

UNDERGRADUATE ENVIRONMENT

2014

Melbourne | Geelong | Warrnambool | Off campus

**ENVIRONMENTAL MANAGEMENT
AND SUSTAINABILITY**

FISHERIES AND AQUACULTURE

MARINE BIOLOGY

**WILDLIFE AND
CONSERVATION BIOLOGY**

ELIZABETH WEMYSS

Bachelor of Environmental Science
(Environmental Management and Sustainability), see page 8.



EXPLORE THE WORLD OF ENVIRONMENT AT DEAKIN



Whether you'd like to conserve animals and plants for future generations, study diverse marine ecosystems or contribute to environmental management and sustainability, Deakin's environment courses offer you a range of exciting choices.

Our courses take you out of the classroom and into the field to give you the opportunity to gain the practical skills that only experience can provide. This hands-on experience, combined with the theoretical knowledge you will also learn, provides you with a mix of skills highly valued by employers.

At Deakin you can choose to pursue your passion for the environment through courses that span land and water environments, allowing you to tailor your studies for the career you want.

This booklet will outline the courses we offer in environment, key features of our courses and career opportunities you can expect from completing a degree at Deakin.

Choosing a university course is an important decision – and we are here to help. We encourage you to gather as much information as possible to help you make an informed decision about which course is best for you.

If you need more information, please contact us on 1300 DEGREE (1300 334 733), email enquire@deakin.edu.au or visit deakin.edu.au.

We look forward to seeing you at Deakin!

The Deakin team

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Using this guide

This booklet provides you with detailed information about Deakin's undergraduate courses in environment (for domestic students), including study areas, career opportunities, course overviews and course structures. It is designed to be read in conjunction with the *2014 Undergraduate Course Guide*, which gives an overview of all of Deakin's undergraduate courses, study options, support services and campuses.

Deakin University also produces course guides specifically for international students. To request a copy phone Deakin International on +61 3 9627 4877 or email deakin-international@deakin.edu.au.

Applying to Deakin is easy

You can apply for most of Deakin's undergraduate courses (bachelor's degrees) commencing in Trimester 1 through the Victorian Tertiary Admissions Centre (VTAC). We also offer courses commencing at other times of the year, for example Trimester 2 (commencing in August) and Trimester 3 (commencing in November), that require a direct application to Deakin. Whether you are a current Year 12, TAFE, private provider or mature-age student, currently studying at another university, in the workforce, taking a gap year or a graduate, visit www.vtac.edu.au or deakin.edu.au/study-at-deakin for details.

Find out more

If you need more information, please phone 1300 DEGREE (1300 334 733), email enquire@deakin.edu.au or visit deakin.edu.au.

You can also connect with us on social media, order other publications and visit us. Turn to page 20 for more information.

ENVIRONMENT AT DEAKIN

We offer diverse and unique courses

Deakin offers you a choice of environment courses, which allows you to follow your interests and passions: marine biology, wildlife and conservation biology, fisheries and aquaculture, and environmental management and sustainability.

Our marine biology program is located at Deakin's Warrnambool Campus on the Great Ocean Road coastline. It provides a unique opportunity to study temperate marine biology, in a marine environment that has some of the highest biodiversity in Australia. The course has a strong ecological focus, linking biological and oceanographic processes in the study of marine environments.

Our wildlife and conservation biology course was the first to be offered in Victoria with a major focus in this area. It concentrates on real-world problem solving and applied solutions to wildlife and conservation issues.

Our fisheries and aquaculture course at Warrnambool emphasises a global perspective on sustainable harvesting and production of aquatic resources, linking fish biology with human requirements for food and better health.

Finally, Deakin's long-running environmental management and sustainability course focuses on finding solutions to environmental problems. It provides a basis for developing a career in many different fields such as wildlife management, coastal and marine management, environmental sustainability, natural resources management, environmental protection, and environmental policy and planning.

Engage in hands-on learning

Deakin's environment courses have a strong focus on fieldwork. You will benefit from the experience that only field trips can provide and have the opportunity to gain real field-based – and job-ready – skills. Depending on your course, field activities can include learning skills such as how to handle native animals, measuring the health of freshwater environments, coastal planning, surveying wildlife populations, conducting sustainability assessments, and studying seals and penguins.

The environment courses at Deakin have a core professional practice unit that includes a discipline-specific industry placement. This puts you in touch with the environment industry through involvement with local councils, community groups and businesses dealing with environmental health issues like pollution control, recycling, ecotourism, as well as biodiversity conservation and management.

Further, as part of your environment studies, you could also have the opportunity to apply for the Department of Sustainability and Environment Science Graduate Program, the Science, Engineering and Built Environment Work-Integrated Learning (WIL) Program, Earthwatch projects, as well as work towards becoming a Certified Environmental Practitioner through the Environment Institute of Australia and New Zealand.

For more information, please visit deakin.edu.au/sebe/students/wil.

Our courses are flexible

Our environment courses are flexible so you can choose specialist areas as you progress through your course, and tailor your degree to match your career goals. Our courses will give you a broad qualification that combines the skills for a specialised career with more generic skills that, as a graduate, will provide you with job flexibility and broad career options.

Experience the world while you study

Give your degree a competitive edge with a Deakin Study Abroad Program. Our Study Abroad and Exchange Office offers various programs including exchange, study abroad, short-term study programs, study tours and international volunteering opportunities. Deakin environment students have studied in a range of countries, including New Zealand, Canada, the US and Costa Rica. For more information on study abroad, please visit deakin.edu.au/current-students/student-exchange/exchange.

Learn in first-class facilities

All campuses at Deakin University have state-of-the-art teaching facilities and laboratories. Facilities that support our environment programs include a Geographic Information Systems (GIS) lab, wildlife tracking technology, aquaculture facilities, infrared motion sensing wildlife cameras, a NATA-accredited water quality laboratory and high-tech research labs. The study of marine biology allows you to experience the environment firsthand through state-of-the-art equipment, including research vessels and remotely-operated underwater vehicles which beam images back to the boat as they are being generated on the sea floor.

As part of an initiative to put the Warrnambool Campus in the international spotlight, in 2011 Deakin announced an investment of \$5 million in marine and aquaculture science over a five-year period. The investment includes upgrading the aquaculture research facility to enable the study of marine species in enhanced genetic and fish nutrition laboratories, a new research vessel, oceanographic equipment to expand Deakin's offshore research capabilities and recruitment of additional research and technical staff to support the expansion of research and teaching activities.

Our courses are aimed at getting you a career

At Deakin we aim to produce high-calibre graduates who are job-ready and have a broad understanding of the career opportunities available in their chosen field. Our courses take you out of the classroom and into the field to gain important practical skills. This experience, combined with sound theoretical knowledge, provides you with the crucial mix of skills that is highly valued by employers.

We have industry links

Relationships with organisations such as the Department of Sustainability and Environment, Parks Victoria, the Department of Primary Industries, Catchment Management Authorities, private consultants and local councils ensure our courses are relevant, responsive and progressive.

Our lecturers are active in the industry

Our teaching and research staff are experts in their respective fields, with broad national and international links and experiences. For example, research programs have led to the active involvement of staff in environmental issues of national significance such as river management, salinity control, forest conservation, landscape ecology, coastal management, wildlife conservation and sustainable fisheries. In areas such as these, which are often highly contentious and widely debated in the media and at public forums, our research groups are frequently involved in the decision-making process itself. As a result, our research groups have had a direct influence in shaping environmental management outcomes of critical importance to Australia and the international community.

Research that makes a difference

Much of Deakin's environment research is conducted in partnership with government departments, industry and leading international scientists, and is funded by national and international agencies, often through successful competitive grants. We have ambitious and cutting-edge research programs around our research strengths in wildlife and landscape ecology, marine and freshwater science, environmental management and sustainability, and global change.

We offer a range of scholarships

Deakin University offers scholarships for academic excellence, access and equity, accommodation and Aboriginal and Torres Strait Islanders, ensuring higher education is accessible for all members of the community.

Scholarships in the Faculty of Science, Engineering and Built Environment for environment students include the Dean's Scholars Program, which aims to recognise, reward and nurture high-achieving students who have recently completed Year 12 and who have been admitted through VTAC.

For more information on scholarships, please visit deakin.edu.au/scholarships.

Study honours

Honours is an optional specialised year of study that allows you to draw together the theory and practical skills gained in previous undergraduate studies. You will develop an in-depth knowledge of your particular discipline through research, additional coursework and training in research techniques. It is offered in all the Deakin environment degrees.

Honours can offer you a competitive edge in the job market along with providing a pathway into a higher degree – many honours students go on to complete a PhD or other advanced qualifications.

For more information on honours degrees, please visit deakin.edu.au/honours.

GLOBAL SCIENCE AND TECHNOLOGY PROGRAM

In 2013, the Faculty of Science, Engineering and Built Environment introduced a new program designed to help Science, Engineering and Built Environment students realise their dreams of international study.

The Global Science and Technology Program aims to recognise, reward and support high-achieving Science, Engineering and Built Environment students who would like to conduct part of their studies overseas to help them develop new skills and a broader world view.

Successful applicants will be offered a \$3000 scholarship to assist with travel costs and will be required to participate in the Deakin Global Citizenship Program.

For more information, please visit deakin.edu.au/sebe/global.

AN ELITE ATHLETE FRIENDLY UNIVERSITY

As a member of the Elite Athlete Friendly University (EAFU) Network, Deakin is dedicated to supporting elite athletes in their quest to achieve academic success alongside the demands of training and competition.

We enable recognised elite athlete students to negotiate assessment deadlines, lecture and tutorial attendance and study loads to integrate with sporting commitments. Student athletes may also be able to take several leaves of absence in order to meet sporting commitments and extend the amount of time normally allowed to complete a course.

For more information, please visit deakin.edu.au/future-students/why-deakin/eafu.

WHERE DO OUR GRADUATES GO?

Graduates of our environment courses have the opportunity to work in the public, private and not-for-profit sectors in a wide range of fields, including agriculture, wildlife conservation and management, environmental management and sustainability, fisheries and aquaculture, natural resources management and marine biology.

They have the potential to be involved with environmental developments that hold the key to the future.

Recent Deakin environment graduates have been employed by a range of organisations including:

- **government**
e.g. Department of Primary Industries, Parks Victoria, Department of Sustainability and Environment, Catchment Management Authorities, local councils
- **private**
e.g. corporations, environmental consultants
- **not-for-profit**
e.g. The Nature Conservancy, BirdLife Australia, Fishcare.

USEFUL WEBSITES FOR CAREERS IN ENVIRONMENT

Department of Sustainability, Environment, Water, Population and Communities

www.environment.gov.au

Department of Sustainability and Environment

www.dse.vic.gov.au

Department of Primary Industries

www.dpi.vic.gov.au

Parks Victoria

parkweb.vic.gov.au

Environment Institute of Australia and New Zealand

www.eianz.org

Environmental Jobs Network

environmentaljobs.com.au



As a Deakin environment student, you will benefit from the experience that only field trips can provide and have the opportunity to gain real field-based – and job-ready – skills.

COURSES AND ATARS

	Melbourne Burwood Campus Clearly-in ATAR 2013	Geelong campuses Clearly-in ATAR 2013	Warrnambool Campus Clearly-in ATAR 2013	Page
<i>Bachelor of ...</i>				
Environmental Science (Environmental Management and Sustainability) S398	63.45			8
Environmental Science (Marine Biology) S399			51.15	9
Environmental Science (Wildlife and Conservation Biology) S393	76.45			11
Fisheries and Aquaculture S394			N/A	13
Global Science and Technology Program	80.00*		80.00*	14
Science and Technology (Dean's Scholars Program in environment)	90.00*		90.00*	14
Associate Degree of Arts, Business and Sciences A200		R/C	R/C	14
Related courses				
<i>Bachelor of ...</i>				
Science# S320 <i>With a major sequence in environmental science</i>	62.60	54.90		
Zoology and Animal Science# S369		67.95		
Combined courses				
<i>With a major sequence in environmental science</i>				
<i>Bachelor of ... / Bachelor of ...</i>				
Arts/Science# D311	62.80	59.70		
Commerce/Science# D321	70.80	N/A		
Information Systems/Science# D369	N/A			
Science/Laws# D331	91.25	N/A		
Teaching (Science)/Science# D351	62.10			

Geelong campuses = Geelong Warrnambool Campus and Geelong Waterfront Campus.

R/C = A range of criteria are used for selection.

N/A = Not available or not applicable. The course is offered at this campus. Where no ATAR is available it may mean that other admission requirements apply.

Please refer to the course entry for more information.

* Minimum ATAR.

Please refer to the *2014 Undergraduate Science Career Booklet* for more information.

If a clearly-in ATAR is not listed it means that the course is not available at that campus.

For more information on ATARs, please visit deakin.edu.au/future-students/year12.

MAJOR STUDY AREAS

Environmental health² **B**

This major sequence enables you to explore and apply theoretical and practical skills in the interface between public health and the quality of the environment (e.g. the impact of pollutants on bodily functions), and provides a basic understanding of human physiology and genetics relevant to the interactions of humans with the environment.

Environmental management and sustainability¹ **B**

This course provides you with the skills and knowledge to manage the complex interaction between people and the environment, and to satisfy society's needs for clean water, fresh air and healthy soils through the sustainable use of natural resources, environments and ecosystem services. You can design your own career direction in environmental management by choosing elective units to specialise in areas such as wildlife management; coastal and marine management; environmental sustainability; natural resources management; environmental protection; and environmental policy and planning.

Fisheries and aquaculture¹ **W**

This course 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 sustainable aquaculture of marine and freshwater species. You will learn about fisheries and aquaculture from a global perspective, including topics such as fish markets, nutrition and farm certification processes, the history of Australian fisheries, fisheries methods and impacts of fishing.

Marine biology¹ **W**

This course gives you the opportunity to study temperate marine biology in a marine environment with some of the highest biological diversity in Australia. You can experience the marine environment first-hand through state-of-the-art equipment, including research vessels and remotely-operated underwater vehicles that beam images back to the boat as they are being generated on the sea floor. Marine biologists study how marine organisms interact with their living and non-living environments and how marine ecosystems function. They also consider the impact of humans on the marine environment, and how marine resources can be managed.

Wildlife and conservation biology¹ **B**

In this course you will focus on real-world problem solving and applied solutions to wildlife and conservation issues, as you gain theoretical and practical experience in wildlife ecology and research, landscape and vegetation management, and biodiversity conservation and management. The hands-on emphasis of the course offers field-based experiences such as extended wildlife field studies trips and regular practical classes in every year level.

Environmental science² **B**

This major sequence focuses on the technical science aspects of environmental science, and aims to provide an even balance between environmental studies on the geosphere, hydrosphere, atmosphere and biosphere.

¹ This is offered as a full degree program.

² This is offered as a major sequence within a full degree program.



COURSES



ELIZABETH WEMYSS

BACHELOR OF ENVIRONMENTAL SCIENCE (ENVIRONMENTAL MANAGEMENT AND SUSTAINABILITY) MELBOURNE BURWOOD CAMPUS

‘Studying at Deakin has not only given me all the relevant knowledge but also practical skills to be able to work in the environmental field. Throughout my course I have attended many field trips including three days spent in each of Cape Conran and The Grampians where I learnt how to handle small mammals and conduct my own research project.

I also had the opportunity to gain a worldly perspective when I travelled to Taiwan on a study tour to learn about sustainability and conservation in a different context.

Deakin offers great facilities to further enhance my learning, with up-to-date Geographic Information Systems software and reliable field equipment such as GPSs and water parameter testers.

I have been successful in gaining a graduate position with the Department of Sustainability and Environment (there were only 15 positions from 400 applicants). This is directly related to my course and the experience, knowledge and skills I learnt while undertaking my degree.’

» Read more about Elizabeth’s experience at deakin.is/elizabeth-wemyss.

BACHELOR OF ENVIRONMENTAL SCIENCE (ENVIRONMENTAL MANAGEMENT AND SUSTAINABILITY) 3 B

DEAKIN CODE	ATAR	INDICATIVE FIRST YEAR FEE
S398	B 63.45	\$8180 (CSP) ¹
YEAR 12 PREREQUISITES		NON-YEAR 12 REQUIREMENTS
VCE units 3 and 4 – a study score of at least 25 in English (ESL) or 20 in any other English.		VTAC Personal History online.

The Bachelor of Environmental Science (Environmental Management and Sustainability) provides you with the skills and knowledge to manage the interaction between people and the environment, and to satisfy society’s needs for clean water, fresh air and healthy soils through the sustainable use of natural resources, environments and ecosystem services.

The course has a focus on providing you with practical and relevant skills that will be invaluable to your future career.

You can design your own career direction in environmental management by choosing elective units in areas such as wildlife management, coastal and marine management, and environmental sustainability.

An honours year is available for high-achieving students upon completion of this degree.

Career opportunities

You may choose to pursue opportunities in a wide variety of careers such as environmental planning, environmental policy, sustainability, environmental protection, climate change adaptation and mitigation, industry-based environmental management, waste management, environmental education, catchment management, water resource management, land rehabilitation, pollution control, environmental science, wildlife management, conservation, and coastal and park management.

Work-Integrated Learning

You will have the opportunity to complete a professional practice unit, which involves a placement for a minimum of two weeks within a relevant, course-related organisation.

Course structure

You must complete 24 credit points of study, including 13 core units and 11 elective units.

Level 1

SLE010 Laboratory and Fieldwork Safety Induction Program (0-credit-point safety unit)
SLE101 Techniques in Environmental Science
SLE102 Physical Geography
SLE103 Ecology and the Environment
SLE121 Environmental Sustainability
plus four elective units

Level 2

SLE201 Society and Environment
SLE207 Environmental Planning and Impact Assessment
SLE226 Research Methods
SLE231 Hydrology and Water Resources Management
SLE239 Introduction to Geographic Information Systems
plus three elective units

Level 3

SLE301 Professional Practice
 SLE303 Managing Environmental Projects
 SLE305 Catchment and Coastal Management
 SLE308 Policy Instruments for Sustainability

plus four elective units

Elective units

You are required to select at least three of your elective units from the options listed below.

SHD201/SHD301 Creating Sustainable Futures
 SLE114 Introduction to Parks and Wildlife Conservation
 SLE202 Landscape Evolution
 SLE215 Ecotourism and Interpretation
 SLE216 Bushfire Management
 SLE317 Australian Vegetation and its Management
 SLE320 Sustainability and Waste Management
 SLE322 Landscape Ecology
 SLE328 Oceans, Coasts and Climate Change
 SLE332 Geographic Information Systems
 SLE342 Risks to Healthy Environments

ENVIRONMENTAL HEALTH MAJOR SEQUENCE

From 2013, students enrolled in the Bachelor of Environmental Science (Environmental Management and Sustainability) may elect to complete a major sequence in environmental health. With a focus on healthy environments and healthy people, this major sequence is recommended for students interested in working in public health policy, environmental health and related areas.

HBS107 Understanding Health
 HSH205 Epidemiology and Biostatistics 1
 HSN101 Food: Nutrition, Culture and Innovation
 SLE111 Cells and Genes
 SLE234 Microbiology
 SLE312 Toxicology
 SLE342 Risks to Healthy Environments

BACHELOR OF ENVIRONMENTAL SCIENCE (MARINE BIOLOGY) **3 W**

DEAKIN CODE	ATAR	INDICATIVE FIRST YEAR FEE
S399	W 51.15	\$8360 (CSP) ¹
YEAR 12 PREREQUISITES		NON-YEAR 12 REQUIREMENTS
VCE units 3 and 4 – a study score of at least 25 in English (ESL) or 20 in any other English.		VTAC Personal History online.

Deakin's Bachelor of Environmental Science (Marine Biology) provides the opportunity to study temperate marine biology in a marine environment with some of the highest biodiversity in Australia.

You will undertake fieldwork in natural marine environments on the Victorian coast, providing an exciting and hands-on program of study.

You can experience the environment firsthand through state-of-the-art, remotely operated underwater vehicles that beam images back to the boat from the sea floor. This experience brings the marine environment to life, giving you the opportunity to participate in activities like identifying marine plants and animals as the underwater vehicle runs across the seabed. The course has a strong ecological focus, linking biological and oceanographic processes in the study of marine environments.

An honours year is available for high-achieving students upon completion of this degree.

Career opportunities

Career opportunities for graduates of this course could include marine biology tour guide, fishery officer, marine biology consultant, laboratory technician, local government environmental officer, aquaculture manager and sustainability project officer, as well as moving into research or pursuing postgraduate study.

Work-Integrated Learning

You will have the opportunity to complete a professional practice unit, which involves a placement for a minimum of two weeks within a relevant, course-related organisation.

[> Continued on next page ...](#)

Deakin marine biology students have access to a range of coastal environments right near the Warrnambool Campus.



COURSES



LACHIE HETHERINGTON

BACHELOR OF ENVIRONMENTAL SCIENCE
(MARINE BIOLOGY)
WARRNAMBOOL CAMPUS

'Deakin University in Warrnambool has an excellent social atmosphere and is extremely supportive. The support I received was invaluable towards my endeavours at Deakin.

I have just received a study-related job as a technical officer at Wannon Water based in Warrnambool and Hamilton. The position requires general husbandry of fish species within Wannon Water's aquaculture facilities, water quality monitoring, fish breeding and conducting various experiments on sample species. Without my university course and close relationship with my lecturers I would not have had the opportunity to attain such a position in an industry workplace.

After graduating I intend to undertake an honours year. I plan to continue working in an industry-based job that allows me to earn some money before continuing on with further study and research in a PhD or some form of fisheries research position.'

Course structure

You must complete 24 credit points of study, including 20 core units and four elective units.

Level 1

SLE010 Laboratory and Fieldwork Safety Induction Program
(0-credit-point safety unit)
SLE103 Ecology and the Environment
SLE104 The Blue Planet: Water and Life
SLE105 Aquatic Pollution
SLE111 Cells and Genes
SLE144 Aquatic Life
SLE150 Environmental Chemistry
SLE161 Aquaculture and the Environment
plus one elective unit

Level 2

SLE223 Water Quality and Ecological Health
SLE232 Freshwater Biology
SLE244 Aquatic Ecology
SLE251 Research Methods and Data Analysis
SLE255 Marine Biology
SLE261 Diversity of Fishes
SLE263 Marine and Coastal Ecosystems
plus one elective unit

Level 3

SLE301 Professional Practice
SLE304 Geographic Information Systems: Uses in Aquatic Environments
SLE315 Comparative Animal Physiology
SLE319 Environmental Planning and Assessment
SLE325 Human Impacts on Aquatic Ecosystems
SLE337 Marine Biodiversity
plus two elective units

Elective units

SLE162 Marine and Coastal Environmental Interpretation
SLE217 Aquaculture Nutrition and Seafood Quality
SLE254 Genetics
SLE314 Research Project
SLE328 Oceans, Coasts and Climate Change
SLE329 Advanced Aquaculture
SLE343 Fisheries Management
SLE350 Marine Wildlife

Study environmental science at Deakin University.

Visit deakin.yt/study-environmental-science to watch a YouTube video.

BACHELOR OF ENVIRONMENTAL SCIENCE (WILDLIFE AND CONSERVATION BIOLOGY) **3** **B**

DEAKIN CODE	ATAR	INDICATIVE FIRST YEAR FEE
S393	B 76.45	\$8200 (CSP) ¹
YEAR 12 PREREQUISITES		NON-YEAR 12 REQUIREMENTS
VCE units 3 and 4 – a study score of at least 25 in English (ESL) or 20 in any other English.		VTAC Personal History online.

Deakin's Bachelor of Environmental Science (Wildlife and Conservation Biology) is designed to provide theoretical and practical expertise in a range of discipline areas, such as biodiversity, wildlife ecology, landscape and vegetation management, conservation, animal biology and park management.

Content will focus on real-world problem solving and practical solutions to wildlife and conservation issues. Field-based experiences and industry placement opportunities help prepare you for an exciting career.

The course is designed to enable graduates to contribute in a professional capacity to the study and management of wildlife populations both in Australia and overseas.

An honours year is available for high-achieving students upon completion of this degree.

Career opportunities

You will be qualified for a career in wildlife conservation and management, and environmental science, and ready to take up challenging roles such as wildlife officer, conservation officer, wildlife manager, park ranger, project officer, research scientist, wildlife biologist, conservation biologist or landscape ecologist.

Work-Integrated Learning

You will have the opportunity to complete a professional practice unit, which involves a placement for a minimum of two weeks within a relevant, course-related organisation.

> Continued on next page ...

For more information and to click through to unit descriptions, please visit deakin.edu.au/courses.



ANNA CUTTRISS

BACHELOR OF ENVIRONMENTAL SCIENCE (WILDLIFE AND CONSERVATION BIOLOGY) MELBOURNE BURWOOD CAMPUS

'The camps and field trips have always been so much fun and I feel like I have learnt more by doing things, rather than just learning in a classroom environment.

These trips have given me hands-on skills that cannot be replicated in a classroom, including radio-tracking skills, GPS and GIS experience, mammal trapping, macroinvertebrate collection and vegetation analysis.

Currently I have a seasonal position as a Project Fire Fighter for Parks Victoria and I also have a cadetship with the Department of Sustainability and Environment so, already, I am using the skills and knowledge that I'm learning at Deakin.

Many of my lecturers and tutors are still contributing to research. Their practical knowledge makes them very inspiring and interesting people to learn from, and I know that what I'm learning is completely relevant to my future career.'

COURSES

Course structure

You must complete 24 credit points of study, including 14 core units and 10 elective units.

Level 1

SLE010 Laboratory and Fieldwork Safety Induction Program
(0-credit-point safety unit)
SLE101 Techniques in Environmental Science
SLE102 Physical Geography
SLE103 Ecology and the Environment
SLE111 Cells and Genes
SLE132 Biology: Form and Function
SLE151 Biodiversity: A Global Perspective
plus two elective units

Level 2

SLE201 Society and Environment
SLE204 Animal Diversity
SLE220 Wildlife Ecology
SLE226 Research Methods
plus four elective units

Level 3

SLE301 Professional Practice
SLE309 Wildlife Conservation
SLE310 Ecology of Pest Plants and Animals
SLE322 Landscape Ecology
plus four elective units

Elective units

You are required to select at least five of your elective units from those listed below.

Conservation practice

SLE114 Introduction to Parks and Wildlife Conservation
SLE215 Ecotourism and Interpretation
SLE216 Bushfire Management
SLE239 Introduction to Geographic Information Systems
SLE302 Wildlife Field Studies
SLE317 Australian Vegetation and its Management

Biology and ecology

SLE136 History of Life
SLE202 Landscape Evolution
SLE203 Plant Biology
SLE205 Vertebrate Structure, Function and Evolution
SLE237 Biogeography
SLE254 Genetics
SLE307 Behavioural Ecology
SLE350 Marine Wildlife

For more information and to click through to unit descriptions, please visit deakin.edu.au/courses.

Environment students have access to state-of-the-art facilities.



BACHELOR OF FISHERIES AND AQUACULTURE

3 W

DEAKIN CODE	ATAR	INDICATIVE FIRST YEAR FEE
S394	W N/A	\$8370 (CSP) ¹
YEAR 12 PREREQUISITES	NON-YEAR 12 REQUIREMENTS	
VCE units 3 and 4 – a study score of at least 25 in English (ESL) or 20 in any other English.	VTAC Personal History online.	

Deakin's Bachelor of Fisheries and Aquaculture 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 sustainable aquaculture of marine and freshwater species. Studies also include marine and freshwater biodiversity, ecology and behaviour, research methods, Geographic Information Systems (GIS) and remote sensing, and environmental chemistry.

Fieldtrips and professional practice activities provide you with the opportunity to gain practical, hands-on skills. The course is focused on developing graduates with strong research and management capabilities with skill sets for a wide variety of work environments.

Career opportunities

Fisheries and aquaculture are growing fields with good job prospects around Australia. In addition to careers in the fisheries and aquaculture fields, graduates may also be employed in food and agriculture-based industries, quarantine, wildlife biology, government environmental monitoring, private environmental consulting and museums.

Work-Integrated Learning

You will have the opportunity to complete a professional practice unit, which involves a placement for a minimum of two weeks within a relevant, course-related organisation.

Course structure

You must complete 24 credit points of study, including 20 credit points of core units and 4 credit points of elective units.

Level 1

SLE010 Laboratory and Fieldwork Safety Induction Program (0-credit-point safety unit)

SLE103 Ecology and the Environment

SLE104 The Blue Planet: Water and Life

SLE105 Aquatic Pollution

SLE111 Cells and Genes

SLE144 Aquatic Life

SLE150 Environmental Chemistry

SLE161 Aquaculture and the Environment

plus one elective unit

Level 2

SLE217 Aquaculture Nutrition and Seafood Quality

SLE223 Water Quality and Ecological Health

SLE244 Aquatic Ecology

SLE251 Research Methods and Data Analysis

SLE255 Marine Biology

SLE261 Diversity of Fishes

plus two elective units

Level 3

MAE322 The Economics of the Environment

SLE301 Professional Practice

SLE304 Geographic Information Systems: Uses in Aquatic Environments

SLE315 Comparative Animal Physiology

SLE319 Environmental Planning and Assessment

SLE329 Advanced Aquaculture

SLE343 Fisheries Management

plus one elective unit

Elective units

SLE162 Marine and Coastal Environmental Interpretation

SLE232 Freshwater Biology

SLE254 Genetics

SLE263 Marine and Coastal Ecosystems

SLE314 Research Project

SLE325 Human Impacts on Aquatic Ecosystems

SLE328 Oceans, Coasts and Climate Change

SLE337 Marine Biodiversity

SLE350 Marine Wildlife

N/A Refer to page 5.



COURSES

GLOBAL SCIENCE AND TECHNOLOGY PROGRAM

DEAKIN CODE	ATAR	INDICATIVE FIRST YEAR FEE
Refer to specific course entry.	B 80.00* W 80.00*	Refer to specific course entry.
YEAR 12 PREREQUISITES		EXTRA REQUIREMENTS
Applicants must refer to the prerequisites for their specific environment course preference. Minimum ATAR of 80.00.		All applicants must complete and submit the Global Science and Technology Program Supplementary Information Form (deakin.edu.au/sebe/global).

The Global Science and Technology Program aims to recognise, reward and nurture high-achieving students who want to conduct part of their studies overseas through an exchange or study abroad program. A minimum ATAR of 80.00 is required for entry into this program. Successful applicants will be offered a scholarship of \$3000 to assist with travel costs and will participate in the Deakin Global Citizenship Program. Scholarships will be awarded across the faculty to students undertaking any course offered by the Faculty of Science, Engineering and Built Environment, admitted to the program through VTAC.

Course structure

You are able to select any one of the undergraduate degrees offered by the Faculty of Science, Engineering and Built Environment through this single, campus-based VTAC preference. Refer to specific course entries and campus offerings in this booklet from the list of environment courses.

* Minimum ATAR.

SCIENCE AND TECHNOLOGY (DEAN'S SCHOLARS PROGRAM)

DEAKIN CODE	ATAR	INDICATIVE FIRST YEAR FEE
Refer to specific course entry.	B 90.00* W 90.00*	Refer to specific course entry.
YEAR 12 PREREQUISITES		
Applicants must refer to the prerequisites for their specific environment course preference. Minimum ATAR of 90.00.		

The Dean's Scholars Program aims to recognise, reward and nurture high-achieving students. A minimum ATAR of 90.00 is required for entry into this program. Scholarships will be awarded annually across the faculty to Year 12 students admitted to the program through VTAC. Successful applicants will also be offered a professional development program and have a high chance of being selected for the Science, Engineering and Built Environment Industry-Based Learning Program.

Course structure

You are able to select any one of the undergraduate degrees offered by the Faculty of Science, Engineering and Built Environment through this single, campus-based VTAC preference. Refer to specific course entries and campus offerings in this booklet from the list of environment courses.

* Minimum ATAR.

ASSOCIATE DEGREE OF ARTS, BUSINESS AND SCIENCES[^]

DEAKIN CODE	INDICATIVE FIRST YEAR FEE
A200	\$6590 (CSP) ¹
YEAR 12 PREREQUISITES AND NON-YEAR 12 REQUIREMENTS	
There are no prerequisite studies for this course. You will need to complete an application form including a detailed personal statement. You also need to attend an information session including completion of a literacy exercise as part of an interview process.	

The Associate Degree of Arts, Business and Sciences will help you develop skills in research, written communication, group presentations, critical thinking and learning technologies, which increase your chances of success at university. The key advantage of the associate degree is that it provides a supported transition to tertiary study. It allows for entry into a range of target degrees (as approved by Deakin University) offered at the Warrnambool Campus, Geelong Waterfront Campus, Geelong Warrnambool Campus, or via off-campus study. Completion of the associate degree may give you up to 18 months credit towards one of these target degrees.

Career opportunities

The associate degree can open doors to employment in a range of fields including administration, marketing, business, management, banking, finance, community work, health, natural resource management and science. You also have the option of continuing your studies to complete a bachelor's degree, which will provide access to a wide range of careers and employment opportunities.

Course structure

To graduate from the Associate Degree of Arts, Business and Sciences, you must complete a minimum of 16 credit points, comprising core units and elective units. If you are studying through a partner TAFE these credit points can also include credits gained through subjects studied as part of your TAFE diploma course.

The core units focus on the knowledge and skills you need to be a successful university student. They will provide you with an introduction to studying at university from the perspective of three different disciplines or subjects, and ensure that you become a more self-directed learner. They will also provide support for your study in other subject areas, particularly through the development of academic writing, critical thinking and information technology skills.

In addition to the core units, you will select four electives in your first year and eight in your second year, from units offered by the Faculties of Arts and Education; Business and Law*; Science, Engineering and Built Environment; and Health. Major sequences in arts, business, education, health and science are available.

You will be guided with your subject selection to ensure you choose units that will provide the maximum credit when using the associate degree as a pathway to a bachelor's degree, or to optimise employment opportunities.

If you study this course through the Warrnambool Campus or Geelong Warrnambool Campus* you will also have the option to complete a mentored work placement in your final trimester. This is a great way to gain real-life work experience and enhance your employment opportunities.

For more information and to click through to unit descriptions, please visit deakin.edu.au/courses.

Core units – for course offered at the Warrnambool and Geelong Warrn Ponds Campuses*

Level 1

EAD101 Learning for a Knowledge Society
 EAD102 E-Literacy for Contemporary Learning
 EAD104 Work and the Sustainable Society (2 credit points)
plus four elective units from the list below

Level 2

Select eight first or second level units from a target bachelor's degree.

Elective units

You may choose from a range of units offered at levels 1 and 2 from the Warrnambool Campus, Geelong Warrn Ponds Campus* (or off campus) as listed below, or the Work Placement unit, which is recommended for those intending to finish at the end of level 2.

ACV101 Studio Art: Painting A
 ACV102 Studio Art: Painting B
 AIA105 Visions of Australia – Time and Space From 1700 to 2010
 AIA106 Populate or Perish: Australia's People
 ALC101 Contemporary Communication: Making Sense of Text, Image and Meaning
 ALC102 Contemporary Communication: Making Sense of New Media
 ALW117 Writing for Professional Practice
 ASC101 Introduction to Sociology A
 ASC102 Introduction to Sociology B
 EAD103 Independent Study (recommended)
 EAD105 Applied Community Project (recommended)
 HBS107 Understanding Health
 HBS108 Health Information and Data
 HBS110 Health Behaviour
 MAA103 Accounting for Decision Making
 MAE102 The Global Economy
 MIS101 Business Information Systems
 MMM132 Management
 SLE102 Physical Geography
 SLE103 Ecology and the Environment

Work placement unit

EAD201 Work Placement (2 credit points)

^ As part of the Deakin at Your Doorstep initiative, this course is offered at the Warrnambool Campus or Geelong Warrn Ponds Campus*. The University also offers the course through its TAFE partners at their campuses in Bairnsdale, Craigieburn, Dandenong, Mornington Peninsula, Portland, Swan Hill and Wangaratta.

* Faculty of Business and Law units are offered from the Geelong Waterfront Campus.

RELATED COURSES

Bachelor of Science – major sequence in environmental science **3** **B**

Bachelor of Zoology and Animal Science **3** **G**

Please refer to the *2014 Undergraduate Science Career Booklet* or visit deakin.edu.au/courses for more information on these courses.

- 1 The indicative first year fee is an approximate indication of the cost of this course in the first year of full-time study for a Commonwealth Supported Place. We can't specify the exact figure, because fees are charged per unit, not per course, so the actual fees may vary depending on what units you choose to study.

The fees quoted in this booklet are for Australian students in 2013, and may change for 2014 and later years. You can find more information about fees on our website at deakin.edu.au or at studyassist.gov.au. For information on fees for international students, please visit deakin.edu.au/international.

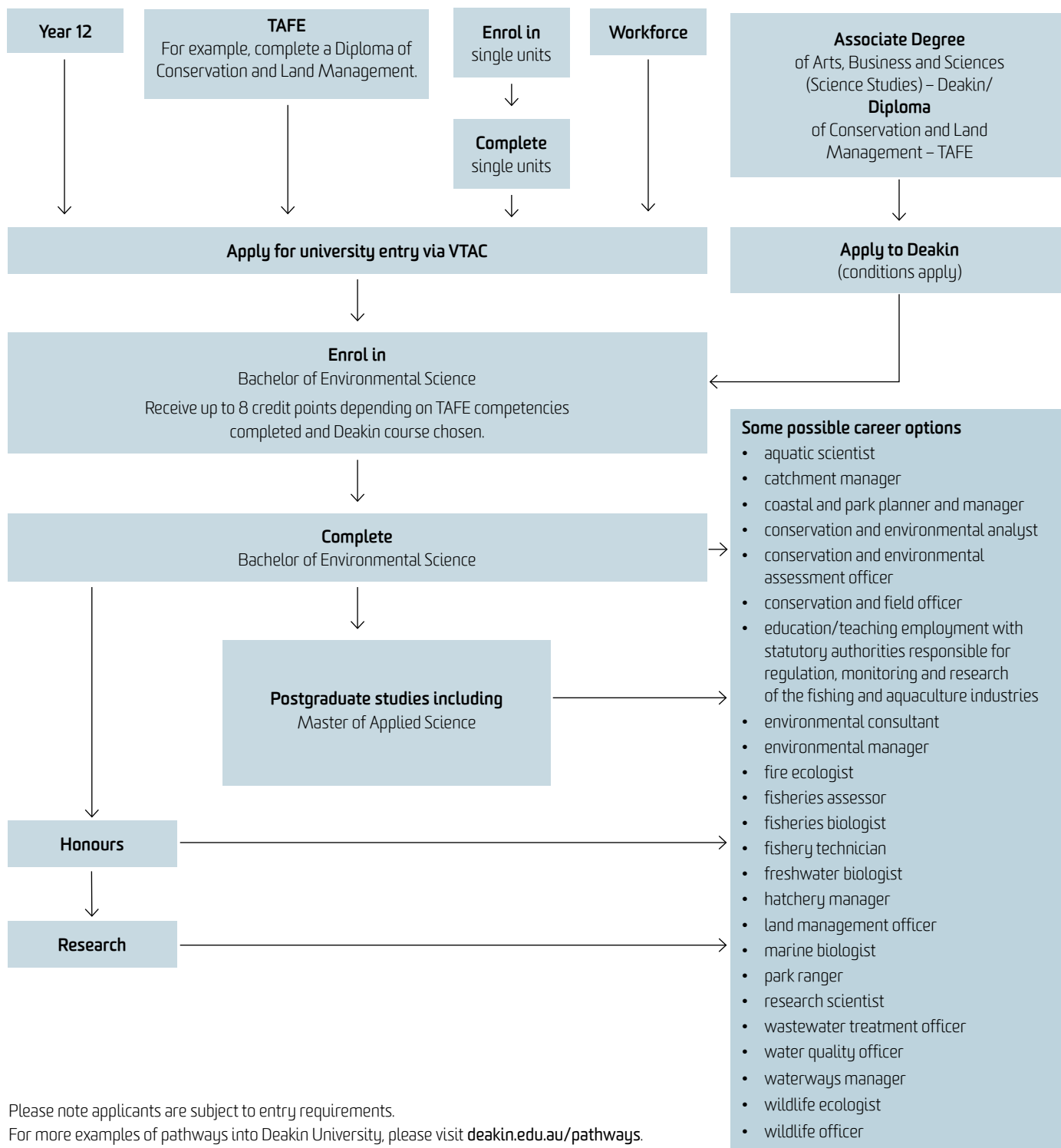


Geelong Warrn Ponds Campus

For the latest information about new courses at Deakin University, please visit deakin.edu.au.

PATHWAYS

Pathway programs provide alternative entry options that take into consideration previous qualifications or your time in the workforce. Deakin has pathway options for a range of applicants including current Year 12 students, International Baccalaureate (IB) students and non-school leavers. Examples for environment students include:





Melbourne Burwood Campus

TAFE pathways

If you complete a diploma or advanced diploma at TAFE in a field similar to the Deakin course of your choice, you can then apply for the Deakin course and you may receive credit for your TAFE qualification. In most cases, this will reduce the number of units you need to complete to obtain your Deakin qualification. Plus, upon graduation, you'll have not one, but two qualifications.

Deakin has formal pathway programs and special credit arrangements with its four partner TAFEs (Box Hill Institute and Chisholm in Melbourne, South West TAFE in Warrnambool and The Gordon in Geelong) however all TAFE qualifications are considered for application to Deakin.

The assessment of credit is based on a number of factors and is determined on an individual basis. To find out what credit you are entitled to, please visit deakin.edu.au/courses/credit.

Melbourne Institute of Business and Technology (MIBT)

Deakin University and the Melbourne Institute of Business and Technology (MIBT) have been in partnership for more than 15 years. MIBT can provide an excellent pathway to Deakin for students who do not meet the admission requirements for Deakin University courses. MIBT is located at Deakin's Melbourne Burwood Campus, Geelong Waterfront Campus and Geelong Warrn Ponds Campus, allowing you the opportunity to gain access to Deakin's facilities and services and get involved in uni life.

MIBT may provide a direct pathway to second-year study at Deakin (conditions apply). MIBT diplomas are equivalent to the first year of a Deakin University undergraduate degree. On successful completion of a diploma and meeting University academic entrance criteria, students may be eligible for entry to second year of the relevant Deakin University undergraduate degree.

Single unit (non-award) study

You may wish to undertake a single unit of study at Deakin (without being enrolled or accepted into a course). These units are subject to fees and do not lead to a degree, but may be credited towards a degree if you succeed in gaining entry to a course at a later stage.

For more information, please visit deakin.edu.au/study-at-deakin/apply/other-types-of-application/apply-for-a-single-subject.

DID YOU KNOW?

Deakin offers a range of scholarships to support students in their studies. For more information, please visit deakin.edu.au/scholarships.

For more information on pathways into Deakin University, please visit deakin.edu.au/pathways.

HOW TO APPLY

Applying to study at Deakin University is easy. Whether you are a current Year 12 student, TAFE graduate, mature-age student, non-school leaver, or international student studying VCE in Australia, you can apply to study a Deakin undergraduate course through the Victorian Tertiary Admissions Centre (VTAC) (unless stated otherwise in the VTAC CourseSearch www.vtac.edu.au or under the individual course entries in this booklet).

When you are applying for a course, make sure you check all of the entry requirements carefully. Most courses have prerequisites and some have additional requirements that you will need to complete to be eligible for selection into that course. For prerequisite and extra requirement information, please visit the VTAC website www.vtac.edu.au.

For more information on how to apply, including special consideration and deferment, visit deakin.edu.au/study-at-deakin/apply.

DID YOU KNOW?

If your application to study at Deakin is successful but it's not the right time for you to commence university, you can defer your studies in most Deakin courses for up to two years. This means you can postpone your studies to work, travel or volunteer and still retain your university place. For more information, please visit deakin.edu.au/study-at-deakin/apply/enrol-defer-withdraw-or-transfer.



LUIS AFONSO

SENIOR LECTURER
SCHOOL OF LIFE AND ENVIRONMENTAL SCIENCES
WARRNAMBOOL CAMPUS

'I feel very fortunate to hold an academic position at Deakin, and to teach undergraduate and graduate students. As an academic and researcher I have always looked forward to opportunities to work with the industry, because this allows me to bring applied knowledge into the classroom. This makes the lectures more exciting and students are able to connect the basic theory with applied or real-life situations. My goal is to have students prepared to think with an unbiased and integrated view, and capable of understanding that the learning skills acquired at Deakin can be used in different contexts, which will ultimately lead to a successful professional life.'

I am interested in basic and applied aspects of fish physiology/ endocrinology, biology, stress, health, and marine/freshwater aquaculture. This is an academic field in which there is a lot to be done and discovered. If you have the desire to learn and a passion for this field, we want you here at Deakin! Among other things, during your academic studies there will be opportunities to undertake field trips, work placement, and laboratory and field-based experiments.'

Fieldwork is a focus of Deakin's environment courses. This hands-on experience, combined with the theoretical knowledge you will also learn, helps provide you with a mix of skills highly valued by employers.



FIND OUT MORE

Talk to us

For more information, phone 1300 DEGREE (1300 334 733) to speak with a course adviser. You can also contact us via email at enquire@deakin.edu.au.

Website

Deakin on the web, deakin.edu.au, contains detailed information on everything at Deakin, including:

- courses
- fees
- campuses
- facilities and services
- applications and scholarships
- events and activities for VCE, TAFE and non-school leavers
- student profiles.

To search for courses and click through to unit descriptions visit deakin.edu.au/courses or deakin.edu.au/handbook.

School of Life and Environmental Sciences website: deakin.edu.au/sebe/les.

Other useful websites

Future students

deakin.edu.au/study-at-deakin

Subject information

deakin.edu.au/handbook

Campuses

deakin.edu.au/campuses
deakin.edu.au/tour

Clubs and societies

dusa.org.au/pages/clubs

Scholarships

deakin.edu.au/scholarships

Services and facilities

deakin.edu.au/campus-life/services-and-facilities

VTAC

www.vtac.edu.au

Study Assist

studyassist.gov.au

Social media@Deakin

Connect with Deakin University on Facebook, Twitter and YouTube. Talk with other future students and ask current students and staff about life and study at Deakin.

facebook.com/DeakinUniversity

twitter.com/DiscoverDeakin

youtube.com/DeakinUniversity

Visit us

There are many opportunities throughout the year to visit Deakin, experience a campus tour and talk with representatives face-to-face.

To organise a campus tour and presentation for an individual or group, please phone:

Geelong 03 5227 8525

Melbourne 03 9246 8063

Warrnambool 03 5563 3444

or email future-students@deakin.edu.au.

For our 2013 Open Day dates, see the back cover of this booklet.

For more information on event dates visit deakin.edu.au or phone 1300 DEGREE (1300 334 733).

Victorian Tertiary Admissions Centre (VTAC)

Contact VTAC for information about:

- the application process
- VCE prerequisites
- extra requirements
- middle-band selection
- clearly-in ATARs
- fees
- Special Entry Access Schemes (SEAS).

www.vtac.edu.au

Further reading

Deakin University produces a range of booklets to help you choose the right course. These include:

- *2014 Undergraduate Course Guide*
- *Accommodation Guide 2014*
- *Introduction to University Guide*
- *Pathways to Deakin 2014*
- *Parents' magazine*
- *Off-Campus Course Guide 2014*
- *University handbook 2013*
deakin.edu.au/study-at-deakin/find-a-course/university-handbook (online only)
- *Deakin at Your Doorstep* (Associate Degree of Arts, Business and Sciences)
- 2014 undergraduate career booklets
- postgraduate course information.

You can download copies of these brochures at deakin.edu.au/course-guides or to request copies of any of the above, email enquire@deakin.edu.au or phone 1300 DEGREE (1300 334 733).

Deakin University also produces course guides specifically for international students. To request a copy phone Deakin International on +61 3 9627 4877 or email deakin-international@deakin.edu.au.

IMPORTANT DATES 2013

DEAKIN EVENTS

Sunday 4 August

Open Day
Warrnambool Campus

Sunday 11 August

Open Day
Geelong Warrn Ponds Campus and
Geelong Waterfront Campus

Sunday 25 August

Open Day
Melbourne Burwood Campus

Deakin will hold additional events for prospective students and parents. Please visit deakin.edu.au/study-at-deakin for updates.

APPLICATION DATES

Trimester 1

Early August*

VTAC applications open

Late September*

Timely VTAC applications close

Mid November*

Late VTAC applications close (late fee applies)

Mid December*

Very late VTAC applications close (very late fee applies)

December

Change of Preference

Please check the Deakin University Change of Preference website closer to the date for specific event details, deakin.edu.au/cop.

* Please check the VTAC website www.vtac.edu.au closer to the time for specific dates.

Trimester 2 and 3

Trimester 2 applications open in April and

Trimester 3 applications open in August.

Course availability and places may be limited.

Please visit deakin.edu.au/apply closer to the time for more information and specific dates.

CAREER EXPOS

Melbourne

Thursday 2–Sunday 5 May

The Age VCE Careers Expo

Saturday 1–Sunday 2 June

Melbourne – Reinvent Your Career Expo

Friday 16–Sunday 18 August

Herald Sun Careers Expo

Interstate

Saturday 23–Sunday 24 March

Brisbane – Reinvent Your Career Expo

Sunday 12–Monday 13 May

Adelaide – Tertiary Studies and Careers Expo

Thursday 16–Sunday 19 May

Perth – Careers, Education and Employment Expo

Saturday 20–Sunday 21 July

Brisbane – The Tertiary Studies Expo (TSXPO)

Saturday 21–Sunday 22 September

Sydney – Reinvent Your Career Expo

VTAC OFFERS

Late November*

Early round offers

Mid to late January 2014*

Round 1 offers

Mid to late January 2014*

Negotiated offers (irregular offers)

Early February 2014*

Round 2 offers

* Please check the VTAC website www.vtac.edu.au closer to the time for specific dates.



Box Hill Institute CRICOS Provider Code: 02411J
Chisholm Institute of TAFE CRICOS Provider Code: 00881F
Gordon Institute of TAFE CRICOS Provider Code: 00011G
Kangan Institute CRICOS Provider Code: 01218G
Melbourne Institute of Business and Technology (MIBT) CRICOS Provider Code: 01590J
South West Institute of TAFE CRICOS Provider Code: 01575G
Sunraysia Institute of TAFE CRICOS Provider Code: 01985A

MORE INFORMATION | ENVIRONMENT

1300 DEGREE (1300 334 733) | enquire@deakin.edu.au | deakin.edu.au/sebe/les

2013 DEAKIN UNIVERSITY OPEN DAYS

04.08.13

WARRNAMBOOL CAMPUS

Princes Highway
Warrnambool Victoria

11.08.13

GEELONG WAURN PONDS CAMPUS

75 Pigdons Road
Waurm Ponds Victoria

GEELONG WATERFRONT CAMPUS

1 Gheringhap Street
Geelong Victoria

25.08.13

MELBOURNE BURWOOD CAMPUS

221 Burwood Highway
Burwood Victoria

deakin.edu.au

Published by Deakin University in March 2013. While the information published in this guide was accurate at the time of publication, Deakin University reserves the right to alter, amend or delete details of course offerings and other information published here. For the most up-to-date course information please view our website at deakin.edu.au.

Deakin University CRICOS Provider Code: 00113B