Agriculture and Environmental Science
2016
The University of Tasmania has recently re-confirmed its position as one of Australia's best universities in a wide range of disciplines, as ranked by the internationally recognised QS World University Rankings for 2015.

The international ratings agency evaluate more than 3000 universities for academic reputation, employer reputation and research impact.
The University of Tasmania has always been an innovator in agriculture and at the centre of environmental debates.

We help you become who you want to be

The future depends on the development and implementation of sustainable agricultural practices in tune with environmental factors and impacts. Agricultural and environmental scientists are at the forefront in tackling some of the world’s most complex challenges and will be integral to creating new industries, opportunities and breakthroughs. The need for specialist knowledge and skills in supporting agriculture and the environment has never been greater.

To address this, the University has a core focus on agricultural, geographic and environmental issues and education.

Drawing on Tasmania’s unique environment, with easy access to World Heritage and wilderness areas, marine environments and geological diversity, the University of Tasmania offers a range of focused and distinctive courses.

With opportunities spanning aspects of science, business, tourism, design and engineering, careers are many and varied in the government and private sectors on a state, national and international level.

Our researchers are committed to undertaking quality research and in developing collaborative links with scientific and business communities, including cooperative research centres in fields such as separation science, geological research, food safety, ocean monitoring, climate and ecosystems. This high-quality new thinking feeds into our teaching and will energise your student experience.

The need for specialist knowledge and skills in agriculture and environment has never been greater.
Who Studies Agriculture and Environmental Science?

People with an interest in the natural, physical and biological sciences, enjoy variety in a working day, and see shared global challenges as opportunities. You might also be someone who enjoys working outside in all weathers and environments.

Our courses encourage inquiry, investigation and research, with many opportunities to go beyond the classroom and work closely with academic mentors and gain practical experience. Increasingly, agriculture and the environment are areas that are highly exposed to the latest thinking, scientific methods and technology, and also attract those with an entrepreneurial spirit.

Your studies, assessment tasks and learning experiences will also help to develop additional workplace skills, such as evidence-based problem-solving, critical thinking and decision-making, effective communication and time management. These ‘soft skills’ are all appreciated by employers.

Career opportunities with Agriculture or Environmental Science degrees

Agriculture and the environment impact many sectors in society and many areas of government and industry. Our University allows you to choose specialist studies that can focus your career or prepare you for various roles in related industries.

- Administrative and managerial roles
- Agricultural Economist
- Animal Nutritionist
- Botanist
- Communicator/Education Officer
- Earth Sciences
- Eco-tourism
- Environmental Consultant
- Environmental Design
- Forensic Entomologist
- Geographer
- Geologist
- Meteorologist
- Natural Resources Manager
- Overseas Development Worker
- Plant Scientist
- Researcher
- Rural Finance Counsellor
- Soil Scientist
- Spatial Scientist
- Surveyor
- Sustainability Resource Manager
- Tourism
- Viticulturalist

Your study opportunities

Different students have different goals.

If you simply want to give yourself the best start for a better chance at a great career, a degree course is an excellent option.

If you want to pursue a passion or want more specialist knowledge and expertise in a chosen field, a double degree or a degree with honours can give you expanded career opportunities. Many of our courses also let you add units from different study areas to diversify your career options.

Degrees

A single degree usually takes three years to finish and requires the successful completion of 24 units. A four-year degree, such as the Bachelor of Agricultural Science, requires 32 units for completion.

Each course structure may be different. Depending on your degree, there could be a combination of core units, Major (8 units) and Minor (4 units) studies and/or electives. A full-time study load is 8 units per year. Some courses also require professional placements or practicums.

Major and Minor (specialist) studies

Studying a particular area of interest can focus your learning, research and communication skills.

Your Major specialist area of study represents eight units (two introductory, two intermediate, four advanced units).

You can complement this knowledge with a Minor area of study. This is made up of four units (two introductory, two intermediate).

Depending on your chosen course, you may be able to combine learning on and off campus, or study part-time or online. Flexible study options can make it easy to fit study around your work and life commitments.

Honours

Honours can help you gain deeper knowledge in your specialist area. An additional Honours year can mean you start your career higher up the ladder and progress in your career faster. It can also lead to postgraduate study and a career in scientific research or academia.
Alternative entry pathways
If you don’t have the prerequisites or ATAR score for direct entry into your chosen degree, an alternative entry pathway can help you get into the course you want.

This could mean starting an alternative degree and then transferring, or completing a relevant AQF-recognised diploma, advanced diploma or associate degree from an Australian TAFE or other Registered Training Organisation.

We can also suggest you complete a foundation unit to meet a prerequisite requirement, such as chemistry, mathematics or physics. These units can be taken individually and are a way to quickly bridge a prerequisite gap so you can start your studies faster.

The Bachelor of General Studies (Science Pathway) gives guaranteed entry into, plus credit towards, the Bachelor of Science. It also provides credit towards other science related degrees, such as the Bachelor of Applied Science (Environmental Science).

If you have already started a degree at the University of Tasmania, or at an Australian or overseas tertiary institution, you may also be eligible for advanced standing (credit) in a similar degree.

Holders of an Advanced Diploma in Spatial Information Services may be granted up to 25% credit towards the Bachelor of Surveying and Spatial Sciences.

Students who meet the pre-tertiary prerequisite subjects but do not meet the ATAR score for a degree in Health Science (Environmental Health) can choose to study the Bachelor of Health Science for one year full-time before reapplying. Transfers will be based on academic merit. The Bachelor of General Studies (Health Science Pathway) is an alternative entrance program for the Bachelor of Health Science.

A Bachelor of Science degree also provides access to related major and minor studies in Agriculture and Environment (e.g. Geographic Information Systems and Remote Sensing; Geology; Geography and Environmental Studies; Plant Science; or Zoology).

A pathway into Science is the Bachelor of General Studies (Science pathway).

Alternatively, the University Preparation Program offers mature age students, or those that did not complete year 11 and 12, the skills critical for success at university across a broad range of subjects.

Professional recognition
Specific professional degrees can satisfy membership with a relevant professional association, such as:
- Ag Institute Australia
- Chartered Institution of Civil Engineering Surveyors
- Design Institute of Australia
- Environmental Health Australia
- Surveying and Spatial Sciences Institute

This is an area highly exposed to the latest thinking, scientific methods and technology.
Your study experience

Your learning experience goes beyond lectures, labs and tutorials.

The teaching environment here aims to provide a distinctive, energising and rewarding university experience for all students. Led by experienced and approachable staff, your learning could also include an international study exchange or a professional placement.

Study Abroad

Our international exchange program offers opportunities for a semester of study at universities around the world, including partner institutions in the USA.

Study Abroad Scholarships

The University actively encourages our students to extend their learning opportunities by undertaking international study exchange. To facilitate this, we offer a range of scholarships and financial assistance.

Professional placements, excursions and in-field practicums

In many Agriculture and Environment courses, students are encouraged to complete practical industry work experience. Field-based units can also require students (and staff) to stay on site in remote areas, including excursions to farms and businesses or undertaking a collaborative community project.

Some units and practicum requirements will be outside normal university semesters, perhaps requiring extensive field work and first hand interaction with natural areas. Practical work is usually undertaken during annual vacations, providing valuable experience on agricultural properties, in agribusiness and research-related activities, even in wilderness areas.

Professional experience placement units can require students to attend relevant professional workplaces. Prior to undertaking placements, students may be required to have a police check and commit to other relevant agreements and policies.

Many students who undertake the professional experience placement go onto further employment with their placement provider.

Additional learning resources

Most Agriculture and Environment courses at our University are a combination of classroom, laboratory and in-the-field learning.

The 340-hectare University farm includes a dairy, vegetable and grain farming. It provides essential teaching and research links, especially within the discipline of Agricultural Science.

Our research organisation, the Tasmanian Institute of Agriculture, is a centre of excellence in agricultural research, development, extension and education. It provides outstanding opportunities for research training as well as giving students’ access to world-class researchers in a wide range of practical and pure research areas.

Our Central Science Laboratory provides academic advice, support, collaboration and teaching in atomic and molecular analysis and several different forms of microscopy. It hosts research level analytical instruments and also provides high level electronic and mechanical engineering workshop support.

We also provide online academic skills tutorials to help with your research assignments, as well as access to programs designed to develop your communication, mathematical and English language skills. Students also have 24-hour access to computer labs.

A distinctive, energising and rewarding university experience for all students.
Scholarships

Each year, the University offers more than 900 awards, across all academic areas. Awards are based on merit and equity and reward excellence and improve access for new or continuing students. Application details and selection criteria for each award are clearly noted for each award on our website and within the online application.

Specific scholarships and bursaries in Agriculture and Environment

- Agricultural Science Scholarship
- Bachelor of Applied Science Scholarship
- Bruce Wall Scholarship (for commencing Agriculture student)
- Hedley Lux Gregg Bursary in Agricultural Science
- Horizon Scholarship (for commencing Agriculture student)
- Lewis and Sons Bursary in Agricultural Science
- Nick Martin Tasmania University Scholarship in Surveying and Spatial Sciences
- School of Agricultural Science Scholarship
- TasWater Steve Balcombe Scholarship (for commencing Environmental or Earth Science student)

See: utas.edu.au/scholarships-bursaries
Course information

Agriculture
The University offers degree courses in Applied Science (Agriculture and Business) and Agricultural Science. These two distinct degrees cover different aspects of the agricultural industry.

Agricultural Science equips graduates to solve agricultural problems and improve practices through the use of scientific research, knowledge and skills. Applied Science (Agriculture and Business) places more emphasis on the business, process and entrepreneurial side of agriculture enterprise.

Bachelor of Agricultural Science

<table>
<thead>
<tr>
<th>Duration</th>
<th>Four years full-time or equivalent part-time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisites</td>
<td>Successful completion of TCE (Tasmanian Certificate of Education) including Chemistry and at least General Maths, or interstate equivalent, or General Entry Requirements*</td>
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<td>Entry</td>
<td>February, July</td>
</tr>
<tr>
<td>Location</td>
<td>Hobart</td>
</tr>
<tr>
<td>Course code</td>
<td>73M</td>
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</table>

A Bachelor of Agricultural Science opens doors to a practical, interesting and sometimes delicious world of careers as diverse as viticulturist, biosecurity manager, boutique brewery owner, rural journalist, food biologist or agronomist.

The degree gives you a sound basis in the physical and biological sciences. In the latter part of your degree you'll have the opportunity for specialisation and advanced study. The outlook for agriculture in Australia is bright with Australia well positioned to play an important role in world food security.

Areas of study
- Animal physiology and nutrition
- Crop production and plant nutrition
- Farm business management
- Food safety management
- Horticultural science and agronomy
- Microbiology and plant pathology
- Physiology and cell biology
- Soil science and entomology

Career opportunities
- Agribusiness
- Agricultural research
- Aquaculture
- Business management
- Education
- Food processing
- Food technology
- Forestry
- Marine and Antarctic research
- Production agriculture
- Resource management
- Waste management

Professional recognition
Graduates are eligible for membership of the Ag Institute Australia.

Bachelor of Applied Science (Agriculture and Business)

<table>
<thead>
<tr>
<th>Duration</th>
<th>Three years full-time or equivalent part-time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisites</td>
<td>Successful completion of TCE (Tasmanian Certificate of Education) or interstate equivalent or General Entry Requirements*</td>
</tr>
<tr>
<td>Entry</td>
<td>February, July</td>
</tr>
<tr>
<td>Location</td>
<td>Hobart</td>
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<tr>
<td>Course code</td>
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</table>

This course has been designed to meet the demand by employers for graduates qualified and skilled in the application of scientific technology in the agricultural and horticultural industries.

You will study core majors in Agriculture and Agribusiness and a minor in Enabling Science.

A Bachelor of Applied Science (Agriculture and Business) is a specialised degree looking directly at production of agricultural goods and the associated financial and economic aspects of agribusiness.

A Bachelor of Applied Science (Agriculture and Business) considers the role of agricultural production at a larger scale. Graduates look at ways to ensure animal, crop and food safety or improve growing techniques.

Areas of study
- Agribusiness
- Agricultural production and technology
- Animal science and principles of breeding
- Crop production
- Crop protection and microbiology
- Soil science

*General Entry Requirements are briefly outlined in the ‘How to apply’ section. Visit utas.edu.au/admissions for further details.
Feathers, fur or fins, explore them all through this exciting new degree. Global conservationists, agriculturalists and researchers are increasingly searching for graduates with skills in animal management. This new degree is unique to the University of Tasmania and provides an in-depth knowledge of animal production systems and ecology.

On completion of your degree, you will have a range of in-demand skills and knowledge to meet the needs of industry, business and government.

**Areas of study**
- Animal Management
- Animal Production Systems
- Animal Ecology

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This degree combines the disciplines of biology, chemistry, ecology and geography complemented with studies in environmental policy and management. The program has a strong focus on aquatic science, chemical monitoring and environmental management.

**Areas of study**
- Aquatic science
- Botany (wilderness and forest management)
- Chemical monitoring
- Earth sciences (geomorphology and catchment management)
- Ecology
- Environmental Management
- Geography and Environmental Studies
- Statistics

**Career opportunities**
- Environment and natural resource management
- Environmental impact assessments
- Policy analysis and implementation
- Pollution monitoring
- Water and waste water management

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*General Entry Requirements are briefly outlined in the “How to apply” section. Visit [utas.edu.au/admissions](http://utas.edu.au/admissions) for further details.

*First year only is available at Cradle Coast campus – for year 2 and 3, lectures are available by distance, however tutorials and compulsory practicals must be attended in Launceston.*
Environmental Design

The Bachelor of Environmental Design focuses on environmentally sustainable design within a specialist stream. It gives you a choice between architecture, furniture design or interior design. Each specialisation has the design studio/design workshop at its core, supported by studies in relevant history and theory, building/manufacturing, environmental ethics, technologies and practices, and design communication.

Students from all specialisations are eligible for Associate Membership of the Design Institute of Australia.

Please see our Architecture and Design brochure for more information or visit utas.edu.au/courses

Environmental Health

The Bachelor of Health Science (Environmental Health) focuses on how our environment influences health and disease. You'll study the physical and biological sciences as well as their practical application in areas including environmental protection, food safety, occupational health and safety, water and air quality, and water and waste management. Graduates acquire the technical expertise and practical ability to work as Environmental Health Officers, usually in State and Local Government.

Graduates will be eligible for membership and accredited by the Environmental Health Australia.

Please see our Health Science brochure for more information or visit utas.edu.au/courses

Natural Environment and Wilderness Studies

Bachelor of Natural Environment and Wilderness Studies

Duration Three years full-time or equivalent part-time
Prerequisites Successful completion of TCE (Tasmanian Certificate of Education) or interstate equivalent or General Entry Requirements*
Entry February, July
Location Hobart
Course code 73Q
2015 Round 1 Clearly-in ATAR 65

If you would like the great outdoors as your office, this is the degree for you. You'll study a major in Geography and Environmental Studies and select another science or policy area as your second major, providing you with a deep understanding in two disciplines.

The aim of this degree is not just to provide you with knowledge. As a wide, interdisciplinary degree, it gets you thinking about environmental issues and developing communication, data collection, analytical, presentation and other skills. At graduation you'll have a wealth of wide ranging areas to consider gaining employment in.

Areas of study
- Geology
- Government and the Environment
- Marine Environments
- Plant Science
- Zoology

Recommended prerequisites
Some prerequisites apply depending on unit selection. We recommend all intending students study two or more subjects in mathematics and science.

Career opportunities
- Environmental protection
- Environmental organisations and consultancies
- Land and heritage management
- Nature-based and eco-tourism
- Parks planning and management
- Resource-based industries such as forestry

*General Entry Requirements are briefly outlined in the ‘How to apply’ section. Visit utas.edu.au/admissions for further details.
Bachelor of Surveying and Spatial Sciences

Duration
Three years full-time or equivalent part-time

Prerequisites
Successful completion of TCE (Tasmanian Certificate of Education) including Satisfactory Achievement (SA) in Mathematics Methods or interstate equivalent or General Entry Requirements*

Entry
February, July

Location
Hobart, Launceston*

Course code
73G

2015 Round 1
Clearly-in ATAR
65

Career opportunities
- Cartography and mapping
- Engineering and hydrographic surveying
- Geodesy, GPS
- Geographic information systems
- Land and resource management
- Remote sensing and photogrammetry

Professional recognition
On graduating in Surveying and Spatial Sciences you will be able to apply for membership of the Surveying and Spatial Sciences Institute (Australia) and the Tasmanian Land Surveyors Accreditation Board.

Surveying and Spatial Sciences show us our place in the physical world. These rapidly growing disciplines involve an integrated approach to the science and technologies of measurement, mapping, analysis and visualisation of data. The skills you learn can be applied to any aspect of industry, science and society that need high quality information to make reliable decisions.

Through this degree you’ll study two majors: Geographic Information Systems and Remote Sensing and Surveying. You’ll also study a minor in Geography and Environmental Science. This broad degree will make you highly employable as a scientist with multiple skills and knowledge.

If you would like to work as a Land Surveyor, you must complete the one-year Graduate Diploma of Land Surveying following graduation.

*General Entry Requirements are briefly outlined in the ‘How to apply’ section. Visit utas.edu.au/admissions for further details.

*First year only (by demand).
Financial matters

When you commence study with the University of Tasmania in a Commonwealth supported place (CSP), you must contribute towards the cost of your tuition. The amount you pay depends on which units you study and the payment method you choose.

Student contribution amounts and rules

To be eligible for a CSP you must be an Australian citizen, a New Zealand citizen or hold an Australian Permanent Resident Visa.

The student contribution is calculated based on the units of study that you enrol in. Each unit is assigned to a ‘band’ according to the subject area it comes from. The band tells us how much to charge for one Equivalent full-time student load (EFTSL), equivalent to 100 credit points, or 100% load.

Most units at the University of Tasmania are 12.5 credit points (0.125 EFTSL), so to calculate the cost of a unit we multiply the contribution amount for that designated band by 0.125. For example, the student contribution amount for a 12.5 credit point Nursing unit of study would be $6152 \times 0.125 = $1076.63.

A typical three-year degree is made up of 24 units.

HECS-HELP

The majority of university students across Australia choose to defer their student contribution until after they have commenced in the workforce. You can do this by taking out a HECS-HELP loan. HECS-HELP is available to eligible students enrolled in a CSP. This loan can cover all or part of the student contribution amount. You are eligible for HECS-HELP if you are a Commonwealth supported student and an Australian citizen or the holder of a Permanent Humanitarian Visa.

Under this option, the Commonwealth Government pays the loan amount directly to the University of Tasmania. Then, when your salary reaches the minimum repayment threshold, you will make compulsory repayments through the tax system.

To learn more, visit studyassist.gov.au

2015 student contribution by band

<table>
<thead>
<tr>
<th>BAND 1</th>
<th>BAND 2</th>
<th>BAND 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>$6152* per full-time year (100% load)</td>
<td>$8768* per full-time year (100% load)</td>
<td>$10,266* per full-time year (100% load)</td>
</tr>
<tr>
<td>Nursing*</td>
<td>Mathematics*</td>
<td>Law</td>
</tr>
<tr>
<td>Education*</td>
<td>Statistics*</td>
<td>Accounting</td>
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<tr>
<td>Humanities</td>
<td>Science*</td>
<td>Administration</td>
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<tr>
<td>Social Studies</td>
<td>Computing</td>
<td>Economics</td>
</tr>
<tr>
<td>Behavioural Science</td>
<td>Built Environment</td>
<td>Business/Commerce</td>
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<tr>
<td>Clinical Psychology</td>
<td>Other Health</td>
<td>Dentistry</td>
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<tr>
<td>Foreign Languages</td>
<td>Allied Health</td>
<td>Medicine</td>
</tr>
<tr>
<td>Visual &amp; Performing Arts</td>
<td>Engineering</td>
<td>Veterinary Science</td>
</tr>
</tbody>
</table>
| *The student contribution amounts for mathematics, statistics and science are subject to passage of the Higher Education Support Amendment (Student Contribution Amounts and Other Measure Bill 2012).
1. For pre-2010 students, the maximum annual student contribution amount that may be charged for Education and Nursing units is $4696.
2. From 1 January 2010, the maximum annual student contribution amount for commencing Commonwealth supported students undertaking Education and Nursing units of study has been increased from the ‘national priority’ rate to the Band 1 rate.
3. The increased maximum annual student contribution amounts affect only students who commence their course of study at a higher education provider on or after 1 January 2010.
4. If you are a mathematics, science, education, nursing or midwifery graduate you may be eligible for a HECS-HELP Benefit.
5. This table is a guide only. Fees are reviewed each year by the Commonwealth Government and may vary.

Other costs

Students are required to pay a student services and amenities fee (SSAF). In 2015, the fee is around $340 for a full-time undergraduate student.

Part-time students are charged on a pro-rata of study load undertaken. Students who are unable to pay the fee up-front can defer all or part of the fee through an element of the Higher Education Loan Program, known as SA-HELP.

The fee contributes to funding student services such as legal and health services, counselling, and sport and recreation activities.

You will also need to cover costs such as textbooks, materials, art supplies or software for your course. These costs can vary from course to course.

Accommodation and general living expenses will also vary depending on your chosen living arrangements.

To learn more about accommodation options, visitutas.edu.au/accommodation
How to apply

Applications are made directly to the University of Tasmania.

**Year 12 applicants**

For Year 12 students, applications for Semester 1 should be submitted electronically via the University’s online application process.

The ‘timely’ application period opens in August and closes in the last week of September. Late applications will be accepted by the University, but some programs that have special requirements will not accept late applications.

**Changing your preference**

You can change your original ‘timely’ application course preferences during the Change of Preference period in December. This allows you to modify your course selection depending on your results from your final examinations.

Learn more by visiting [utas.edu.au/apply](utas.edu.au/apply)

**Non-school leaver (mature aged) applicants**

If you are not a Year 12 student, you apply directly to the University via the online application process. As a non-year 12 student your application will be considered on a broad range of factors, including previous studies, work experience and any extra requirements specified for the course.

To meet the General Entry Requirements (GER) into an undergraduate degree, at least one of the following must be completed:

- Year 12
- Certificate IV, diploma or advanced diploma and/or
- Successful completion of a University enabling program, including foundation units in prerequisites such as chemistry, mathematics or physical sciences
- Personal competency statement demonstrating how work experience or background meets the University’s General Entry Requirements

Particular degrees may also require you to sit a Special Tertiary Admissions Test.

Visit [utas.edu.au/courses](utas.edu.au/courses) or [utas.edu.au/apply](utas.edu.au/apply) for further details.
# Quick reference guide

## Degrees

<table>
<thead>
<tr>
<th>COURSES</th>
<th>DURATION</th>
<th>Clearly-in ATAR</th>
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<tbody>
<tr>
<td>Bachelor of Agricultural Science</td>
<td>4 yrs FT or equivalent PT</td>
<td>65</td>
</tr>
<tr>
<td>Bachelor of Applied Science (Agriculture and Business)</td>
<td>3 yrs FT or equivalent PT</td>
<td>65</td>
</tr>
<tr>
<td>Bachelor of Animal Science</td>
<td>3 yrs FT or equivalent PT</td>
<td>65</td>
</tr>
<tr>
<td>Bachelor of Applied Science (Environmental Science)</td>
<td>3 yrs FT or equivalent PT</td>
<td>65</td>
</tr>
<tr>
<td>Bachelor of Natural Environment and Wilderness Studies</td>
<td>3 yrs FT or equivalent PT</td>
<td>65</td>
</tr>
<tr>
<td>Bachelor of Surveying and Spatial Sciences</td>
<td>3 yrs FT or equivalent PT</td>
<td>65</td>
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## Pathways

<table>
<thead>
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<th>COURSES</th>
<th>DURATION</th>
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<tr>
<td>Bachelor of General Studies</td>
<td>1 yr FT or equivalent PT</td>
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<tr>
<td>University Preparation Program</td>
<td>1 yr FT or equivalent PT</td>
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To find more information about all University of Tasmania courses, visit [utas.edu.au/courses](http://utas.edu.au/courses)
KEY DATES

30 August 2015
University of Tasmania Open Day

Year-round availability
One-on-one course adviser appointments

FURTHER INFORMATION

1300 363 864
utas.edu.au