SMUCE

2021 CAREERS GUIDE

YOUR LINK WITH INDUSTRY

PROUDLY PUBLISHED BY THE
SOCIETY OF MONASH UNIVERSITY
CHEMICAL ENGINEERS

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a division of the Monash Student Association (Clayton) Inc.

To the engineers and
problem solvers of tomorrow

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NOTE FROM THE AUTHOR

On behalf of the Society of Monash University Chemical Engineers, I would like to proudly present the long-awaited 2021 SMUCE Careers Guide.

From rationalizing, navigating a global pandemic, with careful (and tedious) editing, every participant played a motivating part in the creation of this Guide; all with a singular motivation to develop an insightful resource to better the chemical engineers of tomorrow.

In essence, the Guide is emblematic of SMUCE's ethos, one, built in community, teamwork and embodies a "link to industry". From industry professionals, research candidates to aspiring undergraduates, the Guide is a definitive amalgamation of a wealth of career insight and information.

SMUCE is a non-profit academic social club founded by aspiring chemical engineering students, and in regards to monetary compensation and sponsorships, I would personally like to thank all our 2021 Platinum, Gold and Silver industry sponsors and supporters. Specifically our wonderful Platinum sponsors, Monash University Department of Chemical Engineering, The Monash University Faculty of Engineering and IChemE. Their generous contributions funded the production and logistics that went into producing the very publication before you. These sponsorships not only helped fund the Guide, but also helped SMUCE develop meaningful and lasting connections with industry professionals and invest in the students of today, and the engineers of tomorrow.

Last and but not least, I'd like to thank the SMUCE organization itself and specifically the SMUCE Industry team for all the countless hours and work that was put in. It's been a wonderful journey, and just like all of them, I am extremely proud of the Guide and we think this is an immensely helpful tool in your arsenal.

And to you, I thank you for picking up this publication. From pure curiosity or a genuine desire to develop yourself as one of Victoria's budding engineers, I am sure you will find great value and be very pleased with the information between these pages.

I urge you to read on, make notes and annotate away; for the next page you flip, might just be the next step to your dream career.

Kind regards,

P. Pravinash

Pravinash Punniyamoorthy
Industry Vice President 2021

OUR GUIDE'S SPONSORS

SMUCE upholds its tradition of linking students with industry and as such has a major focus with connecting aspiring graduates with their future employers and employees and we are proudly sponsored by a plethora of industry partners.

From engineering services, to a ChemE specific professional community, our industry sponsors range from a breadth of sectors.

PLATINUM SPONSOR

MONASH University Engineering

Engineers possess a rare combination – a seamless blend of the practical and the creative. It's a profession that tackles society's challenges and makes the world a better place to live. And what better place to study engineering than the best faculty for engineering in Australia, us.

For more information visit:

- www.monash.edu/engineering

PLATINUM SPONSOR

MONASH University MONASH CHEMICAL ENGINEERING

At Monash Chemical Engineering, we see potential in everything. We thrive in that pivotal space where engineering, chemistry, physics, and mathematics intersect. And we're ranked number 1 in Australia for Chemical Engineering – so we're the perfect place to develop your potential, too.

For more information visit:

- www.monash.edu/engineering/departments/chemical

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PLATINUM SPONSOR

IChemE ADVANCING CHEMICAL ENGINEERING WORLDWIDE

The Institute of Chemical Engineering (IChemE) is a global professional community with a focus on building and supporting a network of Chemical Engineers globally. IChemE aspires to be a peer-group leader with its vision to be recognized as a significantly valued organization with contributions in several chemical, processing and biochemical industries.

For more information visit:

- www.icheme.org/

GOLD SPONSOR

wood.

Wood Group plc is a multinational energy services company, operating in a variety of sectors from oil and gases, mining to renewable and sustainable energies. With a plethora of sectors, comes a plethora of job opportunities, ripe with career progression.

For more information visit:

- www.woodplc.com/

OUR GUIDE'S SPONSORS

Some of our valued sponsors, extended beyond monetary compensation and ensured to support SMUCE efforts and initiatives from the annual Industry Guide, attendance to our beloved networking nights to insight into promotions and logistics.

Some of valued and cherished sponsors include:

Pfizer

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woodside

EY

1 ALL ABOUT SMUCE

WHAT IS SMUCE?

The Society of Monash University Chemical Engineers (SMUCE) is a student-run society bridging the gap between classrooms and the world outside the university. It serves as a link between students, academics, and industry.

SMUCE connects industry professionals to one of the best chemical and process engineering university cohorts in the Southern Hemisphere. Our vision is connecting students with industry for mutual benefit, and we are proudly sponsored and supported by various industry partners.

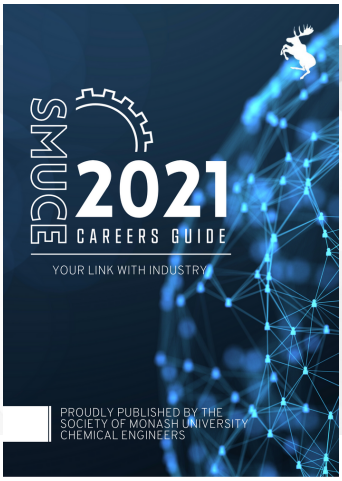
Since 1962, SMUCE has aimed to provide students with industry exposure throughout their academic years. Industrially, SMUCE organizes weekly seminars, publishes materials such as the annual Careers Guide, promotes job opportunities, runs site tours, and many more; to achieve this goal.

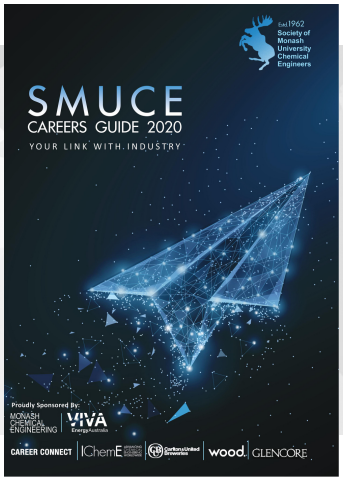
Socially, SMUCE organizes several events to facilitate networking opportunities between students, different year levels, and academic staff. Such events include barbecues, game competition nights, and our annual SMUCE Academic Dinner.

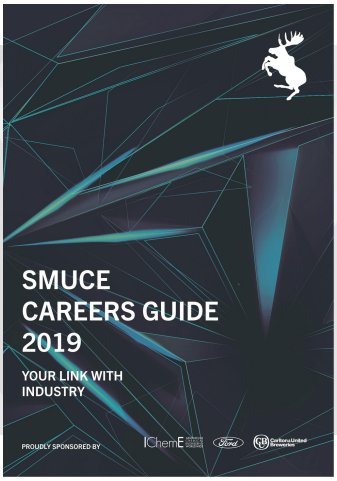
WHAT IS SMUCE?

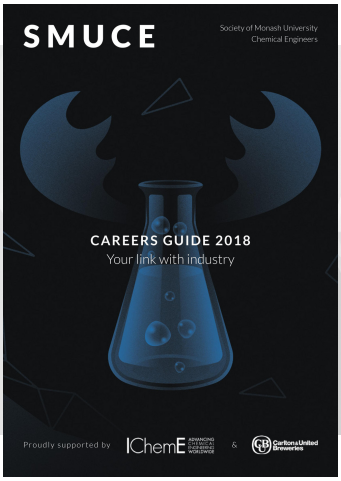
We strive to expose our fellow students to the chemical engineering world by regularly inviting industry members to visit through our hugely popular Industry Seminar Series. We also work closely with the Department of Chemical Engineering and Monash Employment and Careers Development to increase student awareness of the professional opportunities and to build upon the skills necessary to aid them in their professional undertakings.

The SMUCE Careers Guide is published annually. It comprises employability tips, academic profiles, and most importantly, industry profile. These profiles showcase company cultures and opportunities, as well as other important statistics and information. With 2 nominations for Best Publication by Monash Clubs & Societies, the demand for our guides grows every year.









WHAT SMUCE CAN OFFER

WEEKLY SEMINARS

We run industry seminars weekly, inviting representatives from several companies to present to the students. These seminars allow companies to promote their profile, potential employee qualities and qualifications, job opportunities, and graduate programs. Additionally, this provides students an avenue to ask questions and network with company representatives.

YOUTUBE PANELS

Considering the current climate and the diversifying nature of networking and interaction, SMUCE has faced the challenges of COVID- 19 head-on: with weekly YouTube industry Panels.

The 50 Minute panels consist of our very own Industry team interacting with industry professionals, research scientists, and academic staff to inspire and better equip the chemical engineers of tomorrow. For more information visit:

- www.youtube.com/channel/UC3roAtLj1MVf6rrjlaGNw5A/featured

OUR SOCIALS

As we transition into an ever-connected world, SMUCE has learned to be more effective in connecting industry and the community using social media. Frequent posts on our platforms extend from employability information, SMUCE social and industry event promotion to graduate opportunities.

NETWORKING NIGHT

The SMUCE 2021 Industry Team is excited to announce this new event, which will bring together students and representatives from companies in different areas of chemical engineering. We will conduct a panel highlighting the importance of each industry, the role of a chemical engineer in these fields, and tips to know as an employee working in a certain field, or company specifically.

The SMUCE Industry Night will be a first-of-its-kind networking night with an industry panel tailored to chemical engineering students of all levels, including graduates. Through this event, we aim to provide students with insight delivered by recent graduates and experienced engineers.

2 HOW TO USE THIS GUIDE

INDUSTRY PROFILE LAYOUT

Company Background

Company Logo

Indication of any Graduation and/or Vacation opportunities offered

Industry Category

VIVA Energy Australia

GRD VAC OIL & GAS

"Our purpose at Viva Energy is to help people reach their destination."

Viva Energy is one of Australia's leading energy companies. We're proud to be Australian, proud of our 110-year history and extremely proud of our achievements. We help Australians reach their destinations by making, importing and delivering the fuels, lubricants, chemicals and bitumen they need to get there. We're with workers on their daily commute and families on their school run.

We own and operate the Geelong Refinery, supplying over 10% of Australia's fuel – and more than 50% of all the fuel used in Victoria. At Viva Energy, we're building a company that is driven by our people. Our culture reflects the passion, pride and personality of the employees and contractors that choose to work here. Together we are committed to building Australia's energy future.

FOR APPLICANTS

Viva Energy aims to 'help people reach their destination'. They recognise that each person working within the company wants to grow their career based on what's important to them. Joining the team will give you the opportunity to develop a rewarding professional career and get started in your career.

SMUCE advises applicants to be undertaking a Bachelors in Mechatronics, Mechanical, Chemical / Process Engineering, and it is known for the company to provide an invaluable experience in the corporate world and an operating hydrocarbons facility. So pad your resume, ensure you have full working rights/residency and apply towards the end of your degree!

FURTHER OPPORTUNITIES

We offer Summer internships for Chemical and Process Engineers working on a variety of projects in the petrochemical industry. The program runs for approximately 12 weeks over the summer period. A summer internship offers you valuable work experience and practical skills that can set you up for a successful career once you complete your studies.

Our Graduate program for 2022 will be advertised in April 2021. Process Engineering graduates will have a chance to work from our oil Refinery in Geelong.

For more information visit:

- https://www.vivaenergy.com.au/about-us/careers/current-opportunities

Helpful tips and information for applicants

Further opportunities explained in more detail

RESEARCHER PROFILE LAYOUT

Indication of any Summer Research / Masters / PhD / International Student opportunities offered

Researcher Picture

Researcher Interests

Researcher Name

DR JOANNE TANNER

What are your research interests?
I am interested in reaction and process design and development, with a focus on sustainability. My current research sits in the general area of sustainability and biorefinery, replacing traditional fossil fuel based fuel and chemical production processes with analogous processes using sustainable biomass as the primary feedstock.

SMR MST PHD INT

What are the current projects you are involved in?
Most of my projects are applied research, and I try to involve industry partners as much as possible to make sure that my research is addressing real-world problems. Few of the interesting projects I am involved in is:

- In-pack freshness sensors for fresh meat products (GRIP project, industry partner: Meat and Livestock Australia).
- Sustainable packaging solutions for fresh meat products (GRIP project, industry partner: Meat and Livestock Australia).
- Energy efficient production of nanocellulose (PALS project, pulp, and paper consortium contacts).
- Closed loop water systems in biorefineries (PALS project, industry partner: Visy).

Current Projects

Upcoming Projects

What are your potential upcoming projects?
My project insights broaden on Continuous flow, autothermal, mini – and micro-reactor technologies for reaction engineering applications, including process design and scale-up.

All things biorefinery. That is the production of fuels and chemicals using non-food, bio-based feedstocks. If this area is of interest to you, or you have an idea you would like to turn into a research project, please let me know!

RESEARCHER PROFILE LAYOUT

PhD and Master attributes

Desired student attributes

Further opportunities and application process

What student attributes do you look forward to working with you?
HD averages and high GPAs are laudable, but my philosophy is that all you need to take on the challenging pursuit of research is an open and enquiring mind, an enthusiastic approach, and a persevering attitude. The most required trait in a PhD student is dedication to the project, which paves a way to learn everything! Therefore, I do not require any technical skills in my commencing PhD students.

I firmly believe in learning by doing and am happy to provide this opportunity. My projects tend to be hands-on, lab-based research, but do not let that discourage you! Bring along your enthusiasm and initiative, and we will get along just fine. Masters students, PhD students, and International students are eligible to join my research team.

Any further opportunities for PhD and Masters by Research students?
From time to time, I will advertise new PhD and research Masters projects on my BioPRIA webpage:

- www.biopria.com.au/ourpeople/dr-joanne-tanner/

I also invite anyone who has an interest in sustainability and biorefinery to contact me with their ideas. The project does not have to come from the supervisor – everyone is an inventor at heart!

Do you offer any Vacation Work Opportunities?
Yes. I will most likely have summer 2020-21 research positions available. These will be advertised through the Faculty summer research scholarships program.

What is the citizenship eligibility for these opportunities?
Domestic students are eligible, and I am happy to offer positions to international students who have a scholarship (at Monash or home country).

How to apply?
Please send an email to joanne.tanner@monash.edu

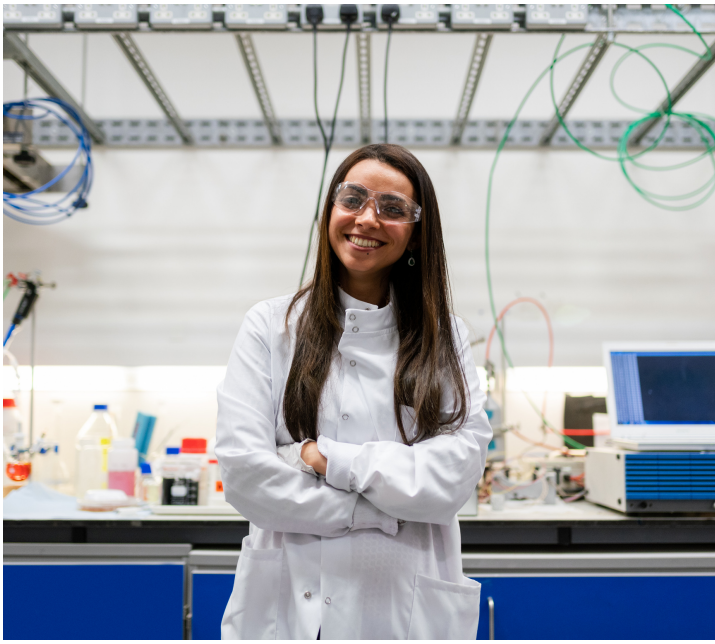
3 WHAT IS CHEMICAL ENGINEERING?

WHO ARE CHEMICAL ENGINEERS?

Chemical Engineers have always had the short end of the stick and many academics and laymen often confuse the discipline with chemistry. To be fair, the distinguishing factors are pretty blurry.

From personal experience, many of my ChemE peers and colleagues themselves, have struggled with explaining the degree to friends, mates, drinking partners. Not that chemical engineering is the main talking point on a Friday night!

To settle the confusion and clear up the hazy definitions online, chemical engineering is the discipline that anticipates and designs industrial processes that produce, transform, and transport materials.
(I apologise if that only made it worse, but bear with me.)



On a large scale, a chemical engineer is an *enabler*: someone who makes things happen efficiently on a massive, industrial manufacturing scale.

They aim to get the best results at the least cost, time, labour and with the lowest impact on the environment possible. Leveraging skills in chemistry, physics, and mathematics, and even economics are what makes a chemical engineer so valuable to a processing plant.

Despite the large number of chemical engineers struggling with the meaning of chemical engineering, a vague job description has its advantages! Chemical engineers are in great demand because of the large number of industries that depend on the synthesis and processing of chemicals and materials.

WHO ARE CHEMICAL ENGINEERS?

In addition to traditional careers in the chemical, energy, and oil industries, chemical engineers experience increasing opportunities and often pioneer new sectors in biotechnology, pharmaceuticals, electronic device fabrication, carbon capture and environmental engineering.

They produce a range of materials, from fuels and fertilizers to processed foods, beer and wine, polymers, and pharmaceuticals. The unique training of the chemical engineer becomes essential in these areas when processes involve the chemical or physical transformation of matter.

A TIP FROM SMUCE

If at times, when the coursework, lecture notes and tutorial problems deviate from common sense and the panic and uncertainty of chemical engineering sets in, remember this;

Always relate the concept in front of you.

That old Thermodynamics lecture note may help you conserve heat and manage the energy expenditure of a Fortune 500 processing plant.

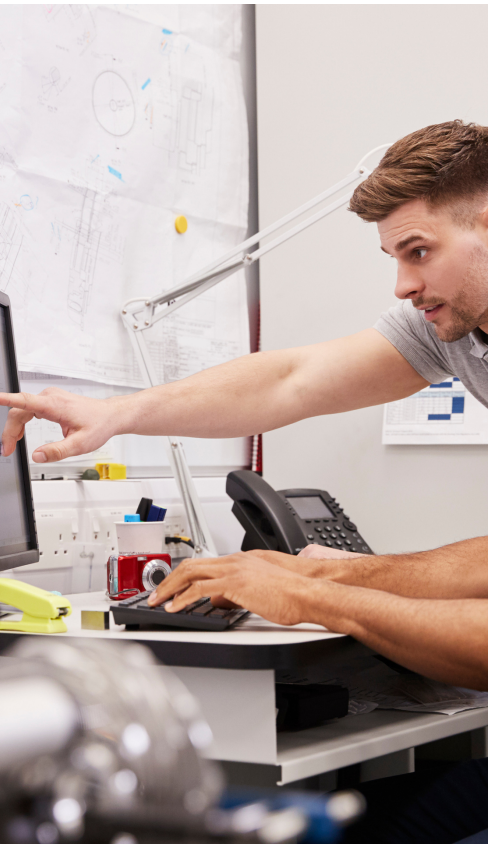
That MATLAB code in front of you is awfully similar to the code that optimizes the inner workings and fluid delivery of an artificial heart.

So study hard and dream on!

MAIN INDUSTRIES: PATHWAYS & CAREERS

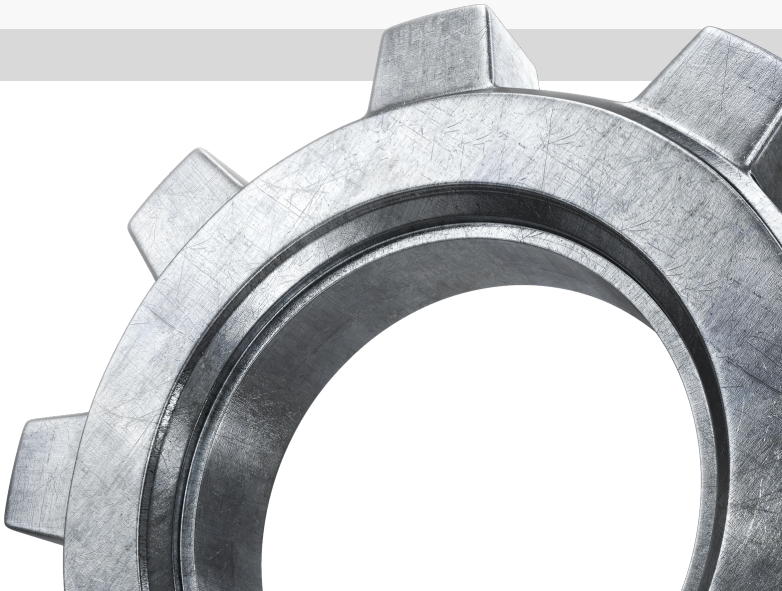
The field and discipline of engineering have succumbed to rapid growth in Australia, due to a recent turn of events.

Whether it's civil, mechanical, chemical, materials or biomedical, Australia is experiencing a widespread shortage of engineers.



Recent government and trade statistics forecast a demand for new innovation and local Australian manufacturing operations, thus requiring a surplus of dedicated and efficient cohorts of chemical and process engineers.

With a long history in dairy, ideal geographic location of oil and gas (LNG), booming research and biotechnology fields, an aging population in need of therapeutics as well as one of the most innovative hubs of medical advancement, the opportunities and careers for a chemical engineer are endless.



MAIN INDUSTRIES: PATHWAYS & CAREERS

OIL & GAS

Australia's oil and gas industry has held a critical place in the development of the country's present-day economy. With increasing global demand, the export volume of LNG has tripled since 2008 predominately in Carnarvon and Perth regions which are based in Western Australia. The gross value added by Australia's oil and gas extraction industry has continued to increase over the past decade.

PHARMACEUTICALS

With an ageing population to the threat of cancer and new diseases and pandemics, Australia's multi-billion dollar industry has been growing steadily over the past few decades and has maintained steady growth and demand despite the throes of the coronavirus. The booming market yields a compound annual growth rate (CAGR) of over 2%, with a focus on increasing awareness of early disease detection, subsidized prescription costs and a wave of designer therapies. Australia is home to many international pharmaceutical manufacturing companies as well as Australia based innovative think tanks and startups, around the Melbourne CBD region.

MAIN INDUSTRIES: PATHWAYS & CAREERS

FOOD & BEVERAGE

The Australian food and beverage industry is Australia's biggest manufacturing sector, generating roughly $50 billion per year, employing a majority of chemical and process engineers. With over 32% of the total manufacturing Australia is responsible for, food and beverage is a secure and future-proof industry sector. A diverse range of food products is available for manufacturing given the large climatic diversity across the continent, from the tropical north to the temperate south. In regards to dairy, the bulk of milk production takes place in Australia's south east, particularly in the Murray, Western and Gippsland regions.

CONSULTANCY

Chemical engineers leverage a strong analytical capability and a unique drive to solve problems, as such many consulting firms hire engineers in their teams. According to research done by GradAustralia, engineers make up 26% of consultant employees as well as 58% of all employed leverage a bachelor's degree. With many international, blue chip companies, head offices and strategic quarters are located in the Melbourne and Sydney CBD.

MAIN INDUSTRIES: PATHWAYS & CAREERS

MATERIALS / TEXTILES / PAINTS

The paint and coatings manufacturing industry has been strong over the past few decades. Industry revenue has boomed to 3.2 billion with the sector employing 36,000 people and expansion internationally. Australia is a large exporter of both raw material and machinery and considering a massive amount of arable land in Western Australia, agriculture of natural textile fibres is very prevalent.

METALS / MINING

The mining and minerals industry in Australia accounts for over 10.4% of its total economy, making it the largest economic contributor to Australia's GDP. The minerals industry is a major contributor to investment, high-wage employees, export logistics as well as government revenue and as such there is a surplus of 1.1 million jobs in the mining, technology and mineral sector. According to JobOutlook, 17% of all chemical engineers are employed in the mining sector, with a specialization on19 useful minerals from over 350 operating mines, Australia-wide. Victoria is a rich source of brown coal, single handedly generating 70% of the state's electricity. Mineral mining occurs in all states of Australia, the Northern Territory and Christmas Island, with an exception in the ACT.

TYPES OF CHEMICAL ENGINEERS

As aforementioned, the career pathway of a chemical engineer is diverse and versatile. With a variable job description comes an extensive list of possible job opportunities.

This branch of engineering is a varied field, and one who pursues it will experience a plethora of different and diverse markets and experiences.

For some context, scroll down to have a brief idea of the sheer variety a degree in Chemical or Process Engineering can take you.

Petroleum engineer
An engineer who develops plans to drill in oil and gas fields, and then effectively recover them. They are responsible for designing equipment to extract oil and forms of hydrocarbon gas from onshore and offshore reserves deep underground, whilst leveraging minimal cost, minimal waste and high efficiency.

Nuclear engineer
An engineer who designs nuclear equipment, such as reactor cores, radiating shields, and associated instrumentation. They are directly related in operating and maintenance activities of operational nuclear power plants to ensure that they meet safety and efficiency standards.

Process engineer
An engineer who develops, configure, and optimize industrial processes from inception through to start up and certification. They also assess processes, take measurements, and interpret data, to convey insight to necessary stakeholders.

Energy engineer
An engineer who designs, develops, or evaluates energy-related projects or programs to reduce energy costs or improve energy efficiency during the designing, building, or remodelling stages of construction.

Materials engineer
An engineer who evaluates materials and their respective (and often unique) properties and likewise also develops machinery and processes to manufacture materials for use in products to meet specialized design and performance specifications.

TYPES OF CHEMICAL ENGINEERS

Mining engineer
An engineer who typically designs and develops mines and determines the best way to extract metal or minerals with an emphasis on low cost, low waste, and high savings. They also develop new equipment or direct mineral-processing operations to separate minerals from dirt, rock and other materials.

Biochemical engineer
An engineer who designs ways of getting biological tissues and groups of specialised cells to control biological and metabolic processes, and then to obtain a manufacturable and commercial product in a way that is ethical, efficient and financially viable.

Environmental engineer
An engineer who conducts hazardous-waste management studies in which they evaluate the significance of a hazard on the surrounding environment, as well as advises necessary stakeholders regarding sustainability measures and long-term impact.

Food engineer
An engineer who utilizes the latest innovative technology to process, package, preserve and improve food products, as well as the production process.

Production engineer
An engineer who monitors the production operations, ensuring process adherence to safety protocols, and evaluating the staff's performance, strategizing on maximizing productivity to deliver efficient results that would drive revenue and increase profitability.

Pharmaceutical engineer
An engineer who is involved in the manufacturing of pharmaceuticals in processes that convert chemical and biological materials into pharmaceutical products and therapies.

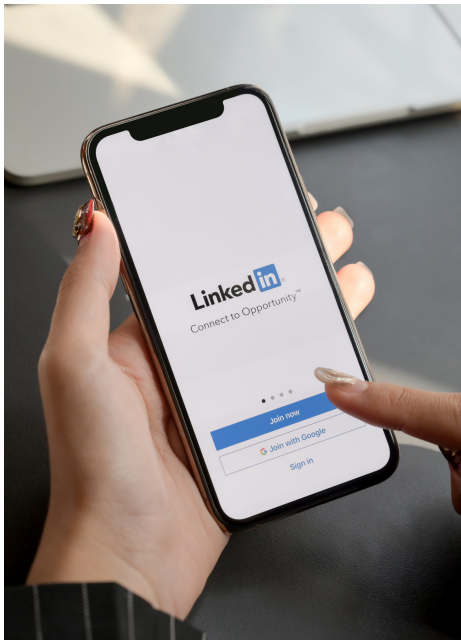
INSTRUCTIONAL HOW-TO'S

HOW TO LINKEDIN

LinkedIn is the world's largest professional social media network, with millions of members looking to connect with others in their field. It is quite a useful tool in a budding chemical engineers toolbox and is a great way to map out career plans, network with like-minded people, keep up to date with innovation in your field, and explore a large population of opportunities and employers.

You can use LinkedIn to join professional associations, participate in group discussions, keep up with industry news and search for jobs. If you are new to the networking scene, the standard LinkedIn Welcome tutorial will help guide you through the basics of setting up your personal profile, subscribing to personal interests and fields as well as expanding your professional networks. So we recommend getting started there!

However, if you are a seasoned veteran or just an eager-eyed undergraduate with a thirst for ambition, these 10 tips should help spruce up that page!



1. FRAME YOURSELF

A strong personal photo is always a great addition to your LinkedIn profile. Ensure it is professional, well-lit and puts your best foot forward. It's a great idea to wear what you would to work and smile with your eyes!

2. HEADLINES AREN'T JUST FOR NEWSPAPERS

Conventionally, a headline outlines your job title and the organization in which you work for. However, a LinkedIn headline offers you the possibility to briefly outline your interest and extracurricular activities to demonstrate a well-rounded person.

HOW TO LINKEDIN

3. GROW YOUR NETWORK

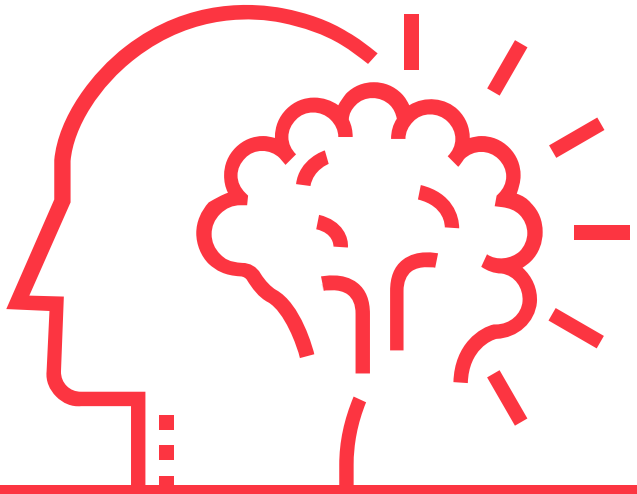
Networking is the name of the game here. Through networking, you can gain important career information and put yourself in the best position to acquire a preferred role. Your network should include friends, lecturers, workmates, employers and professionals.

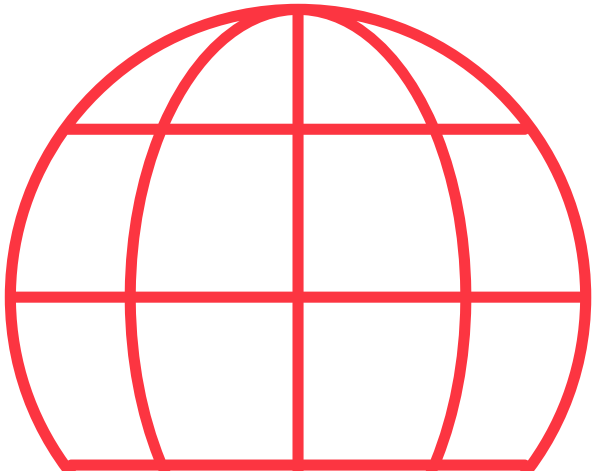
4. NETWORK REQUESTS

When networking, and you come across a potential contact, take the time to write a personalised message as part of the LinkedIn network request. Be direct, polite and delineate the reason why you'd want to stay in touch and connect. Always remember, networking is a two-way street!

5. LINKEDIN-RESUME

Always remember, your resume is the shortest version of your professional and academic capabilities. It should merely tempt your employer to pick up your resume and do his research on you. The bulk and details of your capabilities should be your LinkedIn profile, from extra-curricular activities, organisations, likes and interests, passions and pet-projects. Elaborate on!





6. LINKEDIN LEARNING

LinkedIn Learning is a wonderful tool in your forever learning arsenal. From over 5,000 courses on the platform, it's a great way to expand your skillset and really re-evaluate any fields you mastered. Courses extend from personal financing, business and entrepreneurship, soft skills like public speaking and confidence, as well as technical skills like programming and coding.

HOW TO LINKEDIN

7. POST REGULARLY!

This tip applies to almost all social media platforms. The rationale is simple, to ensure you have a memorable and continued presence on the platform and on your contacts and network, you need to post frequently and quality content. Whether it be a work milestone, a cool project you're working on, asking for help on a technical task, publicising how you coped with a work or uni scenario. Keep your social network social!

8. SKILL UP

We would suggest you focus a bit more on this section, as it helps to substantiate the description in your headline and summary and its pathways for others to endorse you. Refrain from listing unnecessary skills and try to depict skills that impact your career!

Getting your LinkedIn profile done more professionally should not take you much time.

Try working through these ideas, building from one to the other and you will find that you can make progress quickly. Good luck on behalf of SMUCE!

9. TAKE A SKILL ASSESSMENT

A skills assessment is an online test that enables you to demonstrate the level of your expertise and display a Verified Skills badge on your profile. As per the data, it's 30% guaranteed that you will be hired for the role you applied for if your profile shows verified skills. So have an immense focus on this section.

10. SHOWCASE YOUR PASSION FOR LEARNING

You will have the opportunity to add a course certificate to your LinkedIn profile when you complete a course on LinkedIn Learning. To do this you can go to the learning history of your LinkedIn learning account.

HOW TO RESUME

Resumes get your foot in the door. It's the first impression that you will give your future employer, from the first time they hear your name, recognise your talents or consider your experiences.

As the old adage goes, "*You never get a second chance to make a first impression*".

SMUCE has taken the initiative to provide you with some help to build a robust resume that can showcase your strengths (and weaknesses) and help you make that next leap into your career.

EDUCATION

Valedictorian of your double degree cohort?
Battling the waves of a middle-of-the-road WAM or GPA?
Quite apt in your academic grades?

Whether you are 2 years from graduation or even 2 months out, your employers care about your educational experience and academic background. Like most of your peers, details about your education will be of the most interest to potential employers unless you have any industry-related experience. Whether it be a summer-unit you picked up, a passion for a core engineering subject or a passion project that turned into research. Education is important.

Many academics and professionals might argue that academic excellence is by no means a good way to measure a candidate's suitability and capability at the workforce, however academic prowess can delineate other desirable qualities.

Academic excellence can be a testament to a hard-working work-ethic, and an innate drive to succeed. Whereas mid-range grades and scores might actually demonstrate qualities of perseverance and determination. *Your grades might be concrete, but the way your employers perceive them can be altered*. Generally speaking, your education section should include the extent of your tertiary education as well as necessary and interesting subjects that might pertain to the job.

HOW TO RESUME

WORK EXPERIENCE

Whether you summered at a Fortune 500 company or coached a handful of teenagers at indoor soccer, experience is experience.

Even though it may seem meaningless, or silly to list some of your experiences, rather focus on the skills you ascertained, developed and championed during your time. However that being said, if you come to the table with industry-specific work experience, list relevant prior work experiences that highlight the type of employee you are as well as the technical skills you bring.

If experience is where you draw a blank, recall relevant and job-specific activities that highlight your capabilities as an employee. As a tip, look at the initial job description and pay attention to these specific job skills and try to recall your experiences in lieu of the description.

To elucidate a point, consider the example of working at the neighbourhood lemonade refreshment stand. It may not be the most glamorous, but if you can effectively showcase these skills, you can showcase your engineering projects.

For instance, helping your elder sister with her lemonade stand business, can teach you hands-on and vocational skills regarding corporate enterprise, customer-client relationships, teamwork and entrepreneurship.

Further, soft skills like an eye for detail, time-management as well as maintaining quality under high-stress situations are wonderful skills that you might have ascertained in your time with your sibling.

HOW TO RESUME

Carrying on with the example, leveraging key action-based words is imperative in presenting these skills. Describe any duties and responsibilities with an action verb as well as quantifying your result or achievement. For instance:

Facilitated the formulation of a mid-sized, family-run startup specializing in the saccharine delivery of refreshments and chilled beverages to a clientele of over 200 customers town-wide.

Detailing that evening you bought pink powder to turn your regular lemonade to pink lemonade, and made a profit:

Leveraged an attention to detail and market competitor analysis, to successfully implement a new addition to the refreshment product range, leading to a net operating profit margin of 75%, considering short-revenue of over 300 AUD as well as an return on investment (ROI) of over 125%.

LEADERSHIP, VOLUNTEERING & COMMUNITY WORK

Whether you realise it or not, you've been a part or led someone or something - built plans and prototypes, directed projects or even inspired people. Engineering firms and your future employers consider this to be your "third dimension" or unique quality that keeps you competitive and successful in the role you are applying for.

If you are a member / student member of any professional associations, for example, Engineers Australia or IChemE, mention this on your resume as it demonstrates your interest and commitment to the engineering profession. Like with any section, be specific and detailed when explaining your leadership experiences and previous projects. Remember show don't tell!

HOW TO RESUME

PERSONAL SKILLS + ATTRIBUTES

Many professionals will argue that chemical engineering firms don't care if you play the guitar. Or speak conversational Fijian. Or like to go squid-fishing.

Although it may not always tie perfectly to your job description or performance as a candidate, it demonstrates a well-rounded and worldly personality. A chemical engineer with a passion for music. A process engineer who has taken the time to perfect a language. A research student who likes to unwind with fishing on the weekends. This is how your employer makes sure you're the type of person they want to work with 8 hours a day.

Bonus: Try to include skills that exude certain characteristics about your character and about yourself. For example, working with miniature WWII army tanks and motorcycles demonstrates patience, perseverance and good fine motor skills, perfecting a musical instrument shows dedication and respect for the art.

MORE HELP?

Careers Connect is one of Monash's very own resources to build up a robust resume, strong cover letters and confident interviews.

Simply signup using your Monash ID to one of the interactive, free webinars to learn how the professionals get their dream jobs. So bring some paper and take notes, as it can take your resume from highschool, to the next level.

HOW TO RESUME

HOT TIPS WHEN WRITING YOUR RESUME

- Contrary to popular belief, don't include your home address. Do include your personal email address, LinkedIn link and phone number.
- Ensure your resume is void of any spelling mistakes. We live in a day and age of SpellCheck. There is simply no excuse.
- Always save and submit your resume in a .pdf format to ensure formatting is consistent. Stay away from .docx and .png file types.
- Write all your content in the third person, stay away from "I, my or we".
- Get someone from a similar industry to cross-reference your resume and fix and glaring gaps or just tweak the nuances.
- Never go more than 2 pages. Keep it simple.
- Never list soft skills like 'teamwork' or 'organized'. Instead, show these skills in action, never outright tell them.
- Keep formatting to 10-12 size font, with a san-serif font (as opposed to serif), with minimal italicisation, bolding and underlining.
- Don't hesitate to add a splash of colour or vibrancy.
- Check and confirm with your referees that they are comfortable being on your resume.
- Stay away from a career outline. Instead, append it to your LinkedIn profile.
- Be professional with your language. Avoid slang, overly difficult jargon or SMS language.
- Do research on similar resumes to inspire yourself!

HOW TO COVER LETTER

When applying for jobs the cover letter is often overshadowed by your resume, however, in most cases, it is just as important, if not more and could make or break your chances of being considered for a job.

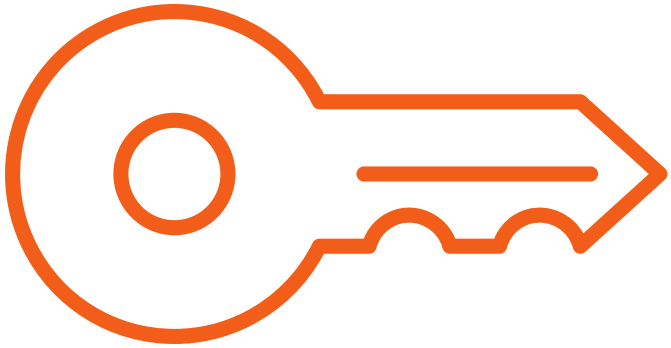
Your cover letter is your chance to really sell yourself as an employee and to elaborate on your skills and experience in a way that makes them so much more relevant to the role you are applying for than on your resume. Try to also inject a bit of personality into your cover letter and give a bit of an insight into the type of individual you are, setting yourself out from the competition.

SMUCE has taken an initiative to provide you with 5 practical steps to write a professional cover letter that can show employers that you are the best fit for their position.

1. MAKE IT PERSONAL

Try to avoid addressing letters to Sir/Madam/To Whom It May Concern, as it is incredibly impersonal and gives the impression that you are sending the letters out to anyone and everyone. Instead,, do some digging in the job application itself or on LinkedIn to research your hiring members or even your Team Leader.

The cover letter should be a more personalised form of your resume, specifically targeting your employer's requests.



2. SPECIFICITY IS KEY

These paragraphs should demonstrate why you want to work for this employer and why they should want you.

It is essential that you demonstrate within these paragraphs your ability to gather the most relevant information from a range of sources to state your claim as a suitable candidate.

Highlight the skills, expertise, qualities and employment experience you have included in your resume that you believe are most relevant to the requirements of the position. Make sure that you can demonstrate how you meet the selection criteria, and how what you have to offer relates to both the current and future needs of the employer.

HOW TO COVER LETTER

3. SHOW PASSION

You need to be enthusiastic and show them that you really want the opportunity. Your choice of language can help to do so, for example, "*I would love the opportunity to discuss this further*." Be passionate about your career and demonstrate your ambition to progress at the company.

4. BE FRIENDLY & POLITE

Getting your personality to shine through words can be difficult, but not impossible.

Using positive words, as well as really powerful vocabulary can help demonstrate an innate passion and drive for the role.

One of the very best things as a young engineer is passion and drive. Use that to your advantage, however, remember to be polite and not braggadocious.

5. FINISH STRONG

What do you want to happen next?

Confirm that you have attached your resume and any other requested documents. Finish on a positive and compassionate note, thanking the employer for their time and expressing interest in attending an interview and hearing back from them.

CONTINUOUS PROFESSIONAL DEVELOPMENT

WHAT IS CPD?

Continuous Professional Development (CPD) is a compulsory professional practice requirement for all Bachelor of Engineering and Master of Professional Engineering students at Monash Clayton.

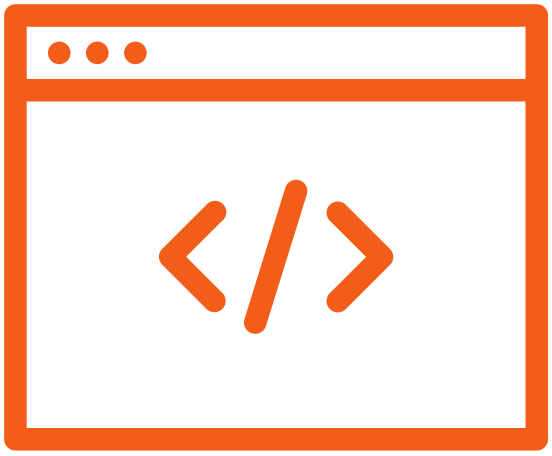
CPD is part of meeting the Engineers Australia Stage 1 Competency Standard to be a Professional Engineer. It is also an opportunity to engage in business and engineering-related activities, build your employability skills and grow your professional networks and contacts.

There are 3 steps to pass the CPD unit:

- **Step 1**: complete a minimum of 420 hours of professional practice activities outside the classroom.
- **Step 2**: create a written record detailing how the activities have helped you develop your employability skills.
- **Step 3**: answer assessment questions reflecting on the key Engineers Australia Stage 1 competencies.

For more information visit

- www.monash.edu/engineering/current-students/professional-development/continuous-professional-development



STUDENT FUTURES

WHAT IS STUDENT FUTURES?

Unique to Monash, this award-winning online platform helps you identify, record and present the employability skills you acquire during the course of your study. You don't even need to have previous work experience!

Student Futures helps you prepare for interviews, craft a comprehensive resume, and assist you in refining your overall career readiness. You will enjoy continued access to the platform for up to twelve months after you complete your studies. A great guide to help you on your career path.

Explore your career options:

- Learn about the nine keys employability skills that employers look for.
- Find out from graduates how they gained their employability skills at Monash.
- Conduct a regular skills evaluation to monitor the progress of your employability skills.

Build your employability skills:

- Search for opportunities to develop specific employability skills.
- Record and reflect on the skills you are building through your experiences, across your studies, Monash activities and activities outside of Monash.

Apply for jobs:

- Use Student Futures to help craft your resumes, cover letters, LinkedIn profiles, and answers to key selection criteria.
- Practice answering interview questions using over 65 pre-defined scenarios or create your own scenarios.
- Generate your own Student Futures certificate, which summarizes your completed Monash activities to potential employers.

For more information visit

- www.monash.edu/engineering/current-students/professional-development/continuous-professional-development

5 FEATURED INDUSTRY PROFILES

VAC Vacation Programs

GRD Graduate Programs

This section features profiles of companies from different industries. The profiles include information about company background, employment opportunities and employee development.

Please keep in mind that these profiles only represent a fraction of companies applicable for chemical engineers. To know more about companies and industries, attend our industry events or contact the Industry Team.

Viva Energy Australia

GRD VAC OIL & GAS

"Our purpose at Viva Energy is to help people reach their destination."

Viva Energy is one of Australia's leading energy companies. We're proud to be Australian, proud of our 110-year history and extremely proud of our achievements. We help Australians reach their destinations by making, importing and delivering the fuels, lubricants, chemicals and bitumen they need to get there. We're with workers on their daily commute and families on their school run.

We own and operate the Geelong Refinery, supplying over 10% of Australia's fuel – and more than 50% of all the fuel used in Victoria. At Viva Energy, we're building a company that is driven by our people. Our culture reflects the passion, pride and personality of the employees and contractors that choose to work here. Together we are committed to building Australia's energy future.

FOR APPLICANTS

Viva Energy aims to 'help people reach their destination'. They recognise that each person working within the company wants to grow their career based on what's important to them. Joining the team will give you the opportunity to develop a rewarding professional career and get started on your career.

SMUCE advises applicants to be undertaking a Bachelors in Mechatronics, Mechanical, Chemical / Process Engineering, and it is known for the company to provide an invaluable experience in the corporate world and an operating hydrocarbons facility. So pad your resume, ensure you have full working rights/residency and apply towards the end of your degree!

FURTHER OPPORTUNITIES

We offer Summer internships for Chemical and Process Engineers working on a variety of projects in the petrochemical industry. The program runs for approximately 12 weeks over the summer period. A summer internship offers you valuable work experience and practical skills that can set you up for a successful career once you complete your studies.

Our Graduate program for 2022 will be advertised in April 2021. Process Engineering graduates will have a chance to work from our oil Refinery in Geelong.

For more information visit:

- www.vivaenergy.com.au/about-us/careers/current-opportunities

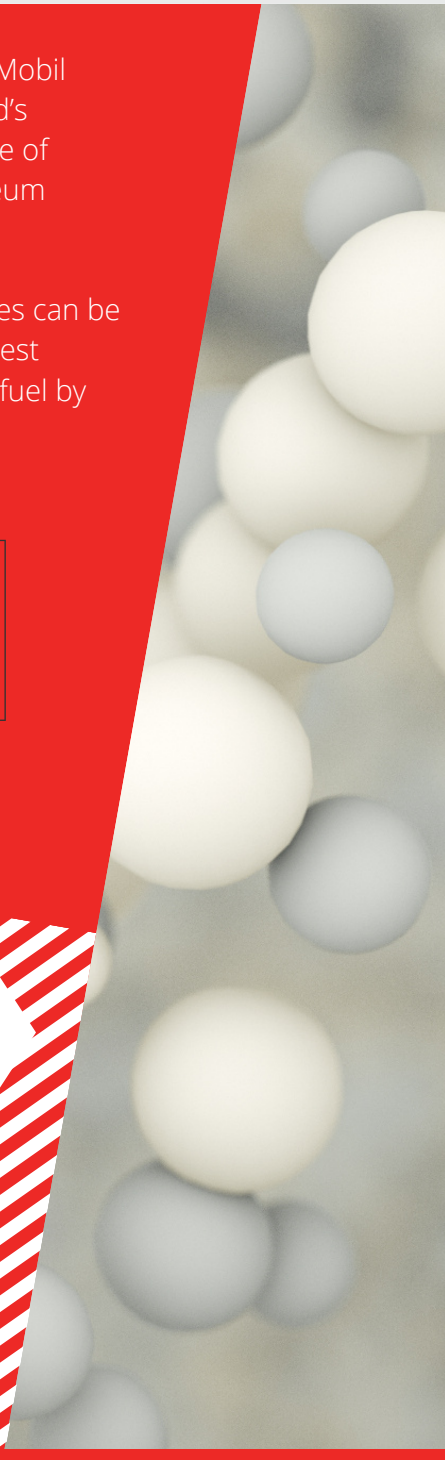
ExxonMobil

VAC | OIL & GAS

"Use your energy to change the world."

ExxonMobil is a global company and has affiliates located around the world. ExxonMobil Australia is one of the subsidiaries of the Exxon Mobil Corporation, one of the world's leading petroleum and petrochemical companies. Our business covers a wide range of petroleum-related activities from oil and gas exploration and production, to petroleum refining and supply of fuels and lubricants.

ExxonMobil Australia's head office is in Melbourne. Vacation Students and Graduates can be based in the office or at one of our main processing facilities or sites. Few of our latest updates and ongoing research studies focus on creating a better world apart from fuel by positioning for a low carbon future, devising engineering solutions to plastic waste challenges and capturing carbon straight out of the atmosphere.



FOR APPLICANTS

Who are we looking for when reviewing potential applicants?

- Students with a strong academic record and have demonstrated maturity and interpersonal skills through previous leadership and team roles.
- Capable, highly innovative students who display leadership skills, initiative, and drive.
- Students with a drive to innovate and be part of continuous improvement at our facility.

If this sounds like you we welcome you to be a part of Exxon Mobil and experience the benefits of joining a reputed company.

ExxonMobil also offers two $5000 scholarships to deserving Monash engineering students titled ExxonMobil Award for Excellence.

FURTHER OPPORTUNITIES

ExxonMobil offers a 12-week paid vacation student program that runs between December and February. As a vacation student with ExxonMobil, you will work on a real project with outcomes that support actual business objectives.

Your work will include site visits and mentoring by experienced engineers to help develop your skills.

Currently, we do not offer any graduate programs in 2021, please be in touch for future updates on the applications openings.

GRD

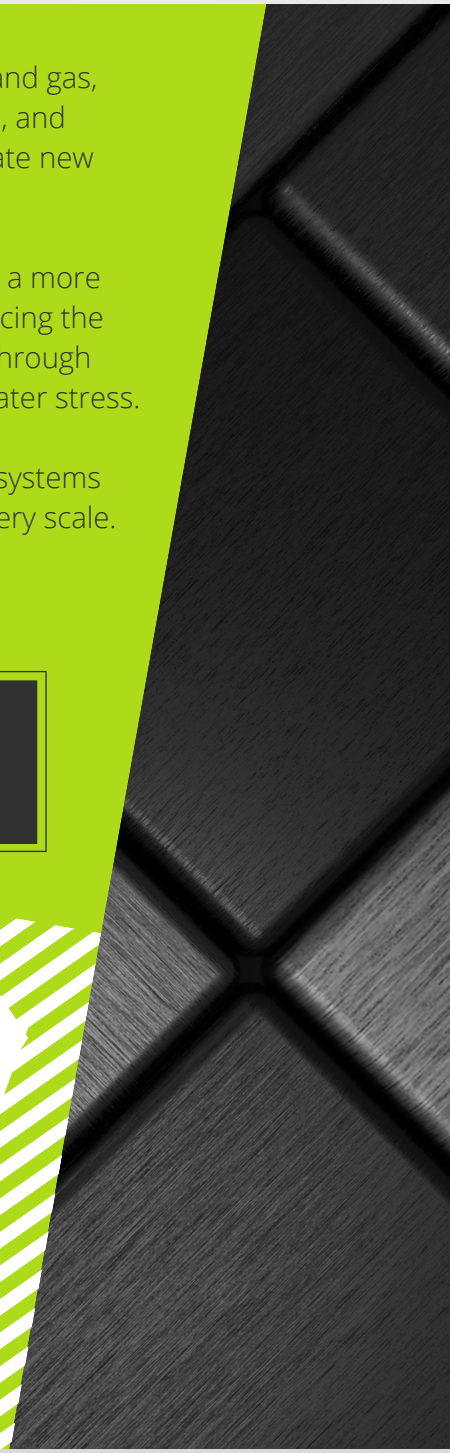
OIL & GAS

"Shaping a sustainable environment, now! "

SUEZ Australia is one of the subsidiaries of the Suez group, the world's leading oil and gas, water, and waste management-based company. We help businesses, governments, and communities to protect, access and optimise the use of natural resources and create new resources through reuse and recycling of water and waste.

Together with our customers, we propose solutions to contribute towards building a more sustainable world by designing and operating smart and sustainable cities, by reducing the consumption of resources, by developing access to local and renewable energies through waste recovery, or by creating alternative water resources in regions exposed to water stress.

SUEZ oil and gas industry (SOGS) is a global leader in delivering packaged process systems and complete process trains and plants for onshore and offshore operations at every scale.



FOR APPLICANTS

A wide range of engineers, including chemical, mechanical, and electrical, as well as technical specialists are employed at Suez.

What we offer for you:

- Extensive on-the-job training
- Development and mentoring tailored to the position and the interests and skills of the individual.

Refer to the SUEZ Water Technologies website Careers page for details of current available positions. Melbourne positions may also be advertised directly via the Monash University Chemical Engineering Department.

If you are a person looking to create a more sustainable environment, SUEZ is the perfect employer for you!

FURTHER OPPORTUNITIES

Our typical graduate program focuses on international projects, so based on the availability we hire few graduate professionals every year. But due to the current pandemic, expect updates from us for the application information and deadlines for 2022 intake. Currently we do not offer any vacation programs but look out for some updates from us!

GRD VAC OIL & GAS

"Committed to a Lower-Carbon Future:
A better tomorrow needs action today."

Woodside is the leading pioneer of the LNG industry in Australia and the largest Australian natural gas producer. We at Woodside will play our part in the global response to climate change by continuing to provide safe, clean, affordable and reliable energy the world needs. Woodside is well placed to be a part of the global energy transition.

Our gas can help reduce emissions, displacing more intensive energy sources such as coal and biomass, while enabling customers to deliver affordable energy and climate action. It's only by working together that a better future comes to life. If you have the potential to excel, we will help you find the ideal opportunity.

FOR APPLICANTS

The minimum eligibility criteria for Woodside (like the majority of ChemE firms) include:

- An Australian or New Zealand citizen or an Australian permanent resident
- An international student currently studying in Australia
- An Weighted Average Mark (WAM) of 65 or above in your most recent studies

Woodside also boasts a three-year, competency-based program that offers experiences and opportunities to develop both your technical and leadership skills, including:

- Rotational assignments – both within and outside your discipline
- Site visits to our WA plants and a chance to contribute to real-world projects
- Extensive on-the-job training
- Individual technical mentors and graduate buddies
- Community volunteering opportunities

For more information visit:

- www.woodside.com.au/careers
- www.woodside.com.au/careers/graduates-and-students

FURTHER OPPORTUNITIES

Woodside's Graduate Development Program plays an important role in building our long-term technical leadership capabilities and we're proud to be recognized as one of Australia's top Graduate employers. We know developing and growing our people is key to achieving our company growth plans. Our size and pace means more opportunities, earlier in your career.

We offer a 12-week structured internship program to penultimate and capable university students. Our Summer Vacation Program boasts:

- Early consideration for our Graduate Development Program
- Additional work placements and support throughout your degree
- Many opportunities to meet potential mentors and colleagues.

GRD VAC PHARMACEUTICALS

"To help people do more, feel better, live longer."

We have three global businesses that research, develop and manufacture innovative pharmaceutical medicines, vaccines and consumer healthcare products. Every day, we help improve the health of millions of people around the world with leading pharmaceuticals like Panadol, Advil, Ventolin, Centrum etc. Our goal is to be one of the world's most innovative, best performing and trusted healthcare companies.

Our engineers are involved in all elements of the design, development and delivery of our products to patients and consumers. We manufacture a huge range of different pharmaceutical and consumer healthcare products. By integrating talented teams of engineers and scientists we can deliver four billion packs of medicines and healthcare products every single year around the world whilst meeting stringent quality and safety standards efficiently.

FOR APPLICANTS

An engineering and manufacturing placement at GSK will provide you with the opportunity to gain first-hand experience at a manufacturing site.

Ensure to keep your CV tailored, minimal and concise and don't be afraid to make your cover letter stand out! The IBL programme is truly a great opportunity and keeps you competitive compared to your cohort, but ensure you are a citizen/ permanent resident and able to defer a year of study and work full time.

For more information visit:

- au.gsk.com/en-au/careers/students/

FURTHER OPPORTUNITIES

GSK is one of the only companies that offers the IBL program, developed for undergraduate University students in their penultimate or final year of study upon commencement of the program. This twelve-month, full-time IBL program is the perfect opportunity for students to launch their career, offering invaluable hands-on work experience in a friendly and supportive environment.

Upon completion, IBL's will have built on their university learning and gained a competitive edge for all future career paths.

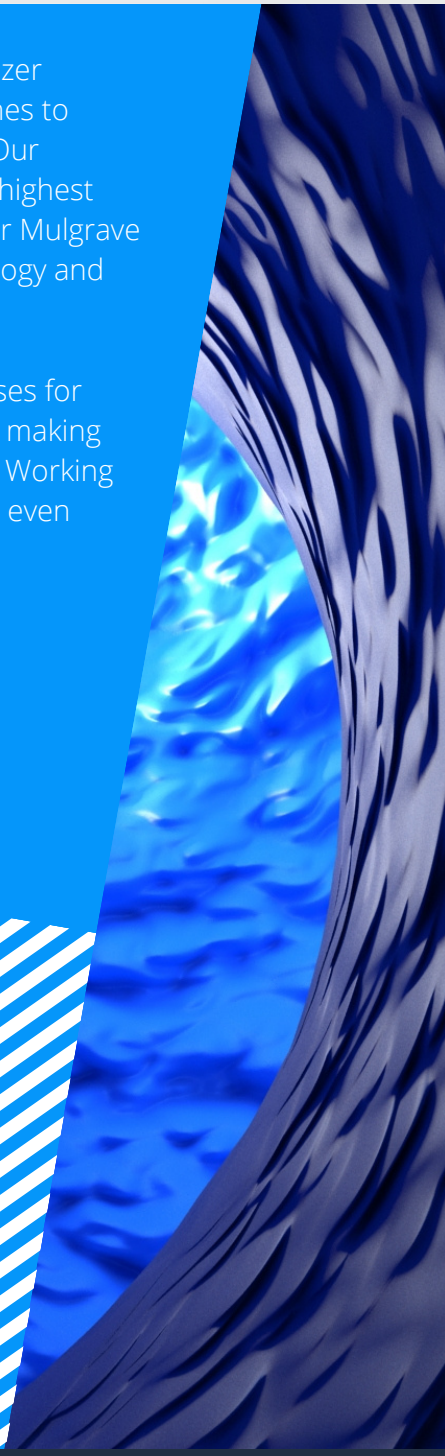
Applications for the GSK 2022 IBL programme open in July 2021, so keep an eye out for that!

PHARMACEUTICALS

"Working together for a healthier world!"

Pfizer Global Supply has over 40 manufacturing sites globally, which support the Pfizer Biopharmaceuticals Group and provide hundreds of different medicines and vaccines to patients in more than 125 countries – more than 20 billion doses in just one year. Our manufacturing sites focus on ensuring that all Pfizer products are produced to the highest standards of quality, safety and efficacy, and are available when needed. Locally, our Mulgrave manufacturing site is a key contributor to these medicines, particularly in the Oncology and Antibiotics space.

Whether you are involved in the design and development of manufacturing processes for products or supporting maintenance and reliability, our engineering team is vital to making sure customers and patients have the medicines they need, when they need them. Working with our innovative engineering team, you are helping bring medicines to the world even faster by imagining what's possible and taking action.



FOR APPLICANTS

What we can offer you:

- Join a global leader in pharmaceuticals!
- Our strong culture of learning and development can actively support your career aspirations
- A flexible and supportive work environment
- A collaborative and inclusive team culture
- Mentoring and leadership development

If you are...

- Looking to push what's possible – for yourself and for your field
- Keen to collaborate with people who see beyond your job title
- Determined to help deliver better global health for all

...You'll find it at Pfizer.

FURTHER OPPORTUNITIES

Pfizer has historically offered a comprehensive graduate program for aspiring enthusiasts, however unfortunately for the duration of 2022, they will not be offering any further opportunities.

BAIN & COMPANY

GRD CONSULTANCY

"We help you see the world differently and discover opportunities you may never have imagined."

Bain & Company is a global consultancy that helps the world's most ambitious change-makers define the future. Across 59 offices in 37 countries, the firm works alongside clients as one team with a shared ambition to achieve extraordinary results, outperform the competition, and redefine industries.

While the firm's client list is closely guarded, Bain is known to have worked with such prestigious names as De Beers, Dell, Ford, Charles Schwab, Starbucks, Del Monte, KIPP, and Bill & Melinda Gates Foundation.

We're looking for Bachelors, Masters (non-MBA) and PhD students who want to work with the brightest, most curious minds and we'll assess your application for academic achievement, professional experience (in your field) and leadership skills.

FOR APPLICANTS

The short answer is that Bain and Company are a consultancy firm, not an engineering firm specializing in chemical or process engineering, hence they would be looking for all-rounders, independent thinkers with a passion for problem-solving.

As stated on their Careers page, the essential skills they look for in an undergrad candidate is an exceptional academic performance and strong analytical skills. So if Bain and Co. interest you, study up!

For more information visit and/or contact:

- www.bain.com/careers
- australia.recruiting@bain.com

FURTHER OPPORTUNITIES

Bain Australia recruits graduates between February and March 2021 for Associate Consultant (AC) positions starting in January, March and July 2022. Those currently completing an undergraduate, masters (non-MBA) or PhD degree, or with up to five years of industry experience are encouraged to apply.

Bain & Co. also offers the True North Scholarship for Women for eligible female, penultimate-year students, giving them a chance to win a $15,000 scholarship, a Bain mentor and an Associate Consultant job offer.

In addition, we welcome applications from experienced professionals with up to five years of industry experience who are looking to make a change in their careers.

BCG

GRD CONSULTANCY

"Solving the world's biggest problems requires instinct and imagination. This is BCG."

The Boston Consulting Group is an international strategy and general management consulting firm whose mission is to help leading corporations create and sustain competitive advantage. As a truly international firm, our strong global presence offers clients and employees a wealth of cross-cultural experience. We partner with clients in all sectors and regions, with particular strength in technology, media and telecommunications, health care, industrial goods, consumer, energy, financial institutions, insurance and public sector.

Projects are getting larger, riskier, and more complex, yet little progress on innovation and productivity has been made over the past 50 years. In such a market environment, delivering projects on time, on budget, more efficiently, and more reliably are today's top priorities. Leading firms are relying on new ways of delivering projects, employing advanced building materials and construction methods, implementing better lean operations on-site, and adopting smart technologies.

FOR APPLICANTS

BCG recruits Associates to join any of their Australian offices, and be apart of real-world consultancy projects and overseas markets. The hired Associates range from degrees in music, philosophy and medicine to the more traditional STEM fields like law, engineering and commerce, and hence is a brilliantly diverse workplace to start your career.

BCG adores undergrads with outstanding academic records, strong analytical and interpersonal skills, intellectual curiosity, and great ambition, so if that sounds like you, consider applying!

For more information visit:

- www.bcg.com/enau/careers/apply
- www.linkedin.com/company/the-boston-consulting-group

FURTHER OPPORTUNITIES

In regards to Graduate opportunities, engineering students are welcomed to apply to join BCG. For more information refer to the Websites provided and get your application started today!

BCG offers a scholarship to students with at least one further year of study in their respective degrees. BCG boasts experience and exposure to:

- Diverse case teams
- International experiences
- Personal mentoring and Individual training
- Opportunity for personal development

GRD VAC CONSULTANCY

"Building a better working world!"

Ernst & Young, trading as EY, is a global accounting firm that derives its revenue from a range of audit, tax and advisory services headquartered in Sydney, Life at EY will be working with emerging technologies, pursuing new opportunities, and reinventing yourself every day.

Our culture of innovation at EY means embracing change in everything you do, from applying new technologies to making existing processes better. Your powerful ideas will unlock your full potential – and ours.

Using the knowledge, you have gained from your studies, you'll help all types of companies, from entrepreneurial start-ups to multinationals. We will provide you with experiences that will shape your career for years to come. Because when you grow, we do too.

FOR APPLICANTS

Immerse yourself in our diverse and inclusive culture, get to know us, work on real business challenges with real EY professionals and find out if EY is the place for you. You will make a bigger impact than you ever thought possible.

From student programs and other offerings to full-time positions, find a role where you can build an exceptional experience for yourself and a better working world for all. Discover the legacy EY is seeking to create at:

- www.ey.com/en_au/who-we-are

FURTHER OPPORTUNITIES

We do offer a 12-week Vacation program for the students in the penultimate year of their degree. Both our Graduate and Vacation program applications for the year 2022 will be opening soon so please keep an eye out for the deadlines using the following link!

- www.ey.com/en_au/careers/students-apply-here

The minimum eligibility criteria for EY's graduate program (like the majority of ChemE firms) include:

- If you are in the final year of your degree or within 18 months from your graduation date at the time of application there you go.
- You need to be an Australian or New Zealand citizen or an Australian permanent resident to be eligible for this program.

Deloitte.

GRD | VAC | CONSULTANCY

"Making the right choices to progress with confidence."

Deloitte is a consultancy-based company that is driven to create an impact that matters at every opportunity. We nurture our graduates from day one. From working with Fortune 500 companies, government agencies and not-for-profits, to participating in hackathons, mentorships, and our award-winning graduate development program, we work on projects that matter.

From building a voice-enabled hospital call bell solution, designing the Invictus Games communications roadmap, valuing the Great Barrier Reef and responding to hacking incidents, the work we do is based on choice and progress that matters. The belief is that we are only as good as the good we do, and the impact we make.

FOR APPLICANTS

The minimum eligibility criteria for Deloitte (like the majority of ChemE firms) include:

- You are eligible for our Graduate Program if you are completing your studies in 2021, and ready to join the program full-time in early-2022.
- For international students who don't hold an Australian PR, you are only allowed to apply for Consulting and Risk Advisory business units and allowed to work in all Australian offices except Canberra, where Australian citizenship is required.

Deloitte looks for people that are motivated, dedicated and above all looking to make an impact that matters in their workplace and their community. They provide the right kinds of tools and training to ensure all the graduates can achieve career success through mentoring, peer support and e-learning. So, if you think Deloitte is a place for you, venture on!

FURTHER OPPORTUNITIES

A 3–8-week paid internship that gives students the chance to land a full-time role with us before they even graduate. A full-time, 12-month graduate program, which involves purpose-led projects, networking and learning opportunities, and the most innovative graduate training in Australia.

Applications for both the 2022 summer vacation program and the graduate program opens on 15th February 2021!

For more information visit and/or contact:

- www.facebook.com/DeloitteAustralia/
- www.linkedin.com/company/deloitte-australia/
- careers@deloitte.com.au

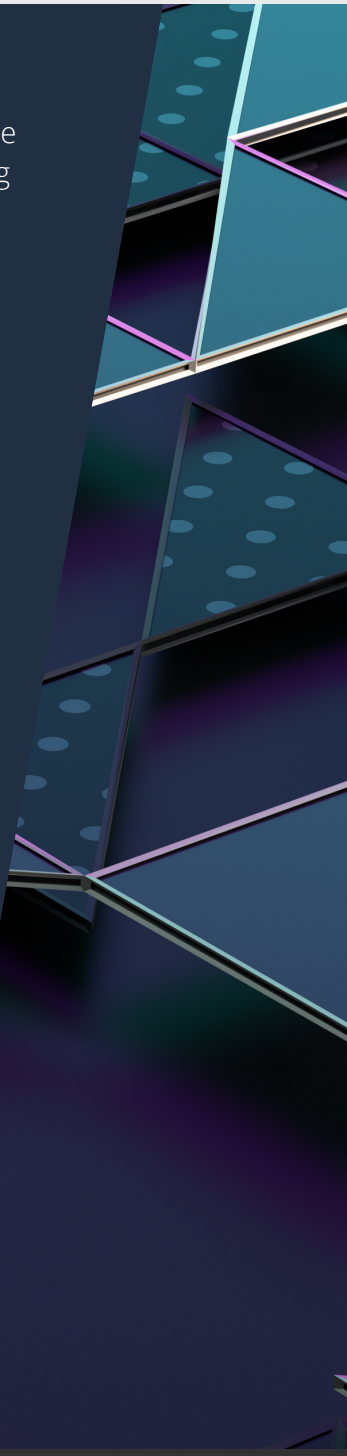
wood.

GRD | VAC | CONSULTANCY

"Our people are the key to our success."

Wood is a global leader in engineering and consultancy across energy and the built environment, helping to unlock solutions to some of the world's most critical challenges. We provide consulting, projects and operations solutions in more than 60 countries, employing around 45,000 people from all over the world, often pioneers in engineering, business and logistics.

Similar to most engineering and consulting companies, engineers are in immense demand to apply problem-solving techniques to be part of the continuous improvement culture at Wood and ensure the problems that society faces are eventually solved.



FOR APPLICANTS

"You'll be challenged. You'll be encouraged to excel. You'll be given the opportunity to build a rewarding career. And you'll feel proud to be part of the team. You will be a part of a strong, global company shaping the future of the world's oil & gas, chemicals, environment & infrastructure, power & engineering"

After numerous chats and meetings with the Wood Industry Team, Wood prides itself in its selection process; one that doesn't just look for degree classifications, marks or your rank. They believe that true enthusiasm, personality and commitment are just as important.

FURTHER OPPORTUNITIES

Applications for graduate roles will open on 22nd February 2021 and close on 28th March 2021. We have career opportunities Australia-wide including graduates in Chemical and Process Engineering.

What makes the grad program unique is that Wood offers graduates the ability to attain a Cert IV in Project Management, in addition to leveraging on the job training working on real world-wide corporate and capital projects.

For more information visit:

- www.careers.woodplc.com/
- www.careers.woodplc.com/early-careers

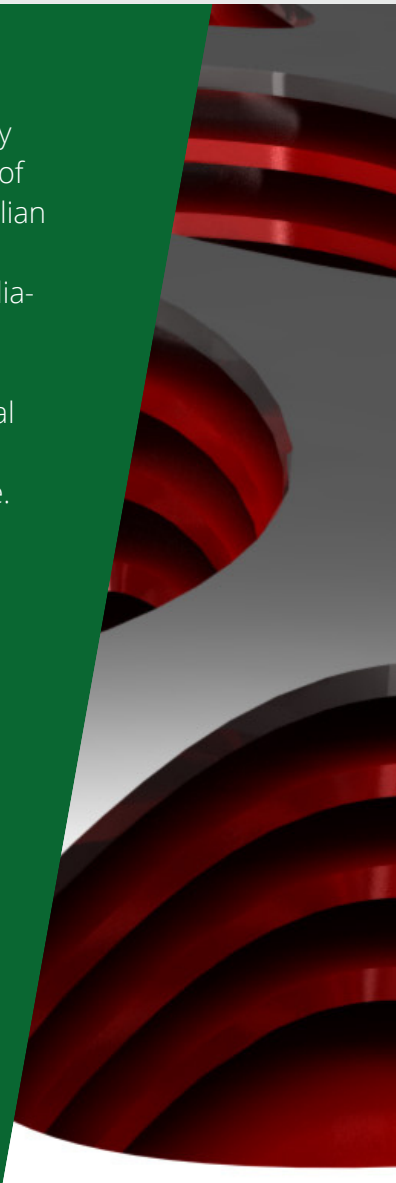
GRD

FOOD & BEVERAGE

"The Great Australian Food Company: Great Food, Great People."

Bega Cheese manufactures, produces and exports various cheese and other food and dairy products for both retail and foodservice industries; from world-famous Bega Tasty Cheese, spreads like Vegemite and Bega Peanut Butter as well as a significant number of products in the emerging bio-nutrient sector. Considering a strong focus on the Australian dairy industry, Bega prides itself on community dedication and building strong relationships within the region. Bega has manufacturing and packaging facilities Australia-wide from Port Melbourne VIC, Strethmetron VIC and Tatura VIC.

Each year Bega looks for bright, enthusiastic engineering graduates specifically chemical and process engineers. Dairy production is a highly technical and specific process and Bega is in constant need of new innovations and engineers to their production pipeline.



FOR APPLICANTS

Bega heralds a culture built in mutual respect, honesty, trust and integrity, and as such expect the incoming cohort of graduates to demonstrate the aforementioned. Bega offers a handful of monetary and career development opportunities, to help incentivise the high performance organisation.

As per the Career's website, Bega's approach to graduate development "is to try and put you in charge of your career, with the company providing support and encouragement, and rewarding you with further opportunity."

For more information visit:

- www.begacheese.com.au/
- www.begacheese.com.au/careers/recruitment-process/careers@bega.com.au

FURTHER OPPORTUNITIES

The Bega Graduate program is a rotational program designed to provide STEM graduates with a breadth of experience, a supportive environment, space to develop soft and hard skills, and the resources to cultivate a broad network that will set them up for success with us well into the future.

The Graduate Program extends to specific disciplinary streams and often include job offers and opportunities to entry-level graduate engineering positions.

Likewise, Bega is also a welcomed partner of the MITI program and has graciously offered positions to Monash University alumni to get a head start on their career and explore the field!

Carlton & United Breweries

GRD VAC FOOD & BEVERAGE

"Brewing Australia's best beer starts with finding the best people."

Carlton & United Breweries (CUB), a subsidiary of Asahi Beverages, is a brewing company based in Australia. The company primarily offers Australia's well-loved alcoholic beverages from beer, cider and spirits. CUB markets its brews as Australia's most iconic and loved beers, including Victoria Bitter, Carlton Draught, Great Northern, Pure Blonde, Carlton Dry, Melbourne Bitter, Crown Lager, Cascade Premium Light and Matilda Bay.

Carlton & United Breweries is committed to the responsible consumption of alcohol, including working to reduce harmful drinking practises in Australia. We were a founding member of DrinkWise and are one of its largest financial contributors.

FOR APPLICANTS

Carlton Breweries has been a big supporter of SMUCE, and from a long history of sponsorship, CUB hails a company culture of informality and candour, and as an applicant, you should strive to display these skills.

CUB allows you to begin your career in one of Australia's foremost fast-moving consumer goods (FMCG) companies and develop your skills to become a leader in our supply business.

At CUB you will be able to work alongside technical experts in the field and learn every aspect of the brewery; from engineering to brewing, packaging to quality.

FURTHER OPPORTUNITIES

CUB boasts a variety of summer internship programs, for penultimate students of relevant disciplines. They have several graduate programs starting in early 2022: Graduate Management Trainee, Supply Management Trainee, Analytics Management Trainee, and Technology Management Trainee.

These programs are great to get your foot in the FMCG door, get industry experience, and be part of a resilient and dynamic workplace.

For more information visit:

- cub.com.au/careers/talent-programs/
- cub.com.au/careers/graduate-programs/

Fonterra

Dairy for life

GRD

FOOD & BEVERAGE

"For Fonterra, tomorrow is not just another day – it is an opportunity to make our vision real."

Fonterra Australia is a subsidiary of Fonterra New Zealand and a leading dairy nutrition company owned by 10,000 New Zealand farmers. Dairy products can play a valuable role in addressing deficiencies in diets and improving health and wellbeing for people around the world. As a dairy nutrition company, we play a key role in contributing to the health of all Australians.

At Fonterra, food safety and quality are everyone's responsibility, from our farms all the way to our customers around the world. All of Fonterra's product and nutrition claims are compliant with local regulatory requirements and based on robust science. We expect our performance to be judged on our approach to sustainability. Apart from the dairy industry, Fonterra is working with our Northern Victorian farmers on programs that assist with water efficiency and provide certainty for farmers.

FOR APPLICANTS

If you are yearning to join our programs, here is what we assist you with at Fonterra.

- Be mentored by senior management and coached by your rotation supervisors.
- Participate in the graduate networking group.
- Engage with our industry experts.
- Work on real projects to develop your skills and lift your career.

The minimum eligibility criteria for Fonterra (like the majority of ChemE firms) include:

- Be in the final year of your degree or have completed your university studies within two years at the time of your application.
- Have a credit average of 65 or higher.
- Have ongoing work rights in Australia at the time of application.

FURTHER OPPORTUNITIES

Our 2-year graduate program is structured in a way to attract, recruit, and select a diverse group of graduates. We have four streams to choose from: Commercial Stream, Sales, Operations and Supply Chain. This program runs for 24 months with rotations every six months, providing you with a breadth of experience across our organisation.

Applications for our 2022 Graduate program will open at the end of June, whilst expressions of interest will be accepted in the latter months of March 2021.

Currently, we don't offer any vacation programs but follow our career's portal for the latest updates.

BLUESCOPE

MANUFACTURING

"Smart solutions in steel, to strengthen our communities for the future."

BlueScope produces a wide range of steel products including slab, hot-rolled coil and plate, cold-rolled coil, zinc/aluminium alloy coated ZINCALUME® steel, galvanized and pre-painted COLORBOND® steel.

Sustainable steel plays a major role at BlueScope, here sustainability means developing, manufacturing, and selling steel products and solutions in a way that provides for a sustainable future, with a focus on continuous improvement, adopting new operating methods and anticipating new products for the future.

BlueScope employees see a challenge as an opportunity. We are driven to solve problems—to learn, to improve and to innovate. We work safely and build a sense of belonging in our teams, knowing that we are part of something bigger.

FOR APPLICANTS

Working at BlueScope will give you invaluable, extensive exposure to multiple business streams and stakeholders throughout our business.
We believe our people are our strength and we value our employees' ability to learn and attain new skills, with options for learning and development.

The opportunities at BlueScope are diverse, with teams in engineering, operations, chemistry, IT, finance, supply chain and sales and marketing. Apart from this, we offer various benefits for the people working at BlueScope:

- Flexible work arrangements
- Study assistance
- Options for salary sacrifice
- Career-development opportunities

FURTHER OPPORTUNITIES

Currently, we do not offer any vacation or graduate programs but hope for some updates from us in the future.

However, if you enjoy working with practical people, put your safety first and care about the communities in which they work, then BlueScope is the place for you.

Be part of the team that creates some of the world's most advanced steel products.

For more information visit and/or contact:

- www.bluescope.com/life-at-bluescope
- asprecruitment@bluescopesteel.com

BORAL®

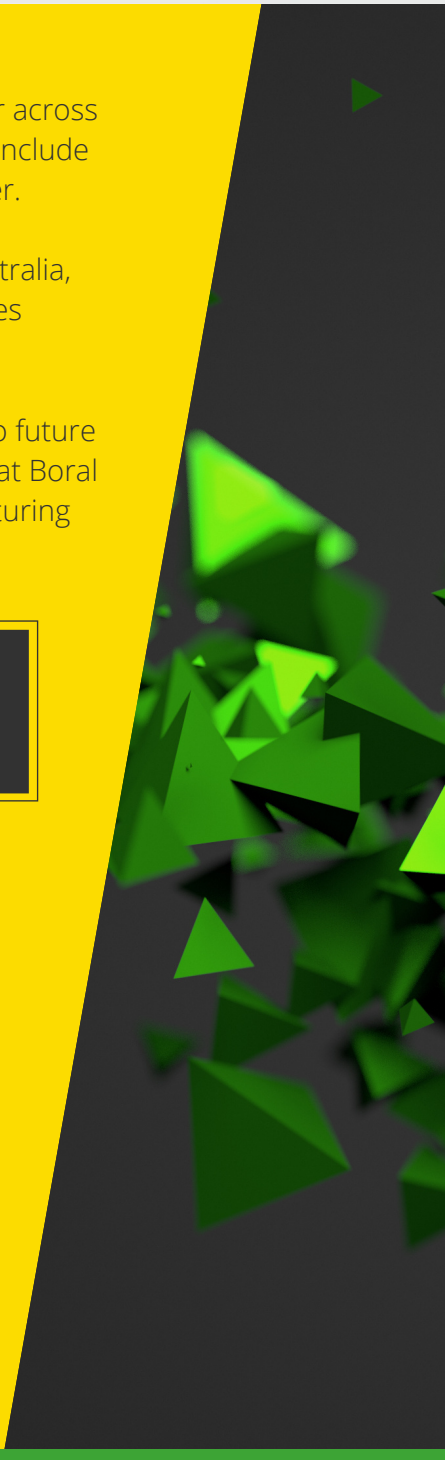
GRD MANUFACTURING

"Boral, build something great."

Boral Australia originally known as Bitumen and Oil Refineries Limited is the largest integrated construction materials and building products manufacturer and supplier across the full range of building and construction markets. Famous and notable products include cement, aggregates, concrete, asphalt, bricks, roofing, masonry products and timber.

With an extensive network of concrete, asphalt and manufacturing sites across Australia, Boral's leading position is underpinned by around 1 billion tonnes of quarry reserves strategically located close to key markets.

One of Boral's key strengths is their recognition that sustainability is fundamental to future success and their ability to "build something great". Naturally, career opportunities at Boral extend across a broad range of disciplines from trade and engineering to manufacturing and logistics.



FOR APPLICANTS

The Boral Graduate Program is specifically tailored for developing future leaders and providing graduates with real hands-on experience across business operations.

Boral graduates will have the resilience to handle complex operating and manufacturing environments, deal with rapid changes, and engage with a variety of different stakeholders and employees.

FURTHER OPPORTUNITIES

The Boral Graduate Program exposes you to all facets of the business and offers you the opportunity to be part of the table, as well as actively contribute and engage with regional and capital projects. If this sounds like the next step or milestone in your career plan, suggest prepping for after your graduation!

Currently, Boral does not offer any Vacation opportunities.

For more information visit and/or contact:

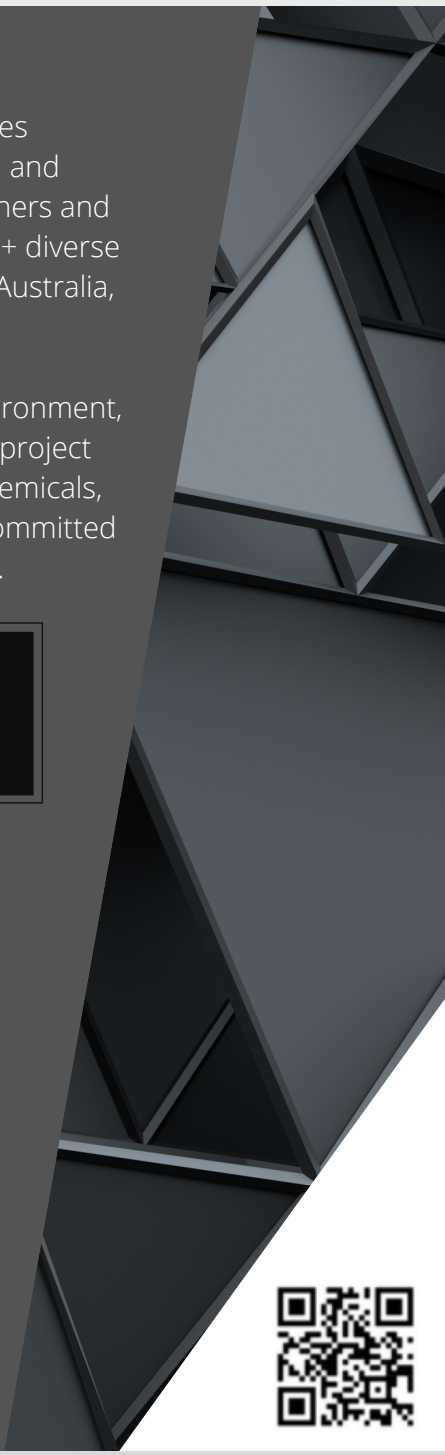
- www.boral.com.au
- www.boral.com.au/careers

GRD VAC ENGINEERING SERVICES

"Innovation and Technical expertise, at our core."

GHD are a global professional services company that leads through engineering, construction and architectural expertise. Our forward-looking, innovative approaches connect and sustain communities around the world. Delivering extraordinary social and economic outcomes, we are focused on building lasting relationships with our partners and clients. Established in 1928, we remain wholly owned by our people. We are 10,000+ diverse and skilled individuals connected by over 200 offices, across five continents – Asia, Australia, Europe, North and South America, and the Pacific region.

We work across several industries including architecture and design, buildings, environment, future energy, energy and resources, water, transportation, digital, geoscience and project management. With service lines including commodity chemicals, fertilisers, petrochemicals, chemical processing and more. Join a global professional services leader. We are committed to solving the world's biggest challenges in areas of water, energy and urbanisation.



FOR APPLICANTS

At GHD we all share in each other's success and support each other through the challenges. Do you have the energy, teamwork, creativity, and values to join us?

Why GHD?
Being the best we can be, is in our culture.

We are a family of smart, innovative and creative problem solvers. In our employee-owned company, everything feels like it matters more. Challenge us and help us come up with new solutions to ensure water, energy and urbanisation are made sustainable for generations to come.

FURTHER OPPORTUNITIES

Our exciting two-year Graduate Development Program was designed to support you as you put your skills and knowledge into practice in the professional environment.

At GHD, on-the-job learning includes exposure to a variety of projects and disciplines and will provide you with the opportunity to work with and learn from a variety of different people.

Expressions of interest open across Australia while we finalise the individual roles in each region. You can register your interest at the QR code above.

thyssenkrupp

GRD ENGINEERING SERVICES

"Engineer. Tomorrow. Together."

Thyssenkrupp Industrial Solutions is an international group of companies consisting largely of engineering and construction services for industrial plants and systems. Recently, thyssenkrupp have been a big pioneer in the technology and technical providers in the chemical manufacturing field. Ultimately, a sum amount of 2,500 chemical plants have come to fruition in patented electrolytic material production, catalytic hydrogen pathways, ammonia and methanol synthesis and more.

The Australian thyssenkrupp team specialises in green hydrogen technology and has been a big investor in Australia's transition to a green and sustainable future. As aforementioned, the need for chemical engineers at thyssenkrupp is ample and particularly bright and curious graduates with a passion for electrolytic and green chemistry.

FOR APPLICANTS

The Australian team is based in Melbourne's CBD and there is plenty of opportunity for interstate and international travel with thyssenkrupp's many global headquarters.

As mentioned above, thyssenkrupp's expertise lies in delivering integrated solutions, and hence an expression of passion and interest is always welcomed.

For more information visit:

- www.thyssenkrupp.com/en/company
- www.thyssenkrupp-australia.com/en/
- www.thyssenkrupp-industrial-solutions.com/en

FURTHER OPPORTUNITIES

The thyssenkrupp Industrial Solutions team offers a wonderful vacation program for interested students to work from August 2022 onwards at the Melbourne CBD office. The program will run for a duration of a few months and will allow the graduate to gain insight into the type of work that thyssenkrupp excels in.

Honeywell

THE POWER OF **CONNECTED**

GRD ENGINEERING SERVICES

"Why Wait for the Future When You Can Create It."

Honeywell is a Fortune 100 company, creating revenue from the provision of industrial automation systems as well as provider of engineering services for a variety of diversified business divisions, from aerospace, energy efficiency, performance materials as well as innovation. Given a focus on innovation and an ethos in bettering society, Honeywell has helped develop numerous inventions from unleaded gasoline, to airline collision avoidance systems and autopilot as well as the simple barcode.

As stated on the company website itself, "As the cornerstone of our company, our engineers always aspire to be the best in the world". Chemical Engineers and aspiring professionals have the opportunity to combine manufacturing techniques with data analytics to make intelligent and informative decisions to create more efficient and more cost-effective solutions.

FOR APPLICANTS

Honeywell has worked hard to build a reputation for brilliance by investing into a results-oriented team. With the support of a global organisation, and an innate culture of teamwork and camaraderie, Honeywell employees can navigate their way around the world and progress through their career goals.

With a great company culture, Honeywell employees are encouraged to reach for the stars and question the unthinkable. Unfortunately, Honeywell doesn't account for international students, so most positions and scholarships are open for Permanent residents or Citizens.

FURTHER OPPORTUNITIES

The Honeywell Graduate Program is designed to empower students and teaches you to adapt quickly while being confident in your ability to handle demanding situations. For more information visit:

- www.earlycareersathoneywell.com.au/current-opportunities/

With a plethora of challenging and meaningful assignments, as well as exposure the respected industry pioneers and veterans, the 2-year Graduate program has a rich history of fostering future leaders and problem-solvers.

Applications for the 2022 Graduate Intake open and are to close during April of 2021!

Jacobs

GRD | VAC | ENGINEERING SERVICES

"Challenging today. Reinventing tomorrow."

Jacobs are a global engineering consultancy with thousands of employees worldwide. We tackle the world's most challenging issues, involving Infrastructure, Water and Sustainability. We're powered by more than 50,000 people across the globe who deliver innovative scientific, technical, professional and program management solutions for public and private clients around the world.

The world needs innovators and problem solvers who turn challenges into greater opportunities. As the Australian Financial Review's 'Most Popular Engineering & Resources Employer' for Graduates, we're seeking thinkers and doers, innovators and change-makers to join our early career programs!.

FOR APPLICANTS

Jacobs want employees who are client focused, dynamic and engaged people to join their teams. So bring your passion, ingenuity and good organisational skills. Considering the scale and the connectedness of our corporate projects, our employees must be able to collaborate with each other and with partners and contractors to safely deliver multidisciplinary projects from small to large scale.

In regards to career development, Jacobs develop you through on the job learning opportunities and support for formal learning and development. Our early career programs are designed with your career development in mind.

For more information visit:

- au.gradconnection.com/employers/jacobs/jobs/jacobs-jacobs-2022-graduate-program/

FURTHER OPPORTUNITIES

Our Graduate Development Program runs for two years and features a range of learning and development programs, mentoring, and an emphasis on Chartership under Engineers Australia!

- Graduate Program Applications open: March 2021
- Program start date: January 2022

Our Summer Internship Program blends on-the-job learning and formal learning and development opportunities to equip you with the skills to become exceptional consultants.

- Internship Applications open: July 2021
- Program dates: November 2021 to March 2022

Rio Tinto

GRD VAC MINING

"Don't enter the future, invent it."

As pioneers in mining and metals, at Rio Tinto, we produce materials essential to human progress. Iron ore for steel. Aluminium for cars and smartphones. Copper for wind turbines, electric cars and the pipes that bring water to our homes. Borates that help crops grow, titanium for paint – and diamonds that celebrate the best things in life.

At Rio Tinto, we are moving a step forward to experience the technology world by introducing our most intelligent mine with the help of artificial intelligence and the theory of working smarter. In more detail, we use virtual reality (VR) to make safety a reality. Along with that, as another revolution, we are highly involved in finding ways to reduce bauxite waste. If this is successful, it could reduce the environmental impact of bauxite processing while also delivering commercial benefits.

FOR APPLICANTS

Students must meet the necessary requirements and our recruitment process has four stages once you have successfully submitted your application:

- Online gamified assessment.
- Online cognitive and abilities testing,
- Online pre-recorded video interview and a face-to-face interview or to partake in an assessment centre.
- All applicants must have the required rights to work in the country they are applying for a role in.

You can work in exploration, looking to discover the next mineral source, or use data analytics to improve productivity. You can work in cybersecurity and mine geology, or with our logistics team, helping to get products to our customers faster and more reliably. If you are more curious about these opportunities and capable of bringing different perspectives, this is the platform for you!

FURTHER OPPORTUNITIES

We offer a 12- week paid summer vacation program for penultimate year students and above students that run from early December to February. Roles can be based at any of our Rio Tinto locations and relocation and accommodation are provided. Applications for the 2022 program open mid-2021.

The 2022 graduate program offers a variety of opportunities in various fields.

For more information on searching and applying for a job at Rio Tinto please use this link:

- www.jobs.riotinto.com/

GLENCORE

GRD VAC MINING

"Diversified, dedicated, driven."

Glencore PLC is one of the world's largest diversified natural resource companies and responsible for producing and marketing more than 60 commodities, from metals, minerals, energy and agricultural products. The commodities we source and market play an essential role in advancing modern life.

From the copper, cobalt and nickel powering the electric vehicle revolution, to the high-quality coal that provides affordable and reliable energy. Joining the Glencore team, allows you to be working with dedicated and driven people, from a diverse range of backgrounds. We aim to develop a workforce that is diversified, dedicated and driven – at every level of our business, and in more than 35 countries in the world. Engineering at Glencore is well known for its job security and career development and workplace support.

FOR APPLICANTS

Operating in more than 50 countries with a diversified business structure, we can offer high levels of responsibility to the right people. So if you thrive on being accountable for your actions, join us.

We expect a lot, but we give a lot in return. We recognise and reward exceptional work. We aim to give you the chance to develop skills, expertise and experience, following a clear career path – so you achieve career growth.

If you are dedicated and driven, you have a can-do spirit, and you are willing to learn and take responsibility, we offer the chance to develop your career – and the rewards to match. If you're bright, curious, confident and keen to grow with us, you're who we're looking for.

FURTHER OPPORTUNITIES

The Glencore Graduate Program is a 2-year program, opening in August 2021 where the graduates are allowed to work in real mine sites Australia-wide.

For more information visit:

- www.glencore.com/careers/graduates
- www.glencore.com/careers/oil-graduate-scheme

For undergraduate aspirees, the 2022 Glencore Vacation program is a 12 week paid program, closing on the 5th of April 2021 where students are supported and complete a development program, contributing to real mining scenarios and environments.

THE GREEN PROGRAM

EDUCATION ABROAD. REDEFINED. REINVENTED.

GRD | VAC | VOLUNTERRING

"Educating and empowering our world's future sustainability leaders."

The Green Program (TGP) is an award-winning, experiential education program for young leaders in sustainable development. Our mission is to educate and empower future sustainability leaders through innovative models of experiential education, travel, and adventure. Our innovative model for experiential education is driven by a desire to provide purposeful, real-world experience through impactful education, travel, and adventure.

We envision a sustainable future driven by global citizens who catalyze change & propel communities and organizations towards progressive sustainability goals and climate resilience. Our team is happy to connect with any interested student to discuss our programs and their professional goals. We eagerly welcome students to our team for internships during the fall, summer, and spring. If you do not see a posting but are interested in interning with us feel free to get in touch by emailing us at:

- info@thegreenprogram.com!

FOR APPLICANTS

We offer M.S. in International Sustainable Development & Climate Change to advance your leadership and international experience in sustainability.

Use this link to apply and obtain a graduate degree for the planet:

- thegreenprogram.com/masters

We also offer further opportunities for online-based inconsideration to the pandemic. So, if you are impressed by these programs, go ahead, and apply using the link:

- www.thegreenprogram.com/programs

FURTHER OPPORTUNITIES

Now Enrolling | Standard Programs

(March 6-14, 2022)
Peru: Water Resource Management & Sustainable Practices

(March 6-14, 2022)
Nepal: Microgrid Systems for Rural Development

(March 7-14, 2021)
Iceland: Renewable Energy Innovation & Sustainability

(May 23-June 1, 2021)
Japan: Disaster Mitigation & Nuclear to Renewable

TEACH FOR AUSTRALIA

GRD VAC EDUCATION

"Our vision is of an Australia where education gives every child, regardless of background, greater choice for their future."

Teach for Australia believes in equity in education. Our mission is to recruit Australia's future leaders into the classroom and inspire, connect, and empower them to a lifetime of action towards educational equity.

Teach for Australia is dedicated to working in areas of need, involved in helping to break the cycle of educational disadvantage and ensuring Australia fulfils its aspiration to be a land of opportunity for all.

Teaching is not an easy profession – and the nature of the program is even more challenging. We provide Associates with a comprehensive network to support their professional development and successful completion of the program, and to maintain their health and wellbeing.

FOR APPLICANTS

Over two years, you will be expected to:

- Teach at a school serving a low socioeconomic community, with full salary and benefits.
- Earn a Master of Teaching (Secondary) (Professional Practice) through ACU on an assisted scholarship.
- Receive one-on-one coaching and mentoring to accelerate personal, professional, and academic growth.

Your Academic Mentor will support and supervise your progress throughout the degree and guide your achievement of the Australian Professional Standards for Teachers. As an Associate in our award-winning Leadership Development Program, you will teach subject areas directly related to your previous studies – and you will become part of a dedicated community committed to tackling educational inequity.

FURTHER OPPORTUNITIES

So, if that sounds like you, consider applying using the link applications open 18th February 2021!

- www.teachforaustralia.org/join-tfa/leadership-development-program/

We offer opportunities for penultimate university students to make an impact and develop skills before applying for the program. Contact us for more information.

We also offer Future Leaders Program, to develop your leadership skills, confidence and potential. This specific program is specially designed for the professionals working in the regional Australia.

GRD VAC MINERALS & METALS

"We mine for progress."

Minerals and Metals Group (MMG) is a mid-tier, global producer of base metals including copper and zinc headquartered in Melbourne, Australia and has partnered subsidiaries worldwide.

We mine to build wealth through the development of our people; the investments we make in improving local capability, and the value we deliver to our shareholders. We advertise new positions regularly, often daily.

To stay up to date, we recommend you visit the careers page often to view current vacancies. You can also save your job search as an alert so that you will be notified via email of future jobs that match your preferences.

FOR APPLICANTS

We have formal annual personal development programs for every employee and a focus on internal promotions, mobility, and secondment opportunities. We also have other sponsorship opportunities including Monash MMG Scholarship.

Below are few guidelines, for those who are interested to be a part of MMG:

- Vacancies at MMG's group of operations are advertised through mmg.com/careers only. This is the legitimate place to view and apply for roles with us.
- We never make job offers without performing a formal interview process.
- No money transfers or payments of any kind will ever be requested by MMG as part of the recruitment process, for immigration documents, insurance, or any other purpose.

FURTHER OPPORTUNITIES

We typically advertise all Graduate positions the year before the intake.

We too offer summer vacation programs for undergraduate students those who are in their penultimate year studies or above. Have eyes on our application deadlines!

VAC PAINT

"We protect and beautify the world!"

PPG Australia is a subsidiary of PPG industries Inc headquartered in Pittsburgh, Pennsylvania, USA and the global supplier of paints, coatings, optical products, and specialty materials. In Australia and New Zealand, \PPG is a leading manufacturer of coatings to the automotive, refinish, protective, marine, packaging, architectural and general industrial markets.

Our vision is to continue to be the leading coatings and specialty products company. From automobiles and jetliners to wind turbine blades, and from ocean-going vessels and water tanks to family homes, our coatings and specialty materials help our customers protect, enhance, and beautify valued assets. As part of our team, you will have access to world-class customers, industry experts, the best and brightest colleagues, and leading-edge technology.

Through leadership in innovation, sustainability and colour, PPG provides added value to customers in construction, consumer products, industrial and transportation markets, and aftermarkets to enhance more surfaces in more ways than any other company.

FOR APPLICANTS

What can you gain
from our programs!

- Have exposure to general business skills, including effective communication, team building, prioritizing and organising your tasks, problem solving and analytical skills.
- Gain exposure to the workings of a truly global company.
- Work with market leading products and brands
- Build valuable networks and contacts for future career opportunities!

If you are interested in learning more about PPG, visit our website: www.ppg.com.au/Home.aspx or contact Tessa Nicolson at tnicolson@ppg.com for more information on our internship program.

FURTHER OPPORTUNITIES

We offer a 12-week paid summer internship program where you can experience the real business projects designed to help discover your strengths.

The application deadlines for 2022 internship program have not commenced yet so, keep note of deadlines using the following link:

- ppg.referrals.selectminds.com/

We do offer a graduate program but only students who have completed our Internship program are eligible therefore we do not externally promote!

Dulux

PAINT

"Welcome to your world in colour."

Dulux Australia develops and manufactures a range of paints and coatings for the Australia and New Zealand markets, under various brand names including Dulux, British Paints and Cabot's. We are headquartered in Clayton, Melbourne, where our Innovation Centre is also located and it is within this facility that we undertake the majority of the development work on new coatings products.

DuluxGroup is an Australian parent company and employs over 4,000 people. Chemical Engineers are employed in R&D, manufacturing and other functions. Our head office and key coatings R&D facility is located in Clayton, Melbourne.

We also have manufacturing sites at Merrifield (new high volume waterborne paint factory on the northern edge of Melbourne) and Dandenong South (Woodcare, Protective Coatings and Powder Coatings).

FOR APPLICANTS

We look for people who are enthusiastic about working for Dulux, are good communicators and work well in teams.

A typical graduate chemist employed at Dulux will commence working on a project in conjunction with an experienced Dulux chemist, who will help the new starter learn all of the essential skills that they require.

No prior knowledge of paint and polymer science is required (although such experience can be useful for standing out during the recruitment process). It's a very technical industry, so "brushing" up on some old notes is always worthwhile!

FURTHER OPPORTUNITIES

In addition, Dulux Group offers a graduate program for suitable employees who demonstrate exceptional leadership potential and drive. New Chemistry and Engineering R&D graduates can enter this program following a competitive and rigorous interview process. For more information visit:

- www.duluxgroup.com.au

An opportunity to work on a research project with DuluxGroup is offered to students who have elected to take the CHE4180 course, as well as a passion to further in the field. Graduate roles are advertised via our DuluxGroup careers page and via Seek.

In regards to a vacation program, DuluxGroup unfortunately does not offer any.

6 ALUMNI & ENGINEER PROFILES

ALM Alumni Profile

RES Research Student Profile

ENG Engineer Profile

KATELYN EVANS

ALM

Give a short brief on your career and experiences.
I graduated from Monash in 2020 and am now a graduate process engineer at Ixom at their ChlorAlkali Plant in Botany. During my degree I interned at Dulux Powder Coatings and at their research and development centre.

"CHEMICAL ENGINEERING IS A TROUBLESHOOTING EXPERIENCE WHICH DRAWS ON TECHNICAL KNOWLEDGE (THEORETICAL AND FROM PAST EXPERIENCE) AND LOGIC AND REASON"

What are the current projects you are involved in?
Increase a product production area capacity through debottle necking, and improving flow and control.

What is one aspect of SMUCE that has helped or could help younger undergrads?
Connections with other high achieving to network and give advice.

What is one killer tip or opportunity that the readers should learn from you?
The difference between consulting and manufacturing and differences in progression between the two.

Contact details:
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- Email: katelynsevans@gmail.com

ADAM HAYES

ALM

Give a short brief on your career and experiences.
I'm currently a graduate process engineer with Glencore Coal Assets Australia (GCAA) based at the coal handling and preparation plant (CHPP) at Oaky Creek in Central Queensland. I interned for 7 months with a process equipment supplier called Acrodyne last year based in Melbourne.

"CHEMICAL ENGINEERING IS ANYTHING INVOLVING A PROCESS,"PROCESS ENGINEERING" IS AN INTERCHANGEABLE TERM THAT DESCRIBES IT WELL"

What are the current projects you are involved in?
A major project the process team at Oaky Creek is working on is using an old prep plant called Mod 4 to reprocess tailings. Tailings are pumped from the storage facilities in the old open cut pits by dredging the pits and pumping the tailings through the fines circuit. Advancements in technology have made reprocessing these tailings profitable. The team has developed an innovative dual spirals process that hasn't been done before and has had plenty of success.

What is one aspect of SMUCE that has helped or could help younger undergrads?
The industry component of SMUCE is a brilliant resource. Be it this careers guide, the seminars, networking nights etc, attend as much of it as you can.

What is one killer tip or opportunity that the readers should learn from you?
Experience is everything when it comes to grad role applications. Don't stress about your marks, focus on doing as many internships, getting involved in as many team activities, and taking on as many leadership roles as possible during your time at uni.

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RABEEH GOLMOHAMMADZADEH

RES

Give a short brief on your career and experiences.
I have been working on the recycling of municipal waste streams and industrial residues since 2011. During this time, I have focused and built my knowledge on e-waste recycling; the recycling of lithium-ion batteries (LIBs). This has been the focus of my MSc and PhD studies, where I undertook the novel research of recycling LIBs and subsequently converting the components to value-added materials, that have the potential to be used as energy storage electrodes.

"CHEMICAL ENGINEERING IS ALL ABOUT TURNING WASTE INTO TREASURE"

What are the current projects you are involved in?
It is expected that 137,000 metric tons of spent LIBs will be generated in Australia by the end of 2036. Therefore, it is vital to develop industries based on the processes that are capable of recycling of spent lithium-ion batteries.

I am currently performing novel research on lithium-ion battery recycling and how the waste materials could be processed so that the discarded components could be converted to value-added products. A particular focus of the work is developing a recycling method that allowed for the components to be used in the construction of new energy storage electrodes using cost-effective, and green approaches.

What is one aspect of SMUCE that has helped or could help younger undergrads?
Providing professional opportunities for undergraduate students to build upon the skills needed to help their career development.

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- Email: rabeeh.golmohammadzadeh@monash.edu

OMAR ELSERNAGAWY

ENG

Give a short brief on your career and experiences.
I am a Chemical Engineer working in Pfizer, a biopharmaceutical company. I have had the opportunity on a variety of projects including process improvements, scale-up operations, and quality risk management. More precisely, I look after our product process and cleaning validation lifecycle by implementing an ongoing process monitoring and verification program that allows for data-driven decisions and continuous improvement. I do this by exploring and analyzing process parameters using a range of statistical applications, including making use of Six Sigma principles for quality control. Risk management is a regular part of the job, with facilitation experience using FMEA and HACCP methodologies.

"CHEMICAL ENGINEERING IS JUST SO BROAD TO SUCCINCTLY DEFINE!"

What are the current projects you are involved in?
Currently working on a few projects including pharmaceutical product transfer and implementing new analytical technology. Also, working in the Process Validation team with the primary focus of managing and improving the site's Cleaning Validation program. Concurrently leading several projects including technology transfer, cost improvement, and batch size scale-up.

What is one aspect of SMUCE that has helped or could help younger undergrads?
SMUCE was great for networking and hearing more about what chemical engineers are doing in the industry.

What is one killer tip or opportunity that the readers should learn from you?
One thing that helped me the most was networking, so try to do it as much as possible! Also try joining a professional association, they are usually free for students.

Contact details:
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- Email: elsernagawy.omar@pfizer.com

JESSE GIVENS-LAMB

ENG

Give a short brief on your career and experiences.
I work at EY as a Supply Chain consultant and have previously interned in food manufacturing with Simplot (as part of the Monash Chemical Engineering IBL program). As a consultant I aim to help solve business problems and communicate their solutions to clients. I've worked for the past 2.5 years at EY with a range of clients, in large (>50 people) and small (<5) teams and have solved problems that have ranged from analyzing data sets to inform decision making to helping facilitate client workshops.

"CHEMICAL ENGINEERING IS PROCESS ("YOU'VE GOT OPTIONS"), PROBLEM SOLVING, AND COMMUNICATION"

What are the current projects you are involved in?
I have recently worked on projects ranging from increasing patient throughput through MRI machines, providing advice to government agencies about purchasing software, and set up and ran a distribution centre. I solve broad ranging business problems (typically supply chain related) in a variety of industries (health, finance, construction, public sector, etc.).

What is one aspect of SMUCE that has helped or could help younger undergrads?
Engaging with industry and helping chemical engineering students understand the variety of career paths available to them.

What is one killer tip or opportunity that the readers should learn from you?
Put your hand up! Volunteer for every opportunity (within reason) and see where it takes you. There's a lot more to graduating university than getting a piece of paper and your grades!

Contact details:
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7 RESEARCHER PROFILES

SMR Summer Research Opportunities

MST Masters Opportunities

PHD Post-Graduate Opportunities

INT International Student Opportunities

This section features profiles of companies from different industries. The profiles include information about company background, employment opportunities and employee development.

Please keep in mind that these profiles only represent a fraction of companies applicable for chemical engineers. To know more about companies and industries, attend our industry events or contact the Industry Team.

A/PROF AKSHAT TANKSALE

What are your research interests?
My research group is broadly categorised into three platforms as:

- **Carbon Conversion platform** that spans from fundamental to applied catalysis where we are investigating the role of catalysts and solvents at the molecular level on the reaction mechanism and energetics.
- **Biorefinery Platform** which is an applied catalysis research including green and sustainable chemistry and also includes research on waste valorisation via hydrothermal and microwave assisted methods.
- **Nano Catalyst Platform** that spans from fundamental to applied nature. Here we are working on developing a fundamental understanding of the catalytic properties.

SMR MST PHD INT

What are the current projects you are involved in?
The interesting project I am involved in is to convert CO and CO2 into formaldehyde and its derivatives. I am keen in exploring more opportunities for CO2 conversion into other valuable chemicals and fuels, in addition to continuing the conversion of biomass derived molecules into chemicals.

What student attributes do you look forward to working with you?
I am looking for students with a strong background in reaction engineering, catalysis, organic chemistry, physical chemistry, or chemical physics. I am happy to recruit students with qualifications at all levels – BEng, Masters by Coursework, or Masters by Research. I am also interested in summer research students who have a keen interest in catalysis and reaction engineering.

Any further opportunities for PhD and Masters by Research students?

- A variety of PhD and Research projects are available.
- Monash Central or Faculty scholarship available, but a competitive opportunity.
- Top-up scholarships may be available for students working on selected projects.

Do you offer any Vacation Work Opportunities?
Yes. I do offer both summer research and HDR projects.

What is the citizenship eligibility for these opportunities?
Both Domestic and International students are eligible, and they are most welcome. But the candidate must be competitive for securing Monash central or Faculty scholarship.

How to apply?
To apply for a project please contact me on Akshat.Tanksale@monash.edu or come and see me in my office.

DR JOANNE TANNER

What are your research interests?
I am interested in reaction and process design and development, with a focus on sustainability. My current research sits in the general area of sustainability and biorefinery, replacing traditional fossil fuel based fuel and chemical production processes with analogous processes using sustainable biomass as the primary feedstock.

SMR MST PHD INT

What are the current projects you are involved in?
Most of my projects are applied research, and I try to involve industry partners as much as possible to make sure that my research is addressing real-world problems. Few of the interesting projects I am involved in is:

- In-pack freshness sensors for fresh meat products (GRIP project, industry partner: Meat and Livestock Australia).
- Sustainable packaging solutions for fresh meat products (GRIP project, industry partner: Meat and Livestock Australia).
- Energy efficient production of nanocellulose (PALS project, pulp, and paper consortium contacts).
- Closed loop water systems in biorefineries (PALS project, industry partner: Visy).

What are your potential upcoming projects?
My project insights broaden on Continuous flow, autothermal, mini – and micro-reactor technologies for reaction engineering applications, including process design and scale-up.

All things biorefinery. That is the production of fuels and chemicals using non-food, bio-based feedstocks. If this area is of interest to you, or you have an idea you would like to turn into a research project, please let me know!

What student attributes do you look forward to working with you?
HD averages and high GPAs are laudable, but my philosophy is that all you need to take on the challenging pursuit of research is an open and enquiring mind, an enthusiastic approach, and a persevering attitude. The most required trait in a PhD student is dedication to the project, which paves a way to learn everything! Therefore, I do not require any technical skills in my commencing PhD students.

I firmly believe in learning by doing and am happy to provide this opportunity. My projects tend to be hands-on, lab-based research, but do not let that discourage you! Bring along your enthusiasm and initiative, and we will get along just fine. Masters students, PhD students, and International students are eligible to join my research team.

Any further opportunities for PhD and Masters by Research students?
From time to time, I will advertise new PhD and research Masters projects on my BioPRIA webpage:

- www.biopria.com.au/ourpeople/dr-joanne-tanner/

I also invite anyone who has an interest in sustainability and biorefinery to contact me with their ideas. The project does not have to come from the supervisor – everyone is an inventor at heart!

Do you offer any Vacation Work Opportunities?
Yes. I will most likely have summer 2020-21 research positions available. These will be advertised through the Faculty summer research scholarships program.

What is the citizenship eligibility for these opportunities?
Domestic students are eligible, and I am happy to offer positions to international students who have a scholarship (at Monash or home country).

How to apply?
Please send an email to joanne.tanner@monash.edu

A/PROF WARREN BATCHELOR

What are your research interests?
My research interests are cellulose macrofibre and nanofiber materials. I am also interested in replacing petroleum-derived plastic materials with renewable, recyclable, biodegradable materials based on cellulose.

SMR MST PHD INT

What are the current projects you are involved in?
My team is currently working on the following research projects. New methods of making and characterising cellulose nanofibres. New methods of film production and forming composites with inorganic nanoparticles. New products, including active packaging with antimicrobial performance, cellulose nanofibre barriers to replace petroleum-derived plastic, and cellulose nanofibre-nanoparticle composites for environmental remediation. The significant impacts we made are as mentioned below.

- We developed a method to characterise cellulose nanofiber quality using sedimentation. This is a widely used application in industries.
- We have developed a spray coating method to make cellulose nanofiber sheets.
- We are pushing to have this as a replacement for conventional sheet forming using filtration, which is very slow.

What student attributes do you look forward to working with you?
Masters students, PhD students and International students are eligible to join my research team.

Any further opportunities for PhD and Masters by Research students?
PhD and Masters positions with scholarships for eligible students.

Do you offer any Vacation Work Opportunities?
Yes, Available through Faculty Summer vacation program.

What is the citizenship eligibility for these opportunities?
Both Domestic and International students are welcomed to apply.

How to apply?
Please send an email to warren.batchelor@monash.edu, or apply through my website:

- research.monash.edu/en/persons/warren-batchelor

PROFESSOR RAVI JAGADEESHAN

What are your research interests?
In the last few decades, there has been a surge of interest in applying the methods of physical sciences to the problems of biology. So my research insights and the goal of research in my group focuses on carrying out interdisciplinary research in which the techniques of experimental and theoretical rheology, and advances in single molecule techniques, are brought to bear on several physical problems that are relevant in a biological context.

SMR MST PHD INT

What are the current projects you are involved in?
Currently, I work in a few projects in collaboration with the students in my group and they are:

- The **rheology of sticky polymer solutions** associative which aims to understand how microscopic topology and the strength/number of intermolecular interactions control the flow behaviour of associative polymer solutions.
- **Computing the dynamics of chromatic folding** which aims to develop a multi-scale computational model that can predict the dynamics of chromatin packaging on the scale of many genes.
- **Influence of wet and dry friction on polymer dynamics** which aims to extract the maximum level of dynamic structural binding information from linear dichroism spectra, so it can serve as a quantitative screen of drug binding to molecular targets in bacteria.

What student attributes do you look forward to working with you?
I am looking for students with an aptitude for mathematics and computations, and who can demonstrate exceptional performance in quantitative subjects. A background in engineering or physics would be appropriate. I am happy to recruit students with qualifications at all levels – double degree BEng and Science (Physics or Mathematics), Masters by Coursework or Masters by Research in the relevant fields.

Any further opportunities for PhD and Masters by Research students?
PhD projects are available, but the candidate must be competitive for securing Monash central or Faculty scholarship.

Do you offer any Vacation Work Opportunities?
Yes. I do offer summer research projects for exceptional students.

What is the citizenship eligibility for these opportunities?
Both international and domestic students are eligible, and they are welcomed. But the candidate must be competitive for securing Monash central or Faculty scholarship.

How to apply?
To apply for a project please contact me on ravi.jagadeeshan@monash.edu or come and see me in my office.

PROF PARAMA CHAKRABORTY BANERJEE

What are your research interests?
I collaborate with various industry partners and government organisations (like CSIRO) to mitigate the challenge to develop cost-efficient environment-friendly energy storage systems. My research team also has immense interest in understanding electrochemical corrosion and designing anti-corrosion coatings for various metallic systems used in the aerospace and automotive industries.

SMR MST PHD INT

What are the current projects you are involved in?
I am leading the Multi-Scale Electro Materials group which focuses on various projects related to the development of different energy storage systems. Currently, I am involved in these interesting projects:

- Designing and fabricating energy storage systems (batteries and supercapacitors) with significantly reduced feature sizes (in micrometer length scale) using a simple one-step printing process (Prov. Patent AU2018050379).
- Identifying the impact of pulsed current on Li-battery performance and cycle life.
- Various anti-corrosion coatings for different metal and alloy systems are used in the automotive and aerospace industry (Prov. Patent 2019900664).

My efforts in the field of electrochemistry and materials engineering have been recognised by various awards including, an early career research award by the Cooperative Research Council of Australia and the prestigious “Brian Cherry Forum award” for the best PhD thesis in Corrosion.

What student attributes do you look forward to working with you?
Students with excellent academic records and healthy attitudes towards solving open-ended problems, proactive, and with excellent communication skills and time management (crucial attributes to develop as an independent researcher). Prior qualifications could include: Honours Class 1 or a good Master degree from respectable institutions. Refereed publications in scientific journals and/or industry experience will help boost the chance of success of the application.

Any further opportunities for PhD and Masters by Research students?
PhD opportunities are usually advertised via the Department's or the University's website or at seek. com.au. Feel free to drop me an email at parama.banerjee@monash.edu or come by my office if you want to explore project opportunities. Currently, we have two such scholarships (with top-ups) available in our team (which have been advertised on Monash job Website and in Seek.com.au).

Do you offer any Vacation Work Opportunities?
Yes, if students are eligible / qualify through the faculty's summer research program.

What is the citizenship eligibility for these opportunities?
Both domestic and international students are welcomed. International students require fee and living allowance scholarships, which are highly competitive. That also means that international students that can obtain these scholarships usually have a very good record, and so I am happy to consider accepting them in my group. For more information visit:

- www.monash.edu/graduate-research for more information

How to apply?
There are two rounds of scholarships in the middle and end of the year. Students who are interested to apply are advised to prepare their documents (CVs etc) and talk to potential supervisors around March / April or September/October.

PROFESSIONAL ASSOCIATIONS

WOODSIDE MONASH ENERGY PARTNERSHIP

The Woodside Monash Energy Partnership is a major research partnership between Monash University and Woodside Energy to progress energy solutions for a lower-carbon future, with a vision to strengthen global leadership in the energy transition and develop new sustainable energy technologies that deliver energy in cleaner ways, our mission focuses on accelerating transformational research in carbon-neutral energy technologies and shape the next generation leadership that will enable a lower-carbon energy future.

The Woodside Monash Energy Partnership is committed to bringing together leading researchers and industry from across Monash, and beyond, into a research partnership that fosters an innovative and collaborative approach to problem-solving.

SCHOLARSHIPS

We are looking for students to join us who are passionate about the energy industry. Scholarship opportunities are available to domestic and international students to work collaboratively with the energy sector to accelerate research toward a sustainable path to a lower-carbon future.

Together with the participation of global leaders, the partnership is accelerating the development and deployment of new solutions to shared global energy challenges.

The Excellence Top-up scholarship is available to top-ranked domestic and international students commencing Research Doctorate degrees as part of the Woodside Monash Energy Partnership in the above research themes.

These top-up scholarships help students with living costs and are awarded in addition to a Monash University Graduate Research Scholarship. Scroll down to have an eye on the deadline and the procedure to apply for this scholarship.

Use the link to access the application portal and to submit your expression of interest, you can also update yourself by understanding the terms and conditions of this scholarship:

- www.monash.edu/woodside/energy-partnership/work-withus/scholarships#tabs__2266887-02

The applications are currently open, and will be closing on:

- 31st March 2021 & 31st August 2021 for International Students
- 31st May 2021 & 31st October 2021 for Domestic Students

Total value of the scholarship:

- $7,500 per year

Numbers offered:

- Several

WOODSIDE MONASH ENERGY PARTNERSHIP EXCELLENCE SCHOLARSHIP (TOP-UP SCHOLARSHIP)

The research objectives will deliver solutions for a lower carbon ecosystem that is competitive with current markets, scalable for bulk energy transport, value-adding through the creation of carbon products, and able to integrate with energy policy to enable a successful transition. The three focused research themes:

RESEARCH THEMES & PROJECTS

1. NEW ENERGY TECHNOLOGIES

High-efficiency and low-cost solutions to generate, store, and export carbon-neutral energy, including hydrogen and its carriers. The projects we offer: Liquid H2 storage and Seawater electrolysis.

2. CARBON CAPTURE, CONVERSION & UTILISATION

Commercially sustainable solutions that reduce atmospheric carbon dioxide emissions through chemical, thermal, and biological approaches. The projects we offer: Gas-phase CO2 conversion and Biological production of 1,4-butanediol from CO2.

3. ENERGY LEADERSHIP

Understanding and enabling the interplay of economics, energy security, policy, and governance on the transitioning energy system, including carbon markets. The projects we offer: LCA- New energy flows and environmental assessment and analyzing change for a low carbon future.

For more information contact:
woodside.energypartnership@monash.edu

As a prestigious Ph.D. scholarship, scholarships are available for research that is aligned to the United Nations Sustainable Development Goals, and the strategic above-mentioned research themes of the Woodside Monash Energy Partnership.

The Woodside Monash Energy Partnership Research Scholarship supports a student with living costs while studying at Monash and a research allowance to support conference attendance. On behalf of SMUCE, we would highly recommend applying for this valuable opportunity that would enlighten your future. Scroll down to have an eye on the deadline and the procedure to apply for this scholarship.

Use the link to access the application portal and to submit your expression of interest, you can also update yourself by understanding the terms and conditions of this scholarship:

- www.monash.edu/woodside/energy-partnership/work-withus/scholarships#tabs__2266887-01

The applications are currently open, and will be closing on:

- 31st March 2021 for international students
- 31st May 2021 & 31st October 2021 for domestic students

Total value of the scholarship:

- $30,000 per year

Numbers offered:

- Up to three per year

WOODSIDE MONASH ENERGY PARTNERSHIP RESEARCH SCHOLARSHIP (PHD SCHOLARSHIP)

ICHEME

The Institution of Chemical Engineers (IChemE) is a not-forprofit, member-led qualifying body and learned society for chemical, biochemical and process engineers, and the only organisation permitted to award the widely-recognised Chartered Chemical Engineer title and Professional Process Safety Engineer registration.

IChemE sets the standard for chemical engineering and process safety through a range of membership grades, registrations, publications, and training for those seeking to improve their professional status, enhance their learning and network with peers.

As a graduate you will benefit from IChemE membership whether you are going into postgraduate study, looking for a job or starting your career.

Finishing your degree is a great achievement, but when you start work you will be expected to stay up to date with the latest knowledge in your field, learn new skills and make useful contacts – all of which will help your career.

WHY JOIN?

We provide support to help you achieve your career goals, including study aids, access to the latest news, and jobhunting tips. IChemE membership signals a commitment to professionalism, knowledge, and connection with a powerful international network.

Take advantage of your networks and utilize opportunities to learn from other peoples experiences and pathways they developed their careers.

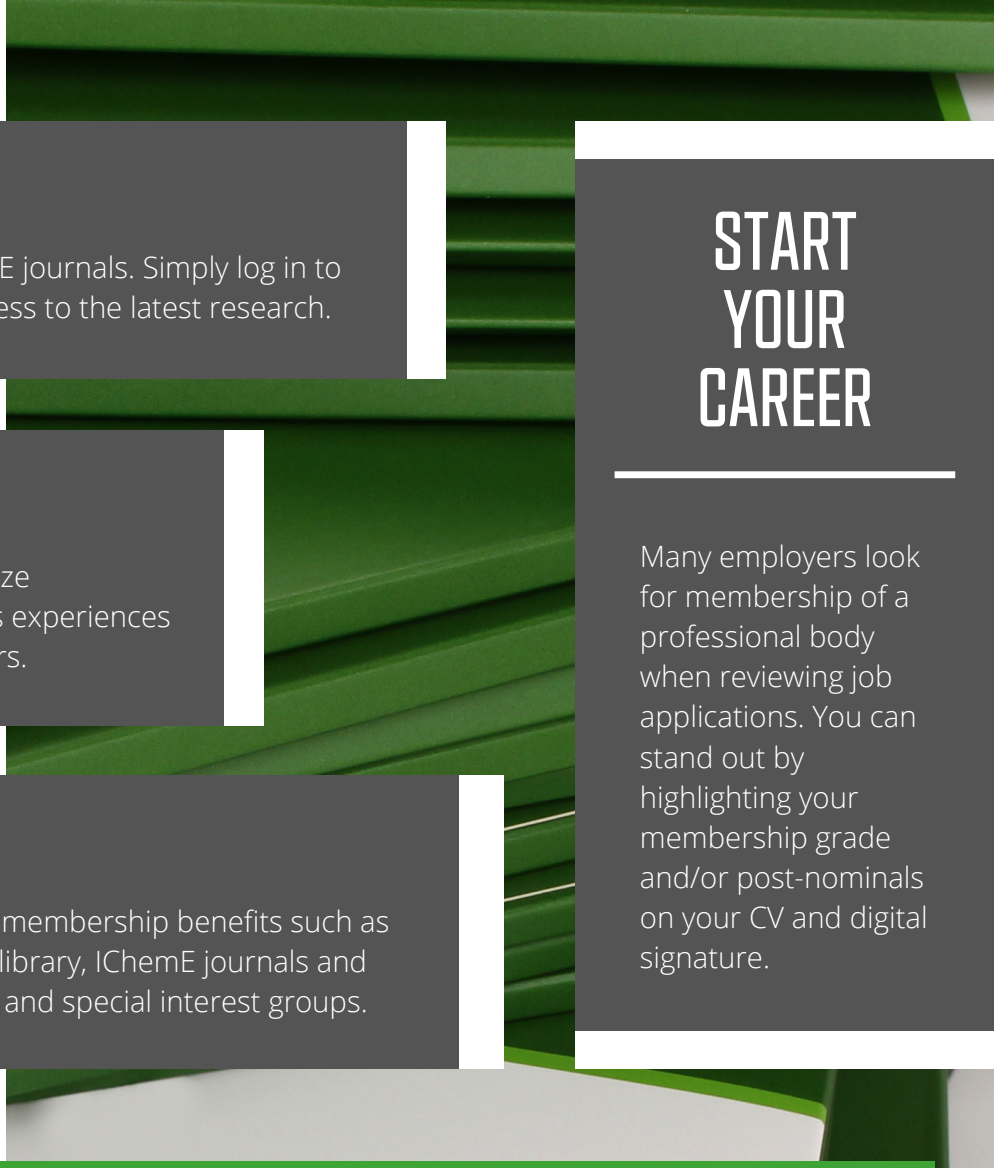
ENJOY THE BENEFITS

Contact Fiona O'Connor on either austmembers@icheme.org or foconnor@icheme.org for more information!

Members receive a free subscription to the latest news, technical articles and job opportunities in The Chemical Engineer magazine and website (www.thechemicalengineer.com). In addition, members get online access to the e-library containing hundreds of textbooks, databases and problem-solving tools.

Additional benefits include:

- Networking, events and webinars via regional member groups and technical special interest groups
- Free student resources including our Job-Hunters survival Kit and Student Pocketbook
- Preferential rates on IChemE conferences, courses, journals and books
- Special postgraduate student membership rate Send your course information to members@icheme.org



POST-GRAD STUDY

Members get free online access to IChemE journals. Simply log in to My IChemE at www.icheme.org to get access to the latest research.

YOUR GOAL

Take advantage of your networks and utilize opportunities to learn from other peoples experiences and pathways they developed their careers.

STUDENT MEMBERSHIP

As a Student Member you have access to membership benefits such as www.thechemicalengineer.com, Knovel e-library, IChemE journals and networking with regional member groups and special interest groups.

START YOUR CAREER

Many employers look for membership of a professional body when reviewing job applications. You can stand out by highlighting your membership grade and/or post-nominals on your CV and digital signature.

JOB HUNTING!

If you have finished your undergraduate degree and have started looking for a job, here are a few things that may help:

- Visit www.icheme.org/job-hunters and download our Job-hunters survival kit for information and advice on looking for for jobs, writing a CV or attending interviews.
- Join the lively IChemE social media community on LinkedIn, Facebook and Twitter.
- Become an Associate Member* and use the designatory letters AMIChemE on your CV and digital signature.
- Join a special interest group (SIG) that appeals to you. You will receive a free subscription to one SIG as part of your membership subscription.
- Log in to the My IChemE members area at www.icheme.org to choose or change your free special interest group.
- Discuss your employment options with a recruitment consultant – preferably one who works within the relevant industries as they will be experts on what employers expect from potential graduate recruits.

At Wood, our people are what sets us apart, a global community of inquisitive minds. Each one committed to making a difference, to lifting each other up, to showing courage in the face of problems.

As part of Team Wood, you'll be challenged and inspired to power progress for our people, our business and our planet. Join us as we embark on a quest to unlock solutions to the world's most critical challenges.

careers.woodplc.com

wood.

Graduate & Vacation Positions - Metallurgy / Chemical Engineering

Coal & Metal Assets

NSW, QLD and NT

At Glencore you will work with leaders in your field every day. You will be a part of a global company who want you to succeed, not just for the benefit of the organisation but also so you can achieve your own career goals. Our people are committed to working ways that embrace our values of Safety, Integrity, Entrepreneurialism, Simplicity, Responsibility, and Openness.

Glencore have a number of opportunities opening up to university students to join our Metallurgy Graduate Program (for those graduating this year) or our summer Vacation Program for those students still studying.

As a **Graduate** you will be reviewing daily plant performance and providing technical support services to the operations and maintenance teams in resolving issues. Dependant on the site, there are a great number of additional financial benefits, and if residential, we will pay for your relocation.

Those students still studying will gain similar exposure during their **Vacation Program** and will contribute to critical operational business improvement projects. For those that are going to site, we will pay for flights and accommodation during your placement.

See the next page for more specific site information on the work you could be doing. Regardless of the site or commodity, Glencore provides unrivalled career and development prospects, great communities and the opportunity to work with leaders in your field.

Applications will only be accepted via: www.glencore.com/careers.

Graduate Applications Currently Open and Close: 5 April 2021

Vacation Student Applications Open: Mid-April 2021

Apply now at www.glencore.com/careers

Glencore is one of the world's largest globally diversified natural resource companies and a major producer and marketer of more than 90 commodities. Our operations comprise around 150 mining and metallurgical sites, oil production assets and agricultural facilities - supported by a network of more than 90 offices located in over 50 countries.

We provide people with the opportunity to develop and grow their expertise and the confidence to grow their careers.

GLENCORE

Diversified. Dedicated. Driven.

Commodity Information - Metallurgy / Chemical Engineering

Specific Role Information

As a Graduate Metallurgist, you will be rotated potentially between different areas for different commodities, bringing a unique experience and developing our well-rounded graduates. Each area brings a unique experience which help you to become a well-rounded metallurgist professional. A typical day for you in in the Copper and Zinc processing plants may include extraction of metals and minerals from ores and refining the extracted metals to reduce impurities and improve value. You will assist in improving the process that separate, concentrate and recover valuable metals from ore. With around 4.6 million tonnes being mined every year, the processing plant has to keep up with large quantities and the team often fine tune their processing methods in order to keep recovery rates high. In our Coal commodity you are responsible for 4 critical areas in our Coal Handling and Preparation Plants: throughput, yield, quality and cost. One example includes projects in place to ensure we maximise our ultra-fine coal recovery, these include optimisation of the Hail Creek Jameson Cells and the commissioning of our second thermal coal flotation circuit at Ravensworth. We seek to maintain the company's high standards in these areas as well as continuously improve our results. You will have the opportunity to work in close knit high performing teams, and really hone your processing skills and knowledge.

Coal – Queensland and New South Wales

What distinguishes us from other programs is the acceleration of your skills development. We believe that rotation through a variety of teams, mining methods and locations, we can enhance your professional and practical development on a fast track towards achievement of your career goals. To support you in this growth, you will have access to our Senior Leadership team from Day 1! All of our graduates are engaged in a structured leadership development program, you have access to a mentor and a series of professional development workshops culminating in an Australia wide national conference with your peers and our business leaders.

Copper & Zinc - Queensland, New South Wales and Northern Territory

Our industry-leading and experienced professionals will challenge you each step of the way - to think differently, ask questions and come up with creative solutions. Glencore Metals offer the opportunity to experience mine to market with our two Mount Isa processing plants, four underground mining locations and our Townsville Refinery and Port Operations, we believe that rotation through our variety of teams, mining methods and locations will fast track your career. As a Glencore graduate, you'll have access to unrivalled opportunities and unlimited potential to grow your career. This is your opportunity to test your skills and creativity in real situations, working with some of the best in your field.

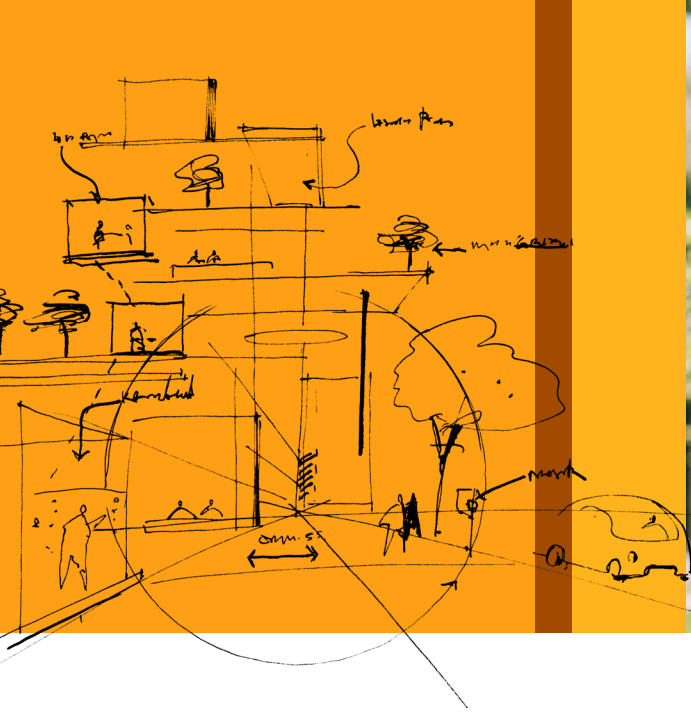
Apply now at glencore.com/careers

Glencore is one of the world's largest globally diversified natural resource companies and a major producer and marketer of more than 90 commodities. Our operations comprise around 150 mining and metallurgical sites, oil production assets and agricultural facilities - supported by a network of more than 90 offices located in over 50 countries.

We employ approximately 146,000 people including contractors and we provide people with the opportunity to develop and grow their expertise and the confidence to grow their careers.

GLENCORE

Diversified. Dedicated. Driven.



Jacobs

Challenging today.
Reinventing tomorrow.

Unlock your purpose

At Jacobs, we deliver impactful global solutions to create a more connected, sustainable world — from intelligence to infrastructure, cybersecurity to space exploration. Our 55,000 employees across 40 countries work every day, challenging the expectations of today to reinvent the way we'll all live tomorrow.

As part of our ANZ Jacobs Graduate or Internship Program, you'll work on real projects, bids and tenders from the get go. Under the guidance and mentorship of our experts and industry leaders you'll find new and inventive ways to help our clients make the world a better place. No matter what drives you, you'll discover how you can cultivate, nurture and achieve your goals – all at a single global company.

Graduate Development Program

Our Graduate Development Program runs for up to two years and is designed to develop a core set of professional competencies to equip graduates to become exceptional consultants.

Applications open: March 2021

Start date: January 2022

Jacobs Internship Program

The Jacobs Internship Program offers students the opportunity to work with us for 12 weeks during the Summer.

Applications open: July 2021

Program dates: November 2021 to March 2022

To find out more information visit:
au.gradconnection.com/employers/jacobs

Applications for our ANZ Graduate and Internship Programs are open to Australian & New Zealand citizens / permanent residents.

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Kick start your career with a company that empowers you to evolve, grow and succeed. We're hosting an online event where you'll meet our hiring teams, industry experts and early career professionals across Australia. We'll discuss:

- The early career experience at Jacobs
- Insights into our innovative projects and teams
- How to make your graduate application stand out.

This event is for university students who are interested in early career opportunities at Jacobs. There will be networking and live Q&A, so bring your questions and curiosity, your drive and your passion, and let's discover the big impacts we can make on the world, together.

Early careers networking session

Thursday 25 March 2021, 4:30 - 6:00PM AEDT

Register for this event here: **tinyurl.com/4dhubsrm**

The 2021 SMUCE Chemical Engineering Careers Guide aims to provide both undergraduate and postgraduate students with useful information, hints and advice on career and research opportunities relevant to Chemical Engineering.

This Guide is not intended to be comprehensive. The information in this Guide was compiled by contacting each company/researcher and meticulously noting down information deemed necessary and beneficial for future cohorts of chemical engineering aspirees. The information in this Guide is the compiled information from the companies/researchers and does not represent the opinion of SMUCE or Monash University.

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