

# Curious about...



## Some reasons for studying Plant Science at CSU:

- students have access to modern glasshouses, phytotron, horticulture precinct and laboratory facilities
- in the final year, students undertake a project tailored to their area of interest, which may be in the form of a work placement or a research project
- flexible study options are available, including on campus or online study, with small specialised classes and great access to academic staff.



## Bachelor of Science – Plant Science major

### What is CSU's Bachelor of Science - Plant Science major?

Students in the Bachelor of Science at Charles Sturt University (CSU) can choose to major in Plant Science. The Plant Science major specialises in a range of plant-related topics such as physiology, pathology, taxonomy, biotechnology and propagation. CSU graduates gain significant hands-on experience ensuring they have the necessary skills to work in a broad range of contexts, such as research or applied industries (including agriculture, horticulture, the environment, museums and much more). Graduates also develop solid generic skills allowing them to adapt to other fields of science.

CSU's Bachelor of Science with a Plant Science major offers the flexibility of online education with residential schools twice a year or studying on the Wagga Wagga Campus. The Plant Science major can be combined with a wide range of minors, including Biology, Chemistry, Immunology, Information Technology, Mathematics, Microbiology, Physics, Spatial Science and Statistics, allowing students to tailor the degree to their interests.

### Why study Plant Science?

Plants play an essential role in sustaining human life, providing food, fibre, relaxing parks for communities, oxygen, fuel and natural resources. With the rapidly growing biotechnology industry, plants are now commonly used to improve our society. For example, new pharmaceuticals are derived from plant products, carbon sequestration is used to address environmental issues, biofuels are developed to reduce our reliance on non-renewable energies, plant-based biodegradable plastics are developed to reduce the burden of garbage removal and storage, and adapted species are used post mining for land reclamation. A qualification in Plant Science can therefore provide a wealth of exciting opportunities in a variety of evolving industries.

### What will I learn?

Students undertaking this degree will specialise in Plant Science while also developing a broad knowledge of science, scientific communication, statistics and experimental design.

Year one provides the fundamentals in botany along with other science subjects, such as microbiology, as like us, plants are intimately associated with microorganisms. This is followed by more advanced study of plant physiology and agricultural biotechnology in second year.

In third year, students will specialise in plant propagation and pathology. Students will also integrate their skills and knowledge in a project chosen in line with a topic of their interest. The project will be carried out either in Industry or in a research facility.

If you are interested in a career in research, you may be able to continue to Honours and postgraduate studies, both available at CSU. You will gain new skills and have an opportunity to work with world leading researchers in anatomy, cell and molecular biology, crop production, ecological systems, environmental science, irrigation, plant protection or soil science.



"I came to CSU with a background of horticulture, namely landscaping and nursery management.

The Bachelor of Science at CSU offered great flexibility and this suited me as I wasn't sure what I wanted to do, but knew I loved science. I began in plant science, but soon branched out into biology, ecology and earth sciences as these areas interested me, and I could see the value in understanding plants within an ecological framework.

"At the time, I was beginning a family and couldn't commit to on campus study. The study had to fit around my existing life and routine with children, work, and family. My three children have grown up with me studying and sometimes helped with my assessment tasks!

"Overall, the Bachelor of Science has given me a strong theoretical background to my understanding of plants and the environment and a positive direction for further study.

"I have found the academic staff to be friendly, approachable, professional, and in many cases to have gone well beyond my expectations in their willingness to help students succeed."

Celia Connor,  
Bachelor of Science student

## Career opportunities

As a plant scientist, you will apply the scientific method to understand and solve real and challenging problems. You could examine the ways plants respond to climate change, the diversity of marine organisms, conservation and the use of natural resources, genomics and evolution, or plant ecology. These are complex problems that will require you to contribute or maybe lead a team of scientists, in order to achieve real outcomes. Many roles exist at all levels of the food supply chain, from improving crop yield through molecular biology and controlling pests and weeds, boosting the nutritional value of plants or increasing seed quality, to food safety.

The Bachelor of Science with a Plant Science major may also be the starting point for a research or academic career, allowing you to continue on to Honours or postgraduate study, such as CSU's Doctor of Philosophy (PhD).

## Facilities

CSU's Wagga Wagga Campus is located on more than 640 hectares with new and very well equipped science laboratories. Plant Science students will be working in the National Life Sciences Hub (a teaching and research facility completed in 2012) with cutting-edge instrumentation for biochemistry and microscopy with a confocal microscope, a suite of fluorescence microscopes and a scanning electron microscope. There are excellent glasshouse facilities and a phytotron housing specialist environmentally controlled growth chambers. A horticulture precinct enables potting up of plants and field work can be done on the CSU farm or CSU's affiliated Graham Centre field plots.

## Studying online

CSU provides an excellent range of support tools for online students with course materials designed to engage and promote active thinking and participation.

Materials include study schedules, study modules containing activities designed to encourage participation, assignments designed to test the mastery and application of course materials, resource materials containing interesting applications of the key principles, and computer based education packages. Online forums also form part of the coursework enabling direct and rapid contact with staff and other students.

Lecturers are committed to ensuring they are readily available to assist students through the subject forum, email and telephone in addition to face-to-face contact at residential schools.

## About CSU

CSU is a national university focusing on excellence in education for the professions, strategic and applied research, and flexible delivery of learning and teaching. We work in close association with industry, professions and government to ensure our courses meet and support industry needs, resulting in high graduate employment levels and starting salaries. We attract more than 38,000 students from Australia and around the world and are well-known for our innovative approach to education, offering practical, hands-on courses, supported online to provide our students with accessible, world class education.

## Further information

For more information or to apply, visit:

[www.csu.edu.au/courses/bachelor-of-science](http://www.csu.edu.au/courses/bachelor-of-science)

**For more information about courses and how to apply, please contact info.csu:**

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