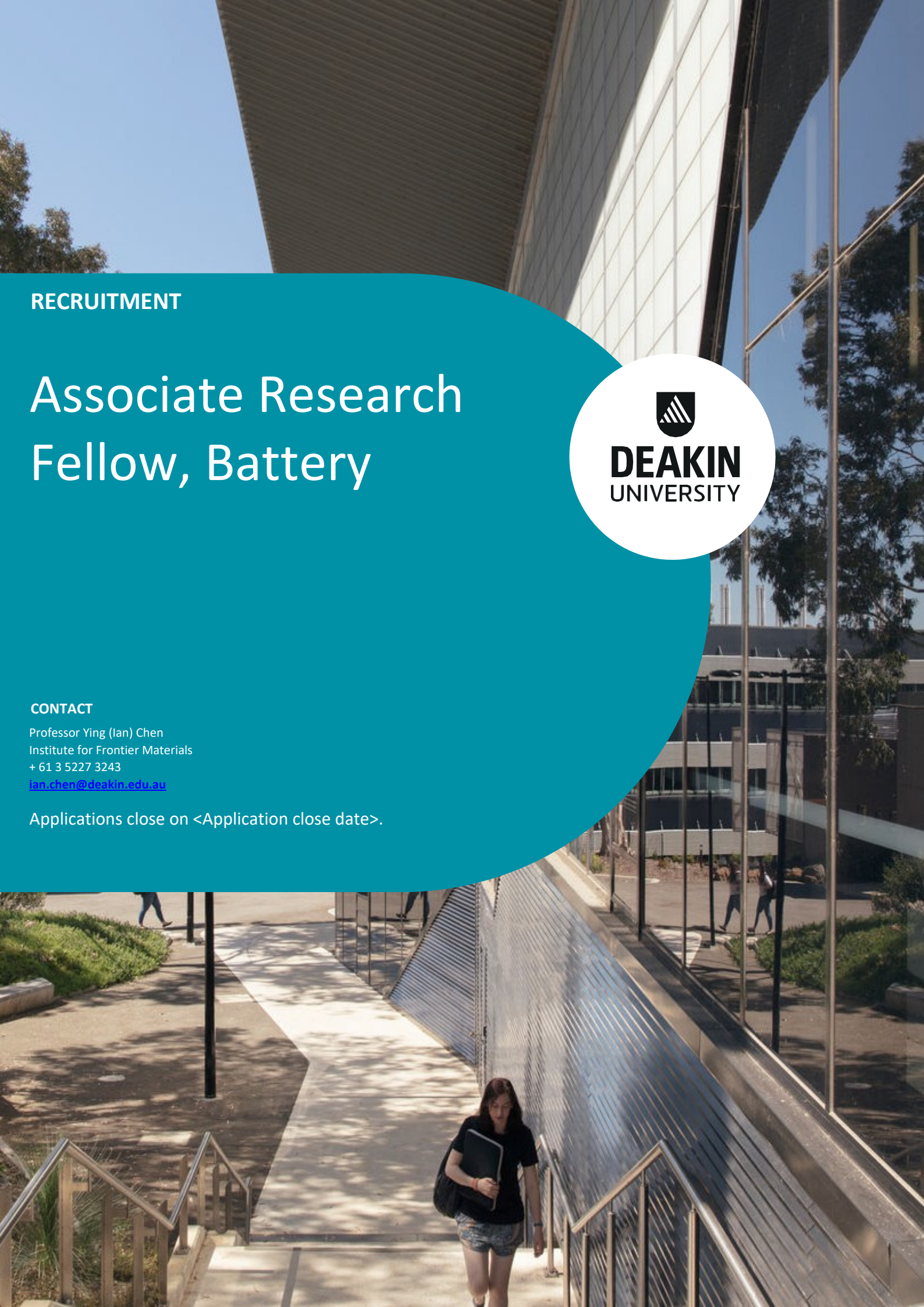

RECRUITMENT

Associate Research Fellow, Battery

DEAKIN UNIVERSITY

CONTACT

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Applications close on <Application close date>.

About Deakin

Top 1% of the world's universities

No. 1 In Victoria for student satisfaction ten years in a row (2010-2019)

No. 261 ARWU global ranking of world universities' research capabilities

Deakin's growing reputation is reflected in its rapid rise in international rankings; Deakin entered the prestigious Academic Ranking of World Universities for the first time in 2014 and now ranks an estimated 261 (AWRU 2019). Deakin is ranked 29 in the QS ranking of the world's top universities under 50 years.

Established in 1974, Deakin University was named after the leader of the Australian Federation movement and the nation's second Prime Minister, Alfred Deakin.

Deakin University has five campuses, one in Melbourne's eastern suburbs, two in the port city of Geelong, one in Warrnambool on the south-west coast of Victoria, and more than 15,000 students study predominantly online as part of Deakin's Cloud Campus.
All students, regardless of their campus or mode of study, benefit from Deakin's award-winning digital environment.

Deakin is proud of its inclusive and student-focused culture and its reputation for using innovative digital solutions to provide an engaging and personalised learning experience. Deakin is committed to lifelong learning, providing students with choices about how, when and where learning occurs.

Deakin prides itself on developing career-ready graduates who are innovative, resilient, and well prepared for rapidly changing workforce needs. Deakin has a strong focus on teaching, with student satisfaction and the employability of its students being key indicators of success. Deakin ranks first in Victoria for student satisfaction (SES) and graduate employability (GOS).

Deakin's four faculties offer courses across the arts, design, science, sport, nutrition, architecture, business, law, medicine, optometry, engineering, nursing, allied health, psychology and teaching.

With over 60 000 students Deakin is one of Australia's largest universities and is consistently ranked in the top 1% of the world's universities.

As an Australian university with global impact, Deakin is translating its research into the commercial outcomes that will drive the innovation Australia's economy needs now and into the future. Research at Deakin focusses on innovation and robust partnerships with industry and business, and it is building a formidable international reputation in areas of emerging national social, economic and political priority in its core areas of health, sport, carbon fibre, energy and cyber security. Deakin's manufacturing innovation precinct provides an important link between technological innovation and successful industry outcomes, strengthening and streamlining pathways for commercial research.

Our strategy

Deakin's vision and mission is articulated in its strategic plan *LIVE the future: Agenda 2020*. Through *LIVE the future*, Deakin aspires to be Australia's premier university in driving the digital frontier, enabling globally connected education for the jobs of the future, and research that makes a difference to the communities Deakin serves.

Informed by its Australian and Victorian context and engaged locally in the communities it serves, Deakin advances:

- Learning – offering students a brilliant education where they are and where they want to go
- Ideas – making a difference through world-class innovation and research
- Value – strengthening our communities, enabling our partners and enhancing our enterprise
- Experience – delighting our students, our alumni, our staff and our friends.

These four interconnecting elements form the acronym *LIVE*, and together they articulate the Deakin promise to its students, staff, alumni, partners and friends.

Institute for Frontier Materials

The Institute for Frontier Materials (IFM) at Deakin University is a world leader in materials science and engineering research.

IFM's vision is to lead and inspire innovations in materials science and engineering that have a transformational benefit to society.

Our mission is to foster innovation and excellence in materials science and engineering research with the aim of addressing the critical societal objectives:

- Innovative manufacturing technologies
- Energy efficiency, resource and infrastructure sustainability.

The IFM team includes about 120 researchers and 150 postgraduate students, supported by a small group of professional staff. Our researchers bring together engineering, chemistry, materials science, physics, biology, mathematics and other disciplines to develop new materials and engineering solutions.

Our aim is to develop new materials and structures that are affordable, and also have a low cost to society of manufacture, use and recycling.

The excellent facilities that have been established at IFM enable our researchers to process and characterise materials across all scale lengths, from the atomic level in the manipulation of interfaces and surfaces through to entire structures (such as a model car). These facilities also provide an excellent training ground for IFM students.

Deakin's Promise to Equity, Diversity and Inclusion

At Deakin we value diversity, embrace difference and nurture a connected, safe and respectful community. We recognise that our academic workforce is increasingly diverse with a variety of backgrounds, experiences and responsibilities. In many cases, academic careers can be put on hold through career breaks or part-time work arrangements to take on caring duties, gain experience in other industries, for medical reasons or other personal circumstances.

Achievement relative to opportunity places more emphasis on the quality as opposed to the quantity of research outputs. In your application, we encourage you to comment on your achievements relative to opportunity.

Nanotechnology

Nanotechnology research at the Institute for Frontier Materials (IFM) is focused on developing novel nanomaterials and using nanotechnology to solve some of today's biggest challenges. Plasma is an exciting, environmentally friendly way of shaping materials for scientific and industrial applications.

Nanotechnology research at Deakin University is focused on developing novel nanomaterials and using nanotechnology to solve some of today's challenges in energy storage (batteries and supercapacitors), environmental protection and health and medical issues.

Our research ranges from tailoring surfaces/interfaces, improving energy efficiency of solar cells and batteries, biomaterials, nanomaterials, sensors and nano-composites to wastewater treatment and electronic textiles.

Energy storage
The use of nanotechnology and nanomaterials are key approaches to improve the performance of energy storage technologies.
We are using our experience in nanomaterials synthesis and applications to develop new electrode materials for batteries and supercapacitors.
Some examples are li-ion and Li-S batteries for electrical vehicles with high power density for energy storage and backup.

Surfaces/interfaces
Nanotechnology research has a range of applications in areas as diverse as environmental protection and healthcare. Our research focuses on:

- water resource protection by removing solvents, dyes and other contaminants
- cleaning up oil spills on land and water
- drug delivery.

Novel nanomaterials
Research in the area of one- and two-dimensional nanomaterials is advancing rapidly with potentially huge benefits for clean energy, environmental protection and medical sciences.
Our group has extensive research expertise in boron nitride nanotubes, synthesis of nanoparticles, nanotubes and nanowires, nanosheets and nanocomposites.

To add an image:

1. Right-click on this grey box and select 'Fill > Picture > Browse from File'
2. Select 'Crop > Fill' to reset image to correct proportions
3. Use the Crop tool to resize and reposition the image in the shape.

Associate Research Fellow

RESEARCH ONLY LEVEL A

The Associate Research Fellow will initiate and conduct research in the area of nanomaterials, energy storage and nanotechnology.

The Associate Research Fellow is expected to contribute to the research output of the Institute for Frontier Materials.

Associate Research Fellow will undertake administrative responsibilities.

Associate Research Fellow will undertake undergraduate teaching and postgraduate supervision.

ORGANISATIONAL CONTEXT

- The appointee will work with support and direction from research only staff classified at Project Manager and with an increasing degree of autonomy as the researcher gains greater skills and experience.

ORGANISATIONAL RELATIONSHIPS

- Associate Research Fellow reports to the Director of the Institute for Frontier Materials via the Project Leader.
- Associate Research Fellow is responsible for the supervision of casual research associate and PhD students.

PRINCIPAL ACCOUNTABILITIES

- Associate Research Fellow is expected to contribute towards the research effort of the University and conduct research independently and / or team research within the fields of nanomaterials and clean energy. It is important that the Associate Research Fellow will contribute to the profile and research reputation of IFM, by means including public lectures, seminars, contributing to public debate and policy formation on key research issues.
- Associate Research Fellow will carry out activities to develop his or her research expertise relevant to the particular field of research.
- Initiate and conduct research under limited supervision either as a member of a team, or independently (where appropriate).
- Personally and through active participation in teams, prepare and develop grant applications relating to the project(s), and contribute to the preparation, or where appropriate, individual preparation of research proposal submissions to external funding bodies.
- Conduct research and engage in scholarly publication, personally and in research teams and prepare findings/results for oral and written communication, producing or contributing to the production of conference and seminar papers and publications from that research.
- Constructively contribute to a vibrant research team by guiding the research effort of junior colleagues.
- Promote the activities of the University, particularly those relating to research and research training, within academic and professional communities in Australia and internationally.

DUTIES

- Effectively conduct data, maintain data protocols and enter data into the IFM database. Conduct preliminary data cleaning, screening and analysis.
- Undertake experimental design and operation of advanced laboratory and technical equipment or conduct of advanced research procedures.
- Remain up to date with current literature and methods relevant to the area of responsibilities
- Contribute to teaching in relation to his/her research project(s).
- Develop research-related material for teaching, or other purposes with appropriate guidance from other staff.

Performance expectations

Annual performance objectives and expected outcomes will be defined for this role in accordance with the Minimum Standards and Typical Duties for Academic Levels (MSTDALs) and Faculty Research Expectation Models (FREMs). Specific duties will be allocated with reference to the applicable Workload Allocation Model (WAM). These documents are updated from time to time and are available on request.

- Be involved in professional activities, including (subject to availability of funds) attendance at conferences and seminars in his/her field of expertise.
- Undertake administrative functions primarily connected with his/her area of research.
- Co-supervise, or where appropriate, supervise, honours and postgraduate research students ensuring successful completions with quality of results.
- Coordinate and supervise PhD students who are part of the DIRI model, as appropriate (including India and Spain in-country students).
- Co-supervise, or where appropriate, supervise and research fellows level A ensuring high quality of results
- Attend meetings associated with the research project(s) and attend other meetings as appropriate, such as Institute / School meetings and / or membership of a limited number of Committees.
- Lead industry focussed activities in the corrosion area including as Category 1 and 2-4 funding.

SPECIFIC EXPERIMENTAL / RESEARCH TASKS

Research in the area of nanomaterials, clean energy, energy storage and functional materials.

LEVEL OF SUPERVISION AND INDEPENDENCE

Research is conducted independently with some consultation with other team members and with the responsible research investigators.

PROBLEM SOLVING AND JUDGEMENT

The Associate Research Fellow is expected to exercise judgement on work methods and task sequences within standard practices and procedures and to seek expert advice for work methods that fall outside the standard practices.
Capacity to work independently, to lead small teams, to use initiative and to work well within a team setting is expected.

OCCUPATIONAL HEALTH AND SAFETY

- The Associate Research Fellow will be responsible for:
- Following safe work procedures and instructions.
- Taking reasonable care for the safety of self and others.
- Seeking guidance for all new or modified work procedures.
- Ensuring that any hazardous conditions, near misses and injuries are reported immediately to a supervisor.
- Participating in meetings, training and other health and safety activities.
- Using equipment in compliance with relevant guidelines, without wilful interference or misuse.
- Must cooperate with the University in relation to actions taken by the University in order to comply with the Occupational Health and Safety and Environmental legislation.

In addition, research only academic staff are responsible for ensuring that an equivalent standard of environment, health and safety is afforded to their students as is afforded to University staff generally. Research only academic staff are deemed to have principal supervisory duty for undergraduate and postgraduate research student activities.

SELECTION CRITERIA

QUALIFICATIONS

- A relevant doctoral qualification or equivalent qualification, in the field of materials science or materials engineering.

EXPERIENCE, KNOWLEDGE AND SKILLS

- Excellent research experience, which has resulted in high-quality publications, conference papers, reports, or professional or technical contributions, which give evidence of research ability.
- Demonstrated skills in the materials synthesis, characterisation and applications in energy, and other areas.
- Ability to develop collaborative work teams and to work effectively as a member of an interdisciplinary team.
- A research track record in nanomaterials and energy, and a demonstrated ability to plan, initiate and conduct high quality research.
- A record of peer review publications and/or conference publications.
- Experience in contributing to the supervision of undergraduate honours and / or research higher degree students.
- Demonstrated organisational skills including the demonstrated ability to maintain a high standard of laboratory and data record keeping.
- Good interpersonal skills, including the ability to interact well with research and technical staff and students.
- Demonstrated excellent oral, written communication and presentation skills.
- Demonstrated skills in the publication of research journal articles.

Associate Research Fellows of Nanomaterials and Clean Energy

SELECTION CRITERIA

QUALIFICATIONS

A relevant doctoral qualification or equivalent qualification, in the field of materials science or energy storage.

RESEARCH

- Excellent research experience, which has resulted in high-quality publications, conference papers, reports, showing evidence of research ability.
- Demonstrated skills in materials synthesis, characterisation and applications in energy storage and other areas.
- Ability to develop collaborative work teams and to work effectively as a member of an interdisciplinary team.
- A research track record in nanomaterials and energy storage, and a demonstrated ability to plan, initiate and conduct high quality research.
- Experience in contributing to the supervision of undergraduate honours and / or research higher degree students.
- Demonstrated organisational skills including the demonstrated ability to maintain a high standard of laboratory and data record keeping.
- Good interpersonal skills, including the ability to interact well with research and technical staff and students.
- Demonstrated excellent oral, written communication and presentation skills.

Appointment process and how to apply

Application

Thank you for your interest in the position of Associate Research Fellow of Nanomaterials and Clean Energy.

Please direct all correspondence and enquiries to;

Prof Ying (Ian) Chen
Alfred Deakin Professor and Chair of Nanotechnology
+61 3 5227 3243
ian.chen@deakin.edu.au

How to apply

Please apply online via:

deakin.edu.au/about-deakin/work-atdeakin

Include cover letter, curriculum vitae and a response to the Selection Criteria.

Please quote reference number:

[Insert reference number]

Interview process

An initial screening of prospective candidates will take place.

Short-listed candidates will be interviewed by a panel of esteemed colleagues.

Details of professional referees will be required prior to interview.

Remuneration and benefits

An attractive remuneration package is offered. Salary will be commensurate with qualifications, experience and research record.

Relocation support may also be available.

Term of appointment

Appointment is for a fixed term of two-year position which is subject to an initial six-month probationary period.

Special Requirement/s

Our locations

Deakin has five campuses, one in **Burwood**, two in Geelong (**Waterfront** and **Waurn Ponds**), one in **Warrnambool** and the vibrant Cloud Campus where over 25% of our students study. All students, regardless of their campus or mode of study, benefit from Deakin's award-winning digital environment.

Melbourne has been named the worlds' most liveable city for more than 5 years running*.

Further information regarding our locations and relocating to Victoria can be found here:

Our locations

Considering Relocation

Melbourne timelapse

**The Economist's annual study*

Geelong Waurn Ponds Campus

Get the best of both worlds at our Geelong Waurn Ponds Campus. Access our world-class education programs and superb facilities while relaxing in a pretty, rural environment, close to some of Australia's best surf beaches