

Sustainability

Undergraduate and TAFE Courses

**SWIN
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SWINBURNE
UNIVERSITY OF
TECHNOLOGY

Are you prepared to join the green collar revolution?



swinburne.edu.au

When you're choosing where to study, it can be difficult to understand the difference between one institution and another.

Do you focus on ENTER scores? Image? Tradition? Are you choosing the reputation, or the reality? What do you really know about the institutions you're considering? And who are you asking?

For the past four years, Swinburne has been placed in the top 10 universities in Australia by the Learning and Teaching Performance Fund (LTPF)*, which rewards universities for outstanding performance.

Perhaps most importantly, our students have consistently ranked us among the highest in Melbourne for graduate satisfaction**.

We achieve these rankings because throughout Swinburne, we focus on providing personalised attention to ensure you get the most out of your studies.

*The Australian based on DEST 2007 and recent LTPF data.

** Good Universities Guide 2007, 2008, 2009.

SUSTAINABILITY

Are you prepared to join the green collar revolution?

Are issues such as water scarcity, over-consumption and climate change insurmountable problems? Or do you see them as a personal and professional challenge?

You could be at the forefront of change towards an ecological civilisation. As a Swinburne sustainability graduate, you will enter the workforce understanding the need to balance economic considerations and social development within the constraints of the environment we live in and share. You will learn sustainability is not a topic that is studied in isolation. Its concepts can be applied to all industries. Your services as a sustainability professional will be highly valued within government and in industry.

We put sustainability first. We were the first Australian university to sign a Sustainability Covenant with the Environment Protection Authority (Vic). And we were the first educational institution to offer a course in carbon accounting.

We are the only Australian university that houses two national-level sustainability centres. The National Centre for Sustainability, located at the Hawthorn and Wantirna campuses, was established in 2001. It is Australia's leading body for bringing together government, industry and community to foster the development of sustainable practices. The brand-new \$12.6m National Centre for Sustainability and Environmental Design at Wantirna campus boasts world-class facilities. The centre promotes a vision of what can be achieved when we harness the latest innovations in design and practice.

Swinburne was the first university to offer sustainability programs, having started in 2004. Our programs are designed to provide a cross-sectoral understanding of sustainability. They will build your capacity to work in a wide range of sectors to create a more sustainable approach to doing business.

You're interested in:

- Architecture and infrastructure
- Community planning and development
- Conservation and the environment
- Consumer behaviour
- Current affairs and issues
- Domestic and global economies
- Ethics
- Natural resources
- New technologies
- Politics
- Product research and development
- Social and environmental justice

What skills will I develop and improve?

- Ability to recommend ways to conserve and enhance resource bases
- Ability to merge economics and environment in decision making
- Ability to plan and develop strategies
- Ability to think strategically
- Ability to understand the synergies between advances in technology and behavioural change
- Ability to manage risk
- Ability to promote ethical business practices



What are my options?

	SUSTAINABILITY MANAGEMENT	ENVIRONMENTAL SUSTAINABILITY
What careers could the future hold?	Community development Social research Resources management Compliance monitoring Government agencies Policy development	Environmental assessment Renewable energy development Energy efficiency and management Air quality, emissions and carbon management Waste management Environmental legislation and protection Sustainability analysis Water quality and soil testing
Bachelor degrees	Bachelor of Arts (Sustainability Management)	Bachelor of Science (Environmental Sustainability)
Diplomas	Diploma of Sustainability Diploma of Sustainable Environment Management Diploma of Sustainable Water and Catchment Management	Diploma of Sustainability Diploma of Sustainable Environment Management Diploma of Sustainable Water and Catchment Management Diploma of Sustainable Landscape Design
Certificates	Certificate IV in Renewable Energy Certificate IV in Sustainable Energy and Resource Efficiency Technologies	Certificate IV in Renewable Energy Certificate IV in Sustainable Energy and Resource Efficiency Technologies

What you need to know

STUDY AREA	COURSE	ENTER	MINIMUM PREREQUISITES	CAMPUS	DURATION	APPLY
SUSTAINABILITY – UNIVERSITY DEGREES						
Sustainability	Bachelor of Arts (Sustainability Management) ●	New	20 in English (any)	H	3F 6P	V
	Bachelor of Science (Environmental Sustainability) ●	New	20 in English (any) and MATH (any)	H	3F 6P	V
SUSTAINABILITY – TAFE COURSES						
Sustainability	Diploma of Sustainability ●	RC	Concurrent enrolment in a diploma or bachelor's degree	H L P W	1P	D
Sustainable Design	Diploma of Sustainable Landscape Design	RC	Basic computing skills	H	2P	D
Sustainable Environment Management	Diploma of Sustainable Environment Management incorporating a Certificate IV ●	RC	VCE or mature age and industry experience	H	2F 4P	V
Sustainable Technologies	Certificate IV in Renewable Energy	RC	1&2 MATH or mature age	H W	2P	D
	Certificate IV in Sustainable Energy and Resource Efficiency Technologies	RC	1&2 MATH or mature age	H W	1F	D
Sustainable Water and Catchment Management	Diploma of Sustainable Water and Catchment Management ●	RC	Industry experience/employment	L	2F 4P	V

KEY

PATHWAYS	ENTER	PREREQUISITES	CAMPUSES	DURATION	APPLY
● Pathway to course available*	N/A Not applicable New New course RC Range of criteria	MATH Mathematics	H Hawthorn L Lilydale P Prahran W Wantirna	F Full-time P Part-time	V VTAC D Direct

* For more information on the unit exemptions that you may be eligible for after completion of a TAFE qualification talk to your course adviser or visit www.swinburne.edu.au/pathways

What are the key features of a bachelor degree?

Professional Learning Model

At Swinburne we believe the best lessons also come from experience. It's why we have developed the Swinburne Professional Learning Model.

Unique to Swinburne, the model focuses on preparing students for professional life after university. We do this by giving our students as much exposure to the real world as possible. To learn, by doing. The model has been engineered to give you an understanding of how your degree – and the knowledge you acquire from that degree – works in the real world.

Swinburne pioneered this approach with Industry-Based Learning (IBL) in 1963. Since then the Swinburne Professional Learning Model has grown to include other kinds of valuable life experiences. These experiences can give you the skills and qualities to help you succeed in your future career.

These experiences include:

- **Capstone Projects** which allow you to put theory into practice and gain insight into real-life scenarios.
- **International opportunities** – you can do one or two semesters of study, a study tour in another country, or an international work placement.

- **A modular degree structure** offering unprecedented flexibility. It allows you to build your passions and interests into your professional qualification.
- **Careers in the Curriculum** is a compulsory career-planning subject that helps you get the skills for winning your first professional job.
- **Summer & Winter Terms** that allow you to balance work and study with a flexible academic calendar.
- **Electives Plus minors** – an additional program offered across the university in Summer and Winter terms. It enables you to study areas outside of your discipline to improve your employment prospects.

Scholarships

For a comprehensive list of selection criteria, application procedures and application forms www.swinburne.edu.au/scholarships

What is IBL?

Industry-Based Learning, or IBL, is available to most Swinburne domestic students in the second or third year of their bachelor degree. Under Australian government regulations, it is not available to international students. IBL is the opportunity to take six or 12 months of paid work placement in a field that relates to your studies. IBL helps to put your learning into practice and may improve your employability and starting salary on graduation.

What is a Capstone Project?

Swinburne has introduced Capstone Projects into all majors. This is a professionally focused project undertaken over the last two semesters in your major.

Working within a team in an industry context, you will develop solutions for a real issue and get the opportunity to put those solutions into action.

It's a chance to identify your personal strengths and develop the skills you will need to succeed once you graduate.

Projects may be externally sourced industry and community projects, competitions, research-based projects or internally developed project briefs.

Majors and minors

You can combine a major with a co-major, or a major with two minors.

Here's how it works:

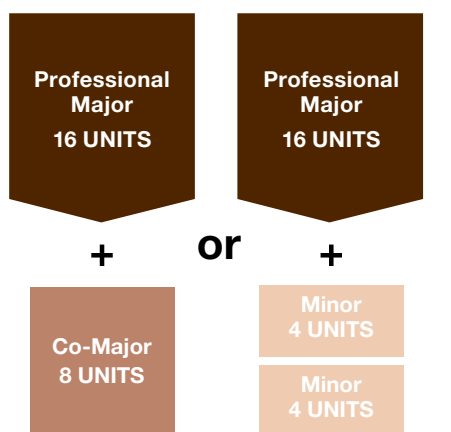
Most three-year degree programs at Swinburne comprise **24 units of study***.

A major is 16 units and is mandatory. It gives you professional specialty. All majors are linked to industry demands and offer clear career prospects. Your major is taught by your host faculty.

A co-major is eight units and can be taken from a wide range of discipline areas.

A minor is four units and can be taken from any discipline, subject to timetabling availability.

Your choice of complementary co-majors or minors will deepen your specialty, or add breadth – both are ideal options for a well-rounded CV.



The range of co-majors and minors available can be as flexible as you are. Timetabling may mean that the minor you really want to do is not available in a standard three-year bachelor degree period, but the more flexible you are about when you study and how long it takes, the more flexible Swinburne can be at ensuring you can craft the degree that you want.

* Engineering is a four-year degree

Environmental Sustainability

Bachelor of Science (Environmental Sustainability)

Campus: Hawthorn

VTAC Code: 34471

Duration: Three years full-time or equivalent part-time. An optional and additional six or 12 months of IBL is also available.

2009 Round 1 Clearly-In ENTER: New

Intake: February, August

Prerequisites: A study score of at least 20 in each of English (any) and in mathematics (any).

Corporations are beginning to take responsibility for their environmental impact, and if you want to help change the world, a professional major in Environmental Sustainability may be the place to start. Environmental Sustainability applies the principles of sustainable development to address the causes of environmental hazards. You will gain an understanding of the relationship between local, global, social and ecological issues and the responsibility of the different groups in sustainability. You will combine this knowledge with scientific skills, such as chemistry, biology and microbiology, in order to address environmental sustainability in the future.

Major study areas

An Environmental Sustainability major comprises 16 units of a 24 unit degree. In addition students undertake either a co-major (eight units) or two minors (four units each) to complement their degree. Students can choose from a range of co-majors or minors that add depth or breadth to their degree. Study areas in the Environmental Sustainability major include biology, chemistry, environmental sustainability, environmental health, environmental management, health policy and promotion, law, microbiology, occupational health and safety, public health, risk analysis and management and research methods.

Career opportunities

As a graduate of this program, you can expect to find employment in a range of roles involving sustainability management in the private and public sectors. Opportunities are growing in the areas of environmental risk assessment and protection; renewable energy development; agriculture and wetland restoration; managing energy efficiency; air, soil and water quality monitoring; carbon, waste and resource management; sustainability analysis including policy and legislative advice; and building sustainable communities.

Sustainability Management

Bachelor of Arts (Sustainability Management)

Campus: Hawthorn

VTAC Code: 34391

Duration: Three years full-time or equivalent part-time. An optional and additional six or 12 months of IBL is also available.

2009 Round 1 Clearly-In ENTER: New

Intake: February, August

Prerequisites: A study score of at least 20 in English (any)

This major examines the complex and diverse threats to sustainability and provides students with the critical knowledge and practices to meet the challenge. Issues addressed range from global warming, resource depletion and destruction, fossil fuel and motor vehicle dependence through to community health, social exclusion and inequality of health and social wellbeing. The complexity of these issues is such that they cannot be addressed by a single discipline so the course is deliberately multi disciplinary with subjects informed by human ecology, philosophy, sociology, science, politics and public policy. The course is about problem solving and many of the subjects deal with the conceptual, policy, evaluation, planning, communication and management skills and tools necessary to put us on the path to a more sustainable future.

Major study areas

A Sustainability Management major comprises 16 units of a 24 unit degree. In addition you will undertake either a co-major (eight units) or two minors (four units each) to complement your degree. Study areas in the Sustainability Management major include Australian politics, behavioural change for sustainability, environment and sustainability, environmental philosophy, sociology, politics, communications, media, philosophy and cultural inquiry, political economy, politics and history, psychology, politics and policy studies, philosophy, sustainability management, sustainable production and consumption.

Career opportunities

Graduates are suitable for employment in a wide range of positions, including public administration, community development, social research, resources management, compliance monitoring, government agencies, policy units, and not-for-profit organisations.



What are the benefits of doing a TAFE course?

TAFE courses are more focused on learning for work and in many cases learning at work. The teaching is based on supporting you to gain specific skills so there are more contact hours, smaller classes and more personal contact with your teachers. The skills you learn are directly relevant to performing tasks in the workplace and are aimed at improving your employability, and ability to adapt to changing work.

There are also pathways that make it easier to move between TAFE and university. You can do this because you receive credits for what you've already learned.

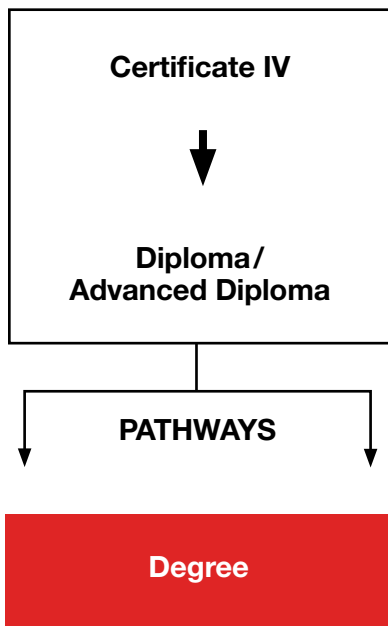
We offer two types of pathways into university degrees:

Swinburne Pathways Direct

These are purpose-built education pathways that take you from Swinburne TAFE into a Swinburne degree program. Because you move within Swinburne, you do not have to apply through VTAC.

Pathways

If you are in a course that does not have Swinburne Pathways Direct, or if you are with another TAFE or university, you may still be able to get credits towards your entry into a Swinburne degree.



The program you choose depends on what you want to achieve.

- **Certificate III and IV courses**, often called Skills Building, provide entry into various trades, traineeships or other jobs that require skills and knowledge beyond a basic level.
- **Diplomas and Advanced Diplomas**, often called Skills Deepening, help you to progress to a higher level or to get you started in a paraprofessional job. It might just give you the skills to get a promotion, or the confidence to handle increased expectations at work. There are many opportunities – it's all a matter of helping you get the education you need, to get you where you want to be.

Why is skills recognition important?

If you have previous work experience or education, you might be closer to a qualification than you realise. We learn in many different ways and the skills we develop through work or personal experience need to be recognised.

This is a critical element of your personalised learning plan. Recognition of Prior Learning recognises any prior knowledge and experience and measures it against the qualification in which you are enrolled. You may not need to complete all of a training program if you already possess some of the competencies taught in the program.

TAFE courses

Environment Management

Diploma of Sustainable Environment Management incorporating a Certificate IV

Campus: Hawthorn

Duration: Two years full-time or equivalent part-time

Prerequisite: Satisfactory completion of an appropriate Victorian Year 12 or its equivalent, or mature age.

Application: Direct to Swinburne

You will develop the skills and knowledge needed to implement sustainable practices in a large number of different industries and environments.

Major study areas

The format of this course is presently under review in order to maintain its industry relevance. For the most up-to-date information on major study areas that you will cover, please see www.swinburne.edu.au/courses

Career opportunities

Employment in local government, emergency services, and private industries such as waste treatment and disposal, chemical transport, and private consultancies with a focus on ecologically sustainable development.

Sustainable Design

Diploma of Sustainable Landscape Design

Campus: Hawthorn, Online

Duration: Two years part-time

Prerequisite: Basic computing skills

Application: Direct to Swinburne

The Diploma of Sustainable Landscape Design incorporates best practice in landscape design and best practice in sustainable landscaping practices. The course aims to influence a generation of landscape designers to see their role as creating landscapes that: facilitate positive social interactions; benefit the environment; and are economically viable.

Major study areas

- Prepare a landscape project design
- Produce computer-aided drawings
- Recommend plants and cultural practices
- Design towards sustainable landscapes
- Oversee sustainable landscape construction techniques
- Apply water-sensitive urban design (WSUD)

Plus three electives

Career opportunities

Landscape or garden designer with your own business, work as a landscape or garden designer in another practice, project manager implementing sustainable practices, sales consultant related to sustainable landscape products, sustainability consultant for industry and/or local council.

Sustainability

Diploma of Sustainability

Campus: Hawthorn, Lilydale, Prahran, Wantirna

Duration: One year part-time

Prerequisite: This course is available to current Swinburne students studying a diploma or degree, or those who have completed a diploma or higher qualification and have relevant work experience.

Application: Direct to Swinburne

You will be introduced to concepts of sustainability, explore the relationship between economy, society and natural environment. You will discover how to apply theories of behaviour change to individuals and organisations and gain insights into sustainable production and consumption. You will become capable in applying your sustainability knowledge to a wide range of sectors and industries.

Major study areas

- Apply concepts of sustainability to a major challenge
- Develop and implement a program to support behaviour change and sustainable practices
- Develop a business plan for responsive and sustainable business practices
- Analyse the long-term outcomes of sustainable production and consumption

Career opportunities

Employment in emerging sustainability-related sectors as well as across traditional sectors that are evolving to meet the challenges of sustainability.

Sustainable Technologies

Certificate IV in Renewable Energy

Campus: Hawthorn, Wantirna

Duration: One year full-time, or part-time equivalent (currently only offered part-time)

Prerequisite: Satisfactory completion of an appropriate Victorian Year 12 or equivalent with passes in Units 1 and 2 Mathematics, or mature age.

Application: Direct to Swinburne

You will learn the principles for the operation of renewable energy systems such as solar power, photovoltaic electricity, wind energy and micro-hydro systems; and the practical skills required

for the installation and maintenance of renewable energy technologies. The course prepares you for Clean Energy Council Accreditation.

Major study areas

- Electrical technology and electronics
- Renewable energy technologies
- Solar design, wind energy and photovoltaic systems
- Stand-alone renewable energy systems
- Business

Career opportunities

Employment opportunities exist in the installation, maintenance and design of renewable energy apparatus; retail and wholesale sales; local and state government for program and policy roles; and program and policy roles in non-government organisations.

Certificate IV in Sustainable Energy and Resource Efficiency Technologies

Campus: Hawthorn, Wantirna

Duration: One year full time or part time equivalent

Prerequisite: Satisfactory completion of an appropriate Victorian Year 12 or equivalent, or mature age.

Application: Direct to Swinburne

You will learn the principles of sustainable energy and resource efficiency technologies as well as the practical application of technologies such as sustainability assessments and action plans, solar design applied to buildings, heating and cooling options, renewable energy options, water efficiency, energy efficiency, materials and waste efficiency, building retrofitting, and solar water heating.

Major study areas

- Sustainability assessments
- Energy, water and materials efficiency
- Renewable energy technologies
- Retrofitting of buildings for efficiency
- Sustainable enterprises and work practices
- Solar water heating and design principles
- Business and project management

Career opportunities

Graduates will be able to conduct sustainability assessments for home owners and small enterprises; install, supervise and/or design resource efficiency technologies; provide advice to clients in retail and wholesale sectors of industry; or work in policy and planning roles for NGOs and government agencies.

Water and Catchment Management

Diploma of Sustainable Water and Catchment Management

Campus: Lilydale

Duration: Two years full-time or equivalent part-time

Prerequisite: Applicants must demonstrate experience, commitment or current employment in the water management industry.

Application: Direct to Swinburne or VTAC

You will gain the skills and knowledge required to manage water resources for regional and state catchment management authorities using integrated and sustainable strategies.

Major study areas

- Occupational Health and Safety, with waterways management focus
- Waterways and Flood Plain Management, including: Planning and Monitoring Works Programs, Mapping Skills, River Restoration, Hydrology, and Catchment Management
- Organisation/project management including project management skills and evaluation
- Communication consultation, including communication with relevant project stakeholders

Career opportunities

You may find employment with water and catchment authorities, local government, private enterprises and consultancies in a technical, supervisory or managerial role.

Key Dates

16 August 2009

Swinburne Open Day
Hawthorn, Lilydale and Prahran
www.swinburne.edu.au/openday

6 October 2009

Postgraduate Information Day

14–21 December 2009

Change of Preference
www.swinburne.edu.au/cop

Where we are

Croydon campus
12-15 Norton Rd,
Croydon Vic 3136

Hawthorn campus
John Street,
Hawthorn Vic 3122

Lilydale campus
Melba Avenue,
Lilydale Vic 3140

Prahran campus
144 High Street,
Prahran Vic 3181

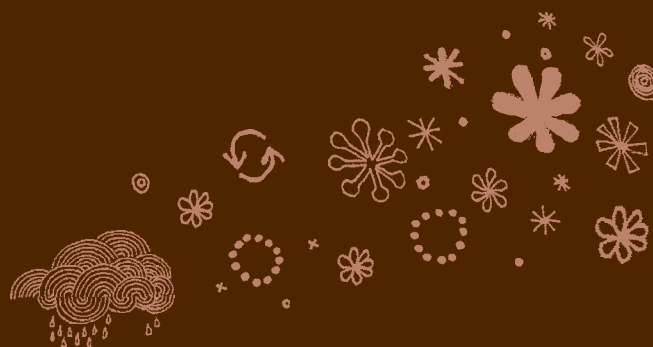
Wantirna campus
369 Stud Road,
Wantirna Vic 3152

Sarawak campus
Kuching, Sarawak,
Malaysia

Questions?

1300 ASK SWIN

www.swinburne.edu.au/future



CRICOS Provider Code: 00111D

The information contained in this course guide was correct at the time of publication, July 2009. The university reserves the right to alter or amend the material contained in this guide. The information in this guide does not apply to international students. For information about courses for international students please go to: www.international.swinburne.edu.au