexts. This specialisation explores optimisation of resource management using applied economics within the physical, biological and social constraints in selected agricultural sectors. Sustainable agricultural industries must be underpinned by sound economic principles.

Crop and Livestock Farming Systems

Sustainable and profitable agricultural production requires knowledge of how best to integrate various

components using a systems approach. The application of science to the management of animals and plants in production systems, as well as environmental sustainability, is the focus.

Genetics and Breeding

Plant and animal genetics underpins approaches to breeding of improved crops, pastures and animals for various agricultural industries. This specialisation provides a solid grounding in genetics and molecular genetics and applies these to the theory and practice of modern breeding and conservation of genetic resources. The role of breeding in enhancing the supply of food and fibre, especially in this era of climate change, is emphasised.

Soil Science and Plant Nutrition

Soil management is of great importance to all agricultural production. This specialisation provides an in-depth understanding of the nature of soils and the influence of various factors for sustainable soil management for productive crops and healthy foods.

Course structure

Core units

- AGRI5402 Agribusiness
- SCIE4402 Data Management and Analysis in the Natural Sciences

Each specialisation also has four core units, including the multidisciplinary core unit AGRI5545/6/7/8 International Agriculture: Research and Development. Other units are selected as options.

For details visit handbooks.uwa.edu.au/courses/coursedetails?id=c164

Students can apply to conduct a research project (coursework and dissertation option) to develop in-depth expertise and research training. The project is the equivalent of six coursework units and is presented as a journal paper and a seminar.

Our strengths

- Dryland agriculture
- Water and nutrient efficient agriculture
- Stress-tolerant crops and pastures
- Agricultural economics
- Conservation agriculture
- Plant/crop nutrition
- Land and water management
- Broad-acre farming
- Farming systems
- Plant and animal genetics and breeding
- Scientific modelling and statistics
- Cereals, oil seeds and legume crops
- Green, clean, ethical animal production
- Animal reproduction
- Crop/plant physiology
- Soil science
- Climate change and adaptation
- International agriculture development
- Sustainable grazing systems
- Remote sensing and GIS
- Weed herbicide resistance
- Pest and disease management
- Science communication

Why study Agriculture at UWA?

- UWA is ranked first in Australia and 14th in the world for Agricultural Science.
- The Institute of Agriculture assists with work experience placements.
- Strong links with industries and networking opportunities.
- A vibrant and interactive teaching and learning environment.
- Many areas of research strength and well-designed units and course specialisations.
- Strong cohort of students (domestic and international).
- Work with world-leading agricultural scientists and other specialisations in the Faculty of Science.

Career opportunities

This course prepares you with the knowledge and skills you need for a future in the rapidly evolving field of agricultural science. There is a shortage of agricultural science graduates and career opportunities range from the laboratory to the field, from the city to rural areas, as breeders, agronomists, farm managers, market development officers, researchers, catchment or farming group scientists, journalists, bankers and more.

Graduates are employed as consultants, managers or researchers, by government agencies, universities, consulting firms, food industries, fertiliser companies, community groups, local/regional governments and international agencies.

Admission requirements

A relevant bachelor's degree that aligns with one of the specialisations of this course, or an equivalent qualification as recognised by UWA. You must also demonstrate a minimum level of English language requirements. See study.uwa.edu.au/elc

Key information

While the standard timeframe for completion of this degree is two years (full time), if you have previously completed a bachelor's degree in a cognate (relevant) area it may be possible to complete within 1.5 years. Subject to academic performance, you may apply to undertake a supervised research project (coursework and dissertation option) – an opportunity to develop your project management and research skills and to work closely with an academic and research group in various disciplines. The project replaces six coursework units.

- **Intake periods:** February and July each year
- **International students** should also visit student.uwa.edu.au/international/esos, which gives more information about the study environment, course fees, refund policy and support services.
- **Scholarships for international students:** study.uwa.edu.au/International-students/fees-and-scholarships
- **Domestic students:** Commonwealth supported
- **For more information:** Visit the Future Students website for fees, refund policy and support services study.uwa.edu.au
- **How to apply visit:** study.uwa.edu.au/how-to-apply
- **Course enquiries:** ask@uwa.edu.au



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