

**Project Title:** Development of hydrogen safety protocols (based at UNSW, Sydney)

**Project background and description:**

With the increasing impacts of climate change being felt globally, there is an urgent need to shift our energy sector away from carbon-based fossil fuels. Hydrogen presents a promising solution to these limitations of our current approach to energy generation, storage and distribution. However, the emerging hydrogen economy has left an urgent need for the development of a standard approaches to safety for the implementation of hydrogen generation systems.

**Aim/objectives:** This project will work develop a portfolio of safety-related hydrogen resources to inform the broader community on best practice approaches to hydrogen generation. This includes the following:

- Understand hydrogen generation systems on a large scale, in both acidic and alkaline environments
- Link with industry, partner universities and advisory organisation to prepare and disseminate key outcomes.
- Develop of a portfolio of safety-related hydrogen resources including P&IDs and corresponding HAZOP documents

**Environment**

The GlobHE Training Centre is offering 12 Higher Degree by Research (HDR) Scholarships (PhD) that will provide a unique training opportunity through:

- World-class and state-of-the-art facilities and experts across the participating universities, research institutions, industry partners and other organisations
- An integrated Training Centre research agenda with inter-disciplinary projects across 5 themes area
- Opportunity to work or placement with partner organisations and industry partners
- Research skills, career development workshops and relevant industrial training
- Competitive support for national and international conference travel and networking opportunity
- Generous project support and excellent mentorship
- Delivering the next generation of highly skilled workforce to give Australia the ability to build home-grown hydrogen solutions and economic models.

**Eligibility**

The minimum requirement for admission to a PhD programme is:

- an appropriate Bachelor degree with upper second class Honours from one of the above universities; or

- a completed Masters by Research from one of the above universities with a substantial research component and demonstrated capacity for timely completion of a high quality research thesis; or
- an equivalent qualification from a tertiary institution as determined by the Faculty Higher Degree Committee (HDC)

The minimum requirement for Scholarship with admission to a PhD is:

- a four-year Bachelor's degree with Honours Class I from an Australian institution or equivalent research qualification experience. This qualification must be in a field relevant to the proposed area of research.

Please note that ALL applicants, whether domestic or international must provide evidence that their language ability meets the **minimum English language\*** requirements. The following table provides guidelines on common English language test acceptable for meeting English requirement:

IELTS (Academic)	TOEFL (Internet based test)	Pearson Test (Academic)
Overall: 6.5 (min 6.0 in each subset)	Overall: 90 (min 23 in writing, 22 in reading, listening and speaking)	Overall 64 (min. 54 in each subset)

\* Check out: [https://www.international.unsw.edu.au/english-language-requirements?field\\_english\\_language\\_tid=4018](https://www.international.unsw.edu.au/english-language-requirements?field_english_language_tid=4018)

### Selection Criteria

- Bachelor (honours) or Masters degree from relevant disciplines include chemical engineering, mechanical, or social policy; at 1<sup>st</sup> class or upper second class level, or equivalent
- Proficiency in computer programming/modelling is required for some of the projects.
- In assessing applications, preference will be given to applicants who can demonstrate an ability to work across disciplines, have excellent interpersonal, communication and management skills
- When applying for a particular project, please state briefly and clearly the relevance of your degree and/or your experience to the project description

### PhD Stipend

PhD scholarships will be available for a period of three and a half (3.5) years. The PhD stipend rate is \$33,413 per annum tax-free. International applicants are encouraged to apply and maybe eligible for Tuition Fee Scholarship. See [International Research Scholarship](#).

## Application Process

Interested applicant must email the following to be considered for Scholarship:

- CV
- Academic transcripts for all completed/pending completion degree
- Testamurs of previous study
- Statement addressing interest relevant to selection criteria
- Name of referees (can be academic or former employer)

Applicants are encouraged to use the HDR Self-assessment Tool: <https://selfassessment.research.unsw.edu.au/> to give indication of eligibility and competitiveness for a scholarship (please also send the outcome of this self assessment).

### Closing date:

Scholarship application outcomes are released progressively from the 'Offers Released' date. To find out more on 'Offers Released' date for your application round, visit [Key Dates](#) for specific Universities. Please note that there are different deadlines for Domestic and International applicants.

### Enquiries

For general enquiries regarding the Training Centre, please contact Professor Rose Amal: [r.amal@unsw.edu.au](mailto:r.amal@unsw.edu.au), Professor Francois Aguey Zinsou Kondo: [f.aguey@sydney.edu.au](mailto:f.aguey@sydney.edu.au)

For enquiries on PhD project, please contact [e.lovell@unsw.edu.au](mailto:e.lovell@unsw.edu.au)