BACHELOR OF SCIENCE

Science at Deakin is not just about laboratory work, but prepares you for a range of real-life settings in which today’s science graduates work. You will have the opportunity to explore a diverse range of science-related study areas, before choosing to specialise in the area/s that appeal to your personal interests and career aspirations. You will gain experience through practical programs undertaken in modern teaching facilities and through optional industry placements.

Location: Melbourne Burwood Campus (B), Geelong Waurn Ponds Campus (G) and Warrnambool Campus (W)
Duration: 3 years full-time study (or part-time equivalent)
Deakin Code: S320
VTAC code: Geelong Waurn Ponds Campus: 1400314401 (CSP) full-time/part-time
Melbourne Burwood Campus: 1400514401 (CSP) full-time/part-time
Warrnambool Campus: 1400714401 (CSP) full-time/part-time

Course overview

Science is a practical discipline where teamwork, critical thinking and problem solving are crucial to finding creative solutions to everyday problems. This flexible degree enables you to explore a diverse range of science-related study areas and specialise in at least one area of interest as you progress through the course.

The course is available as a single degree or as a combined degree with Arts, Commerce, Information Systems, Law and Teaching (Science).

Course structure

The Bachelor of Science consists of 24 credit points of study, comprising eight core units (8 credit points); at least one science-related major sequence from the options outlined below (6 credit points); and ten elective units (10 credit points). Students can choose up to 8 credit points of elective units from any area across the University according to their own interests and aspirations, thus enhancing the distinctiveness of their degree. Major sequences are available in the following areas:

Animal Biology (B, G)
This major sequence provides an introduction to different aspects of animal biology including animal structure and function, evolution and evolutionary biology.

Cell Biology (B, G)
This major sequence provides an introduction to the molecular and biochemical basis of cells, including their physiological properties, development, function and interaction with their environment. Students will also learn about the molecular basis of disease.

Freshwater Biology (W)
Freshwater biology is the study of freshwater ecosystems and the relationship between freshwater organisms and their physical and chemical environment. Focused on understanding and managing rivers, lakes and wetlands, this major sequence will help you to develop the knowledge and skills to manage freshwater ecosystems and resources, whilst participating in fieldwork opportunities and industry placements.

Human Biology (B, G)
This major sequence enables you to discover how the body works and why it works that way through studies covering a broad range of areas relevant to human biology, including physiology and genetics, and their relationship to human disease.

Plant Biology (B)
This major sequence is ideally suited to those interested in botany and includes studies in plant morphology, identification, reproduction and evolution, as well as vegetation management and biogeography.

Chemistry (G)
This major sequence provides an introduction to the synthesis, separation, detection and measurement of chemical substances, their properties and reactions.

Chemistry and Material Science (B)
This major sequence provides students with an initial grounding in chemistry and builds towards specialised skills in materials chemistry (which involves the study and design of new materials) and electrochemistry (which deals with the interaction between electrical energy and chemical change).

Environmental Science (B)
This major sequence focuses on the technical aspects of environmental science, and aims to provide a balance between environmental studies on the geosphere, hydrosphere, atmosphere and biosphere.

Fisheries and Aquaculture (W)
This major sequence provides you with comprehensive training in fisheries resource management, aquaculture management, and fisheries biology, with a focus on environmental sustainability, particularly renewable resource exploitation and culture of marine and freshwater species.

Major sequences continued on the next page...
Mathematical Modelling (B, G, X*)
Studies in mathematics provides you with a strong critical knowledge base and develops powers of analysis, logical thinking and problem-solving, as well as a high level of numerical ability.

*(X) major sequence is available as a cloud (online) sequence

Natural History (B)
Natural history involves the study of plants and animals in their natural environment, and leans more towards observational than experimental study methods. This major sequence emphasises the biological aspects of natural history, and includes studies in zoology, botany and palaeontology.

For more information about this course, including further details of the course structure, major sequences and units involved, please visit deakin.edu.au/handbook.

First-class facilities
Experiential learning and practical exposure to current and emerging technology is a key feature of our degree. You will learn in a modern teaching environment and gain hands-on experience by participating in laboratory, field and project work. As well as access to first-class infrastructure and facilities, you will also enjoy the advantage of small class sizes and personal contact with our research-active staff.

Practical industry experience
As a Deakin science student, you will gain experience through innovative practical programs, including professional practice units, which give you the opportunity to apply and consolidate knowledge gained in your course, experience workplace culture and workplace practices, explore career options, develop a professional network, and prepare you for the real-life settings in which today’s science graduates work.

You also have the opportunity to undertake an industry-based learning experience as part of the Work-Integrated Learning (WIL) Program. For more information, please visit deakin.edu.au/sebe/students/wil.

Input from industry and research
Deakin’s teaching and research staff are experts in their respective fields, with broad international links and connections with industry. Input from industry representatives ensures our courses remain relevant, up-to-date and reflect workplace needs. Students have the opportunity to learn from professional industry guest presenters and be informed by our industry- and government-linked research and development projects.

The Melbourne Burwood Campus has research programs in neurobiology, human genetics, cancer biology, plant biology and cell biology, environmental sciences, palaeobiology, physiology, science education, nutrition and exercise sciences. At the Geelong Waurn Ponds Campus there are research programs in biotechnology, chemistry, forensic science and integrative ecology.

At the Warrnambool Campus research programs include marine biology and ecology, freshwater and estuarine biology and ecology and aquaculture and fisheries.

Career opportunities
Graduates of this course may find career opportunities in government institutions, in roles such as quality assurance, occupational health and safety, research, planning, management or marketing; science-related industries, working in pharmaceutical production or pharmaceutical sales; biomedical science areas, such as research or hospital and laboratory science; quality assurance in analytical and diagnostic laboratories; the food industry in quality control; environment and natural resources; teaching; mathematics or science journalism to name a few.

Teaching methods
You will be taught using a range of located learning methods including classes, seminars and practical experiences. Classes typically comprise a large number of students, while seminars are generally smaller, more informal and allow for open discussion of topics raised during classes. A range of units are also available via cloud (online) learning, and can be taken as part of a full-time or part-time degree. Some units are also available during Trimester 3. You can take advantage of this flexibility to study when, where and how you like, and to fit your studies around your work and personal commitments.

Contact Hours
A typical full-time student generally undertakes 4 credit points of study per trimester, with an average of 10 hours per week of study expected for each credit point undertaken. This comprises a combination of hours spent attending classes, seminars and practical experiences, in addition to private study undertaken for research, prepare assessments and participate in online activities.

Pathways
Deakin provides a number of pathway options for students seeking admission to its courses. TAFE pathways for application to the Bachelor of Science include the Diploma of Laboratory Technology or Advanced Diploma of Laboratory Operations.

Successful completion of the Bachelor of Science can lead to further study including postgraduate coursework degrees. Those interested in pursuing research may wish to consider application to an Honours program followed by a higher degree by research (masters and PhD).

Information for applicants
Applications: Applications for Trimester 1, 2015 can be made through the Victorian Tertiary Admissions Centre (VTAC), www.vtac.edu.au.

Year 12 prerequisites: VCE units 3 and 4 – a study score of at least 25 in English (EAL) or 20 in English other than EAL.

Non-Year 12 requirements: Educational history including GPA. Applicants who wish for experience to be considered must include this information on their VTAC Personal Statement.