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SMUCE

Careers Guide 2016

**Your link
with industry**

Acknowledgements

The Society of Monash University Chemical Engineers is thrilled to bring you the 2016 edition of the Careers Guide. SMUCE understands the importance of industry connections in furthering careers and making the most of your degree. The Careers Guide showcases career opportunities in industry and research and gives advice on how best to pursue these opportunities. This Guide has been put together in order to assist chemical engineering students in making these important connections.



Thank you to all of the contributors who generously provided their time, effort and information in order to create this resource. This includes all individuals, organisations and company representatives. Thankyou in particular to Monash University, Monash Abroad, Monash Employment and Careers Development, Monash Industry Team Initiative, the Engineering Faculty and the Department of Chemical Engineering.

Collating this Guide was the effort of many individuals. In particular I would like to thank; Mitchell Drowley for his work in assembling both the "Testimonials" and "Getting that Job", Nick Tay for his efforts in creating the "Researcher Profiles" and Jacinta Poon for bringing all of the work together into a high quality publication. I would also like to thank all other committee members who extended a hand to help source information and proofread.

Finally and most importantly, thank you to our sponsors; IChemE and the Department of Chemical Engineering. Without your support the publication of the Careers Guide would not have been possible.

- Jesse Givens-Lamb, Industry Vice President 2016

The Society of Monash University Chemical Engineers, SMUCE:

SMUCE aims to enhance the student experience of chemical engineering students through facilitating greater student-staff relationships and providing opportunities to network and link with industry. SMUCE believes that as a student, industry contacts are important and as such provides the means for students to network with industry leaders and company representatives.

This year we will continue to provide for our students through our various initiatives including:

Weekly Industry Seminars

Each week during semester we invite representatives from different companies or organisations to come and speak to our students. These seminars allow companies to present to students on who they are, what they do and potential career pathways into employment. Additionally these seminars provide an avenue for students to ask questions and network with working engineers. These seminars are held on the Thursday of each week throughout the academic year from 12-1pm in the Lawson Room (22 Alliance Lane, Room 201) and are followed by a free pizza lunch.

Vacation Employment Day

A one-day information session geared to provide students with skills to help them obtain work experience. This information is provided from both companies and Monash organisations and includes presentations and activities to improve resume and cover letter writing as well as interviewing skills. Vacation Employment day is held during the mid-year break in July.

More Information

To hear more about SMUCE and our events like us on Facebook at www.facebook.com/SocietyOfMonashUniversityChemicalEngineers and feel free to ask us any questions via email at smuce@monashclubs.org. Students are also welcome to come speak to us in person at our office, located opposite lecture theatre E1.

Table of Contents

Acknowledgements	1
Table of Contents	2
How to use this Guide	3
Testimonials	
Becoming a Well Rounded Engineer	5-7
Alastair's Research Experience	8
Luca's Industry Experience	9
Chris' MITI Experience	10
Getting that Job	
Tips on writing a Resume for a Chemical Engineer Graduate	12-14
Top Tips	15
Networking	16-17
IChemE	18-19
Monash Abroad	20
Industry Profiles	
Boston Consulting Group	24
BP Australia	25
Deloitte	26
Ego Pharmaceuticals	27
Emerson	28
Engineers Without Borders	29-30
Exxon Mobil	31-32
EY	33
Fluor	34
Jacobs	35
Macquarie	36
Mars	37
MMG	38
Rio Tinto	39
Santos	40
Shell	41-42
Suez	43-44
Teach for Australia	45-46
ThyssenKrupp	47
Wood Group PSN	48
Researcher Profiles	
Dr. Cordelia Selomulya	50-51
Dr. Karen Hapgood	52
Dr. Lian Zhang	53
Dr. Lizhong He	54
Dr. Meng Wai Woo	55
Dr. Wenlong Chen	56

How to use this Guide

Testimonials:

The 'Testimonials' section of the Careers Guide is comprised of the experiences of students and alumni. We've tried to provide a well rounded view of chemical engineering that is relevant to students.

Getting that Job:

This part of the Careers Guide can be used as a reference for resume and cover letter writing when applying for jobs. We are most grateful for the Monash Employment and Career Development (ECD) team for taking the time to compile these tips and advice. ECD also offers a resume and cover letter checking drop-in and professional development workshops that are open to all interested students.

Industry Profiles:

These give a summary of what a number of companies do, as well as opportunities available to students. This is intended to give you an idea of what is available to you as a chemical engineering student. Please keep in mind that there are many other opportunities in Melbourne and Australia; it is up to you to find these. The SMUCE 2016 Chemical Engineering Careers Guide is only a basis for you to start your investigations.

VACATION OPPORTUNITIES	VAC ✓	YES
GRADUATE OPPORTUNITIES	GRAD ✗	NO
INTERNATIONAL STUDENT OPPORTUNITIES	INT ?	UNKNOWN

Researcher Profiles:

Like the Industry Profiles, these give a summary of some of the work of researchers at Monash University and how you can become involved. There may also be other opportunities available in the Monash University Department of Chemical Engineering. The best way to learn about research and opportunities is to talk to the academic staff in the department.

SUMMER OPPORTUNITIES	SMR ✓
MASTERS OPPORTUNITIES	MST ✓
PhD OPPORTUNITIES	PhD ✓
INTERNATIONAL STUDENT OPPORTUNITIES	INT ✓



The background of the page is a network diagram consisting of numerous black dots (nodes) connected by thin black lines (edges). The nodes are scattered across the page, with a higher density in the lower half. The lines form a complex web of interconnected paths, creating a sense of a global or digital network. The word "TESTIMONIALS" is centered horizontally and positioned in the upper-middle part of the page, overlaid on the network lines.

TESTIMONIALS

Becoming a Well Rounded Engineer

At the start of my final year at university I had a lot of unanswered questions. My grades were decent, I had completed the ever-elusive vacation work, and I had even completed a few research projects but I still felt no closer to a fulfilling career than the day I first set foot on campus. I had heard a lot of perspectives on what makes you an attractive graduate for employers, but I didn't know how to integrate them with my own ideas about how I wanted to live and what I wanted to achieve with my career. Fast forward two years, and I've entered the world of working professionals where I've answered many of the questions I had as a student and, much to my surprise, the best decisions I made as a student were usually the ones that were driven by my own passion and motivation, not by following the "norm".



I currently work for the Australian Energy Market Operator (AEMO), a name very few chemical engineering students know. AEMO is a unique organisation, as it operates the spot markets where energy companies like Origin and AGL buy and sell the electricity and natural gas that power our industries, businesses and homes. Like with any market, the companies who trade on our markets pay us a fee, but we are a not for profit. So how could this possibly relate to engineering? Markets stuff is for commerce students isn't it? I used to think so too, but I was very wrong.

AEMO employs economists, accountants and lawyers, but it also employs plenty of engineers. Its employees have a broad skillset because the range of functions it performs is incredibly diverse. Aside from operating two electricity markets and three gas markets, AEMO also operates most of the high-pressure natural gas system in Victoria (called the Declared Transmission System), and manages the output from power stations and the availability of high voltage transmission lines in the National Electricity Market Power System.

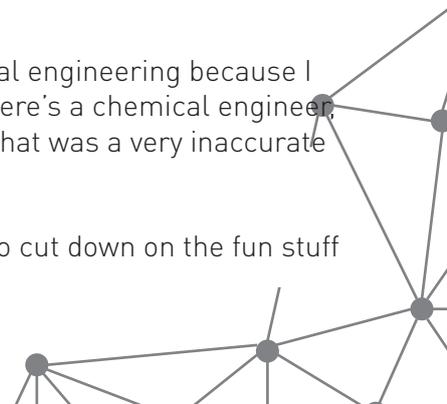
If that wasn't enough, AEMO also produces a number of forecasting and planning reports that are used by industry and Government stakeholders to enable them to understand how trends in consumer behaviour and technology might shape the industry. The team I'm in is responsible for operating the natural gas markets together with the gas transmission system in Victoria. This work requires an in depth understanding of engineering principles but due to the variety of work we do, the skillset of our people is constantly expanding, and that is why I love working here.

When I was at university my cohort thought that an engineering degree would more or less guarantee us a job as an engineer. But that was in 2009. Over the next few years the world economy slowly changed direction and it became clear that the demand for graduates that came from Australia's mining boom was slowing down. Even the oil and gas giants who used to pinch Australia's best graduates drastically reduced their intake and all of a sudden things looked a little less rosy. Many students, including myself, took a long hard look at their selection of subjects and tried to figure out whether all that HECS debt was really worth it.

At this point in time I was at the end of my second year. I could still make changes to my degree but it would cost me time and money. At the end of high school I had struggled to choose between engineering and science, so instead of forcing a decision I enrolled in the Monash double degree. I chose physics and maths for my majors in science because, honestly, that's what I felt like. I wanted to understand quantum mechanics, but I also wanted to do some astrophysics units (because space!).

Engineering took a considerable amount more thought, but I finally chose chemical engineering because I figured that everything needs raw materials and where there are raw materials there's a chemical engineer, so chemical engineers must have pretty interesting work. It later turned out that that was a very inaccurate impression of the field, but I'll get to that.

During the abovementioned "long hard look at my degree" I felt a lot of pressure to cut down on the fun stuff



Becoming a Well Rounded Engineer

in my degree and, instead of learning interesting things, just make my degree a pragmatic training exercise. I didn't succumb to these pressures, and I wish I could tell you that that was the result of my own wisdom, but it wasn't. I just couldn't stand the thought of three years of working like a robot. I didn't mind working hard, I just wanted to work hard on something I enjoyed. So instead of dropping physics and maths I stuck to them and I chose the engineering electives I wanted to do. This ultimately led me to develop skills like logical reasoning and data analysis, which I find incredibly useful today.

I didn't study chemical engineering to join any industry in particular but I was very interested in the reason why some technologies became widely used and others didn't. The question started out as a technical one. Surely, I thought, the technology which is objectively the best will end up becoming the most widespread, but as it turned out I was wrong. And so, from a very engineering focused question, I went searching for answers in fields that are not traditionally associated with engineering. Economic and environmental assessment of a process technology gave me some answers and consequently I developed a keen interest in public policy over the course of my degree, but that was very uncommon for an engineering student. I still remember the blank stares I got when I spoke about energy policy, followed by "cool story bro".

That wasn't my only odd decision. I was one of only five students in my cohort who studied physics together with chemical engineering, and I started attending public lectures about energy policy and economics. Crucially, I only applied for jobs I was genuinely interested in, unlike most of my peers, and after a while this strategy got on my nerves. But when I got offered a job where my odd interests mattered though, I felt like it was all worth it.

So what's the take away from all this? Am I trying to tell you to be like me? No. I've tried to think of a single sentence response to sum it all up, but I can't find one. The truth is that there is no recipe to follow. No slogan. And to some extent I guess that's the point. It's not just about thinking outside the box, it's about disregarding the box entirely and actively piecing the world together for yourself. This much I learned from a mentor whom I met through the Monash Alumni mentoring program (which I highly recommend).

My assigned mentor had studied chemistry at Monash and had worked in the resources industry for a long time. He taught me some important principles of networking, explained how the companies in the private sector make decisions and had a wealth of knowledge about Australia's resources and energy sectors. Probably the most important thing I learned from him at the time though, was how to think about my grades.

So let's talk about grades from an engineering perspective. When you want to figure out what's going on in a reactor you can use measurements of temperature, pressure and composition to get some data, but a single parameter's data won't tell you the full story. Instead, your analysis of all the data together is how you figure it out. Your job application is the same thing. Your resume, academic transcript and cover letter contain data and the managers and recruiters use that to try and figure out your story. They want to know what you're passionate about. They want to know that you can solve problems and write well. They want to know that you're reliable and last, but certainly not least, they want to know that you have people skills. Do your grades alone tell them the whole story? I'll let you be the judge of that.

You have to realise that you have an unimaginable amount of freedom in how you find a job and where you end up working. There is no recipe for finding a job but if you are passionate about an industry or field, let that passion lead you. A good place to start is to find out about Engineers Australia events that cover your industry of interest and attend them. If you can't find any of those, go and have a look on Eventbrite, go and talk to lecturers, even cold call people. There are so many options. The only real guideline I can give you is to learn as much as possible about the field. Why? Because when you start your job you'll have a good idea of what's going on and a by-product of that is the fact that your interviewer will be able to have a real conversation with you about their industry. Believe me when I say that there is nothing, and I mean this, nothing as encouraging as talking to a student who knows their stuff.

Becoming a Well Rounded Engineer

And this brings me to a point I'm quite passionate about. Engineers are not valued for solving equations and they don't spend their time in jobs where everything has already been figured out. Instead, engineers, amongst many other professions, solve problems. Difficult ones. We do particularly well solving the sorts of problems that require multidisciplinary skillsets where science and data analysis combine with the global economy and the law. So don't limit yourself by focusing only on the typical areas associated with chemical engineers. Your degree gives you a much more flexible skillset and it's up to you to figure out how you will put it to use.

I attended a Monash Chemical Engineering alumni event in 2015 where I met chemical engineers working for law firms, universities, management consultancies and (oddly enough) chemical companies. What took me by surprise was not just the fact that engineers were in a very diverse range of jobs, but that even the ones who worked as engineers developed new skillsets once they started work. Logistics, intellectual property law, writing skills and stakeholder communications were all in the mix, so it seemed as though a broader skillset was really inevitable. Doing work that requires more than technical skills is not a question of "if" but "when", and the question for you to ask yourself as a student is: When will I start learning accordingly?

- Stephan Jacobs



Alastair's Research Experience

Many students towards the end of their degree seek out vacation work in order to gain industry experience, boost their employability and learn more about their chosen career path. Whilst my friends over the summer break donned hard hats, high-vis vests and steel-capped boots I instead nestled into my comfy desk chair wearing my traditional Australian Open tracksuit, and worked under Ravi Jagadeeshan for my Summer Research Project.



Over the course of 12 weeks I worked at Monash University with the supervision of Ravi, PhD student Chandhi Sasmal and Owen Kaluza (among others), investigating the various conformations that DNA could exhibit in an elongational flow, specifically in a semi-dilute solution. These various conformations affect the flow properties of the fluid and hence change the way in which these fluids can be used. The goal of my research was to use computational resources to help give evidence towards experimental data gathered by other groups. These findings can be used to approximate other polymer-containing solutions and allow their flow properties to be modelled. This has a great impact on ink-jet printing processes, nanofibre construction and the plastics industry.

I was excited that my project involved me working on something entirely new; whilst properties of both diluted and concentrated protein solutions have been thoroughly investigated, due to the difficult nature of semi-dilute systems, I was doing work that no one had done before. Whilst this was an exciting prospect it also came with some difficulties. There was a very steep learning curve and I was required to do extensive reading in order to bring my knowledge up to a level that was sufficient. This does depend on the exact nature of the project, however what doesn't change is being able to use what you have learnt when conversing with esteemed individuals of those fields. I was fortunate enough to hear from and speak to international professors who studied these polymer solutions.

Working under any researcher will vary, however personally my supervisor was incredibly busy and as such I only had contact with him every one to two weeks. This was both rewarding, in giving me a sense of independence and freedom, but it also meant I had to be very self-driven and was forced to manage my own time. Additionally my project involved running simulations which could take hours and during this "free time" it was important to brainstorm about what else I could do that would be useful; often this wasn't directly related to the research but could be beneficial in the long run. After meeting with my supervisor I would discuss my findings and thoughts and he would help me go back to the drawing board, refocus and work out what steps I should take next.

Research work can lead down many potential paths; the most obvious being a PhD. Working closely with a PhD student helped me to understand what was involved in the process, and whilst many students don't get to be involved in the formal writing of their research, I was fortunate enough to see some papers being critiqued before they were submitted to journals. After a PhD you aren't restricted to that field; many will pursue other areas of research and those that were more industry based are often hired for their depth of knowledge and understanding. Research provides fantastic critical thinking skills and also a better understanding of the scientific method, and through these skills many different career options become available.

If you are considering research you should talk to your lecturers. Ask them about their projects and their fields of interest. Decide if those are areas you would like to learn more about and if so, ask about any potential research positions. A PhD is not an alternative to a job, it is another possible path to a successful career and summer research is a great way to decide if it is right for you.

- Alastair Katrivesses

Luca's Industry Experience

"How can a student add anything of value, amongst a workforce of incredible, experienced engineers?"; This was one of my main concerns beginning work, however, as it turns out, it was not as hard as I had initially thought. We were told that by the end of our three months we would be experts in our subject matter and this was completely true.



The engineers working alongside me during my 12 weeks of vacation work at ExxonMobil are constantly "firefighting"; dealing with constant process upsets, reliability concerns and other issues that constantly drain their time. This ensures that no day is the same as the last, however this also leaves no opportunity to devote a long period of time to a singular task. I was fortunate enough to have the time to delve completely into the specific projects that were assigned to me and I quickly became well-versed in those areas.

One of the projects I had was to develop a tool that would allow quick diagnosis of the energy, steam and fuel gas usage within different unit operations in the refinery. The tool itself, conceptually, was quite simple and would allow the engineers to save considerable time each week. I then began to see the catch-22 that affects most workplaces; if a tool could save you an hour a day but would take a week to create, it would be worthwhile in the long run. However, with so many different issues pulling at everyone's time, many of these long term projects are left to the wayside. These types of projects provided a window of opportunity for me to add value even with my limited industry experience.

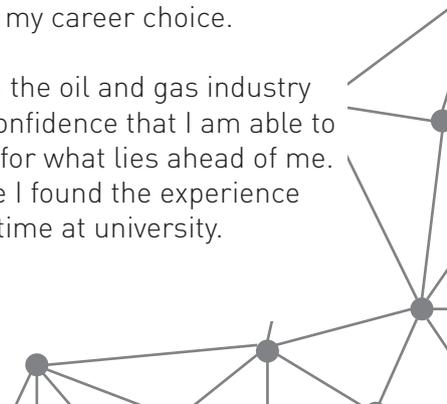
This ability to singularly focus upon a task was a common theme throughout my time at the refinery. My main project focused upon investigating the level of fouling present within the heat exchanger network. Sound easy? I thought so too initially, however there was a catch; I was to look at the cooling water heat exchangers and there was essentially no temperatures, pressures or flows available for the cooling water streams. This starkly contrasted from what I was used to in tutorials where the questions always had the values you needed, I found instead that sometimes these figures simply do not exist. Throughout the course of the project, I found hundreds of thousands of dollars being lost due to fouling within several heat exchangers, and these would have continued unnoticed had someone not been available to spend 12 weeks focused upon that one task.

One of the most interesting tasks was compiling an initial project nomination to replace a bank of heat exchangers that were not functioning correctly. This was a multi-million dollar project, and it was extremely exciting contacting vendors for quotes, costing civil and construction work and talking to design experts. It reinforced that engineering is not a singular discipline and often requires the assistance of professionals from many fields. What blew my mind was that for a typical engineering project, the equipment cost typically only makes up 25% of the total cost of the project; so to install a \$1m piece of equipment, you would expect to pay \$4m all up to get it up and running!

The reason I applied to work with ExxonMobil was that every person I had met had a genuine passion for their work. I was not disappointed after starting at the Altona site; the culture there is really something special. Everyone is incredible, and will take the time needed to help and support you. Additionally the chance to go on a number of team building events, meet experienced members of the company and visit other ExxonMobil sites was something that helped both build me as an individual and cement my career choice.

The time I spent at the Altona site was incredible and gave me an insight into both the oil and gas industry and the role of engineers in the workforce. Most importantly it has given me the confidence that I am able to be a successful engineer in the future and a sense of excitement and anticipation for what lies ahead of me. Although I did not formally need to complete vacation work to complete my degree I found the experience highly rewarding and would encourage all students to seek it out during their time at university.

- Luca Stamatescu



Chris' MITI Experience

I have spent the last two summers with MITI being placed in two different dairy companies; Burra Foods (2014/2015) and Fonterra (2015/2016). At the two companies I experienced two completely different projects that applied different sets of skills, but what did stay the same was the enjoyment that came with working and living with a team of four Monash University students.

At Burra Foods we were tasked with applying computational knowledge to develop a program that assisted in the optimisation of the plant's production process, for both short and long term planning. This involved factoring in plant constraints through production data analysis and collaboration with managers, to then model it into the timetabling tool by coding.

At Fonterra, we were brought into tackle the waste water storage issues across the site. As a team we devised multiple strategies to both minimise the amount of waste water produced across site, and maximise the amount of waste water that can be further recycled. The recommendations made have since been implemented by Fonterra and is expected to result in a total increase of 80ML of waste water that can be reused for irrigation.

As I have only completed three of six years of my Bachelor of Chemical Engineering and Bachelor of Pharmaceutical Science double degree, the major benefit of doing vacation work is that it I am now certain that I am in the right course. On top of this, since the two projects were so different, I can draw from these experiences when deciding my career path.

The fondest memories I have from the MITI program come from the times I have enjoyed while living with my team during the week. With a large fraction of MITI projects being based in companies far from Melbourne, there is a high chance of living in a regional area. Since I still live at home, this provided myself with a great chance to learn how to cook, clean and most importantly how to budget myself when shopping.

With MITI continuously looking to increase the number of available projects, there are bound to be more and more fantastic opportunities being offered to students. I highly recommend that all students try and get involved with MITI as you get to enjoy hands on experience, real industry work and spend your time with three people who not only help you learn in the workplace but also become long-lasting friends.

- Christopher Schumacher



A network diagram consisting of numerous black dots (nodes) connected by thin black lines (edges). The nodes are scattered across the page, with a higher density in the lower half. The lines form a complex web of connections, with some nodes having multiple connections and others having only one or two. The overall structure is irregular and non-hierarchical.

GETTING THAT JOB

Tips on writing a Resume for a Chemical Engineer Graduate

Your resume is the first impression that you will give to a potential employer. So make it clear, concise and relevant.

You should take the time to research the organisation and the position that you are applying for. This will enable you to link the skills and experiences from your time at Monash University as a Chemical Engineering student and any other employment, volunteer work, memberships and involvement in groups or bodies.

Try not to use the same resume for every job that you apply for - tailor it for each different position and company. Doing this will help you stand out for all the right reasons. Your resume is where you show that you have the required skills, knowledge and qualifications that are needed for the position.

The first page of your resume should reflect the most relevant information pertaining to the job. As you head towards completion of your Chemical Engineering degree, details of your education will most likely be of most interest to the potential employer unless, of course, you have any industry related experience.

List your education in reverse chronological order. If you received any outstanding marks, be sure to include these, if not, there is no need to list them as companies often request a copy of your academic transcript which will contain this information. If you did well in a particular subject and the position requires this, then make the potential employer aware of your mark.

Also be sure to list your work experience and employment history in reverse chronological order. For each position, describe your duties and any achievements, beginning each point with an action verb (e.g. formulated, identified, solved, accomplished, managed, assisted etc.) and remember to keep to the point and stress what you have achieved. Any engineering related work experience you have could have a separate heading for example "Chemical engineering related experience". Keep in mind that most engineering work is project based, therefore you should give brief details of any projects that you were involved in and highlight your specific contribution to its' success.

Over and above your Chemical Engineering degree and any engineering related experience, companies will look for employability skills that you have developed. These could include the following and should be addressed in a "Skills summary" section of your resume:

Communication, Creativity and Innovation, Initiative and Enterprise, Professionalism, Planning and Organisation, Problem Identification and Solution, Intercultural Competence, Teamwork, Use of Tools and Technology

You should include evidence of how you possess and utilise some of these skills by using relevant examples. Merely listing skills with no evidence is meaningless for employers. **Remember this is the section that should contain the skills that the employer has specifically identified as being important and should be different for each application.**

Another heading to include in your resume if relevant is "Voluntary and community work". Employers value people who are worldly and culturally aware and willing to contribute to the greater community. If you are a member/student member of any professional associations for example Engineers Australia, mention this on your resume as it demonstrates your interest and commitment to the engineering field. You may or may not include a list of your "Interests and hobbies" - it's a personal choice. Employers are usually interested in you as a person and this section could add another dimension.

Finally you need to include a section with details of potential referees. List their name, position title, organisation and contact details. Referees should have witnessed your capabilities in a working environment. It is acceptable to write "Available upon request" if you don't have up to date details but bare in mind you will

Tips on writing a Resume for a Chemical Engineer Graduate

need to provide the details if employers are serious about employing you. Always ensure you speak to your referees before listing their contact details. See some samples using the link below.

monash.edu.au/students/career-connect/apply-for-a-job/resume-samples.html

Quick tips:

- Use 10, 11 or 12 font - Arial, Calibri or Times New Roman are good choices
- Triple check your grammar and spelling
- Be consistent with formatting – use clear headings, bullet points (make sure they line up)
- Choose an easy to read layout and make sure there is plenty of 'white space' on the page
- Be concise and use relevant examples
- Write content in the third person – no 'I' or 'we'

How can we help you?

Chat with the friendly staff at Career Connect about:

- Meeting with a Careers Education Consultant
- Getting your job application checked
- Interview tips, including Interview Stream (monash.interviewstream.com/signup)
- Developing your employability and using Student Futures (student-futures.monash.edu)
- Your work rights
- Career Gateway jobs board (careergateway.monash.edu.au)
- Jobs for Students program
- Student leadership development
- Volunteering at Monash (monash.edu/volunteer)
- Career seminars and events

Please visit our website for more information monash.edu/students/career-connect/

Tips on writing a Cover Letter for a Chemical Engineer Graduate

Your cover letter could be the first thing that an employer will read about you.

A cover letter should introduce you and describe your qualifications, it should demonstrate your motivation for wanting to work for that particular company and your passion for chemical engineering and it should show that you have the relevant skills for the position. A common mistake made with cover letters is to repeat the information that is in your resume – this is not the point of a cover letter! Also re-write your cover letter for each application as it must be tailored specifically to each job you apply for.

Paragraph one

This should include the purpose of your letter. Include your qualifications, the position title and any reference number to the position (if applicable). If you're not writing in response to an advert and canvassing for potential employment, introduce yourself and your current career circumstances as concisely as possible, including any specialised professional interests and abilities.

Paragraphs two/three/four/five

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.

Tips on writing a Resume for a Chemical Engineer Graduate

Include other factors that point to your possession of key general skills (e.g. communication, teamwork, initiative, self-management) through your experiences in voluntary or community activities, clubs and societies etc. If you have done a chemical engineering internship or vacation work include skills from this experience as evidence.

Show that you have researched the organisation and the position. Include this when you show your enthusiasm for that particular position with that particular employer but do not copy sentences from the employers website.

Final Paragraph

What do you want to happen next?

Confirm that you have attached your resume and any other documents requested. Finish on a positive note, thank the employer for their time and express interest in attending an interview.

Have a look at the link below for examples, and for the correct way to address the letter, the salutation and how to close the letter.

Quick tips:

- ONE PAGE ONLY – never longer (unless specified by employer)
- Tailor it to the job for which you are applying
- Use a standard business style for your letter
- Use 10, 11 or 12 font - Arial, Calibri or Times New Roman are good choices
- Clear structure – one main idea per paragraph
- Plenty of white space (standard margins and space between paragraphs)
- 100% accurate spelling and grammar
- Short, well-constructed sentences, not unnecessarily long and wordy
- A positive tone (do not include your weaknesses)
- Plain English (avoid slang, SMS language or other abbreviations, jargon or terms which are too casual)

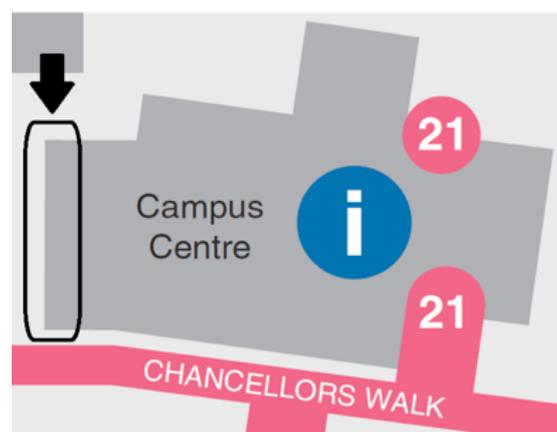
Please visit our website for more information and sample Cover Letters monash.edu/students/career-connect/apply-for-a-job/cover-letters.html

How can we help you?

- Attend 10 minute drop-in sessions for a quick feedback on job application or career advice
- Provide you with tips on assessment centres
- Offer you half hour one-on-one career consultations
- Online resources including sample resumes and cover letters, and lots of other useful career planning tips and information regarding employment outcomes based on your degree program
- Brush up your interview skills
- Practice job interview using Monash Career Connect Interview Stream

For more information please visit <https://monash.interviewstream.com/signup>

The Monash Employment, Careers and Development Centre is located in the Campus Centre on the far western side of the ground floor. It is at the end of the corridor that is next to the Airport Lounge stairs.



Top Tips

Top 5 tips for interview:

1. Be vocal and confident about your ideas in a group situation
2. Never sell yourself short, but also make sure you don't come across as arrogant
3. Dress in professional but comfortable attire
4. Come prepared with specific questions to ask the interviewer
5. Research the company and specific projects relating to their work. Think about specific aspects of the company that interest you

Top 5 tips of what to get involved in at uni/how to gain experience:

1. Start as early as possible. Don't wait till your last year to start looking for opportunities. Second year is a good time to start looking for vacation work. It puts you ahead of the majority
2. Get involved in extracurricular activities especially those involving leadership and also management. Companies like to see you can manage your time well so if you are juggling studies, work and extracurricular well, it is impressive
3. If you can't find a paid internship consider volunteering to gain experience
4. Network as much as possible. Attend any networking events and make sure you take the initiative to keep in contact with people you meet
5. Start a LinkedIn account early and don't be afraid to add anyone you have met or worked with. Also keep it professional. On that note be aware that recruiters may look at your social media so think about what you make public

Top 6 tips on balancing uni, work and life:

1. Keep a diary/calendar so you can manage your time well. Include all uni, work and social activities so you can plan ahead
2. Make sure you give yourself time to exercise, eat well and sleep. Also set aside down time to spend with your family and friends
3. Don't overdo it. If you can't handle everything then consider what your priorities are and focus on them
4. Attend to any academic issues before they become a big problem. If you are having problems understanding a concept in class then make time with your lecturer/tutor to revise it
5. Don't procrastinate. If you know you can't stop looking at Facebook then consider deactivating your account during exams or setting yourself time limits
6. Don't start watching a new TV show during exams if you know you will get addicted

- Anna Nayyar and Clare Keogh, Orica Graduate Chemical Engineers



Networking

Networking can be one of the most daunting and difficult tasks for young graduate engineers; however, building a network of connections can unlock many opportunities that would not usually be available and can help to give you an advantage in the already tight job market. Networking can also help you build a group of contacts that you trust and can use to gain a different perspective from. Whilst some people are born to be natural talkers and connect with people very easily, others may struggle with awkwardness and shyness. The good news is that learning to network is not difficult and confidence comes with practice.

The Importance of Networking:

There is a hidden job market in most professions that doesn't publically advertise positions. Instead, this job market is accessed through your contacts and networking. Networking can include your family, friends, university staff, members of clubs and groups you are involved in, colleagues and employers. Networking also helps you write better applications as you can find out more about the job and the company from your contact. In addition, when going for a job interview, mentioning that you have previously spoken to someone from the company gives you an advantage by showing that you are engaged with the company and enthusiastic about joining them. Networking remains an important skill as you progress from a graduate engineer to a professional. Networking helps to build a reputation and get your name out there as an expert in particular fields. Companies come to know who you are and what you have accomplished and will often pursue particular engineers, especially when starting a complex project with demands that match your skill set.

Beside the benefits that networking provides to your employability, networking is a way to build a support group of professionals that you can trust and call upon when you need an opinion or different point of view. This works best when you have contacts from a diverse range of fields and areas of expertise, so be sure to make contacts with people outside your field as they may come in handy some day.

Tips for Networking:

Improving your networking skills begins by being prepared for the conversation. Start by practicing introducing yourself and going through the answers to some basic questions. Practicing with a mirror or a friend can simulate talking in front of someone and help to raise confidence and charisma. Aim to talk clearly and confidently and always be genuine and polite. Good topics for conversation include the contact's projects and achievements, the company's history, or how your contact finds working at their company. Researching the company and the contact beforehand will help you to form questions that you can use to facilitate the conversation. Talk about your skills, interests and experience but avoid talking about yourself too much. Making a business card with your details on one side and skills and areas of interest on the other can be a great way to be remembered and can invite your contact to hand you their business card.

During conversation be sure to look interested and engaged. Each situation is different, but in general try not to look defensive with tightly crossed arms or a closed stance. Always be positive and non-judgemental when talking to contacts. Lastly, don't forget about appearances by dressing appropriately for the situation. Networking can be about showing that you would be able to fit into a work environment, so dress to be employed.

How, When and Where can I Network?

There are many ways to start networking. SMUCE's lunchtime seminars can be a great time to network with company representatives. A friendly chat after the seminar can help you build contact with that company which may give you an enormous advantage when applying for a position.

Once you have practiced with SMUCE, you can continue to increase your connections through other events. Engineers Australia have student seminars and workshops where young engineers have a chance to mingle and introduce themselves to companies. Some companies also host meet and greets where students are invited to meet each other and learn more about the companies. You can also ask your existing contacts to suggest new contacts. It's important to remember that you should treat every person as a new opportunity.

Networking

Be sure to keep in touch with the contacts that you have made. Follow up a conversation with an email and always be sure to send a thank you when a contact has helped you. Another great way to stay connected is by using LinkedIn; LinkedIn is a free professional social networking website which allows you to add and communicate with people you have met in a professional manner. LinkedIn is a great way to create a professional online profile that provides information about your skills and expertise. When using LinkedIn, it's important to keep your details up to date and relevant. Recent accomplishments, scholarships, and interests should be included. Be sure to confine your personal life to Facebook and keep your LinkedIn professional.

Networking is not only about building business connections; it is also about improving your communication skills, expanding your horizons, and being sociable. Networking can help you become employed and build a support group around you that you can call on for advice, help, or for a different perspective. Networking is a worthwhile endeavour that has far reaching benefits. It is a skill that every young engineer should be practicing.

- Michael Ah-Cann with advice from Coline Jones, Process Engineer at Dairy Innovation Australia, DIAL





IChemE On Campus

Professional membership for students

The Institution of Chemical Engineers (IChemE) is the global membership body for chemical engineering professionals and anyone involved with the process industries.

With over 44,000 members based in 120 countries, IChemE is the only organisation that awards the internationally-recognised qualifications of Chartered Chemical Engineer and Professional Process Safety Engineer. Our team of professional staff support our members and the wider chemical engineering community from our office locations in Australia, Malaysia, New Zealand, Singapore and the UK.

IChemE exists because chemical engineering matters.

Your IChemE membership is proof of your commitment to your studies and future career. Join online today and gain immediate access to study resources including:

- free digital subscription to the latest news and job hunting features in 'The Chemical Engineer' via www.thechemicalengineer.com and smartphone/tablet app
- Knovel e-library with hundreds of searchable science and engineering textbooks
- journal archive with over 4,000 chemical engineering research papers
- access to a powerful network of contacts via global events, special interest groups, regional member groups, interactive and lively social media community
- two student handbooks – *Data for chemical engineering students - essential concepts, principles and formulae* and *Communication skills for scientists and engineers*

Other member benefits include:

Discounts

- up to 15% discount off books, including titles in your reading list as well as discounts on training courses and events.
- IChemE Advantage – our member benefit programme that offers a broad range of tangible discounts and value adding benefits. Visit: www.icheme.org/Advantage

Networking

- be part of a global professional community – meet other engineers, network and gain the inside track in your industry. Our member groups hold local social and technical events that provide an excellent opportunity to meet with like-minded professionals.
- as an IChemE member you can also benefit from one free registration to a special interest group of your choice. With plenty of groups to choose from you'll be spoilt for choice. www.icheme.org/specialinterestgroups

Career support

- you'll be able to receive employment advice through IChemE's preferred recruitment agencies, including job search, resume writing and interview tips webinars and workshops.
- gain access to a free IChemE email address upon request eg yourname@ichememember.org
- your IChemE membership demonstrates your commitment to your career development and is the pathway to becoming a Chartered Chemical Engineer in the future.

Did you know about our free upgrade?

Upon graduation you can take advantage of our free upgrade to Affiliate/Associate member. Pay nothing for the first year and receive 50% off* for the following year.

How to apply?

With a \$60 one-off student fee, apply online today: www.icheme.org/joinnow

For more information visit: www.ichemeoncampus.org

* 50% discount only applies to those who have upgraded to Associate level

Monash Abroad

Add an international experience to your Engineering degree with Monash Abroad!

Build your educational experiences through one of our many overseas study programs such as exchange, intercampus exchange in Malaysia, or faculty overseas programs.

Where can I go?

Monash University has exchange agreements with over 100 partner universities across more than 25 countries. We currently have partners offering Chemical Engineering units in Canada, Chile, China, Denmark, Israel, Italy, Japan, Malaysia, Singapore, South Korea, Sweden, Turkey, UK and USA. You can also talk to your faculty about an international internship as part of your practical experience for your course. These are not organised through Monash Abroad, however we do provide insurance and scholarships for all outgoing students.

What are the requirements?

To be eligible to participate in an exchange/study abroad program, you must meet the following criteria:

- Engineering students must have completed 72 points at the time of application; however, students applying for intercampus exchange in Malaysia can do so after completing 48 points.
- A minimum credit average (60%) in your results so far of your current course(s).
- Some host universities might ask for a credit average that is higher than 60% (eg. 65% or higher). Please refer to our list of partner universities for specific entry requirements.

Got electives to spare?

Not interested in a full semester overseas? Many faculties offer short term programs during the summer or winter breaks which are worth 6-12 credit points. If you have some electives free, why not study Italian at our study location in Prato or Tropical Terrestrial Biology in Malaysia? Look at the short term programs page on our website (listed below) to find out more.

How to apply

- Book in to an Open Advising Session through the my.monash portal
- Attend our Engineering Exchange information session (dates and location on our website)
- Further information about our exchange partners, the application forms and our deadlines can be found at our website <http://www.monash.edu/study-abroad/outbound>
- Any questions can be directed to student.abroad@monash.edu
- Find us at 21 Chancellors Walk, Level 1, Campus Centre (Clayton Campus)



Monash Industry Team Initiative



Bringing talented students and industry leaders together (MITI)

What is MITI

The **Monash Industry Team Initiative** program is a multi-disciplinary team based initiative which seeks to educate students by offering positive learning opportunities to solve “real world” problems.

An Australian first, MITI connects high-achieving Monash students with selected industry organisations. Industry partners select student teams from all faculties including Art Design and Architecture, Arts, Business and Economics, Education, Engineering, Information Technology, Law, Medicine, Nursing and Health Sciences, Pharmacy and Pharmaceutical Sciences, and Science.

Student teams are engaged to complete a 10 -12 week project over the summer break, from December to February. This cross-disciplinary collaboration provides lasting benefits for our industry partners and our student.



How does MITI work

If selected for the MITI program you will form part of a multi-disciplinary student team of up to four.

Located on-site with a MITI industry host you will have the opportunity to apply your academic knowledge in collaboration with other team members to achieve innovative solutions to current business challenges.

Additionally, you will have access to the skills and experience of leading industry experts for the duration of your project.



Benefits and advantages

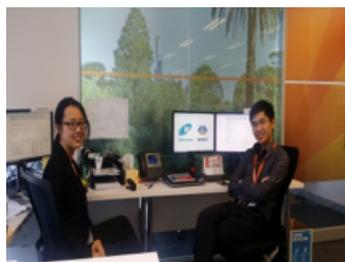
As a MITI team member you will be offered a scholarship to assist with living expenses for the duration of the project. All scholarships are administered by the Coursework Scholarship Unit, Monash, Clayton campus.

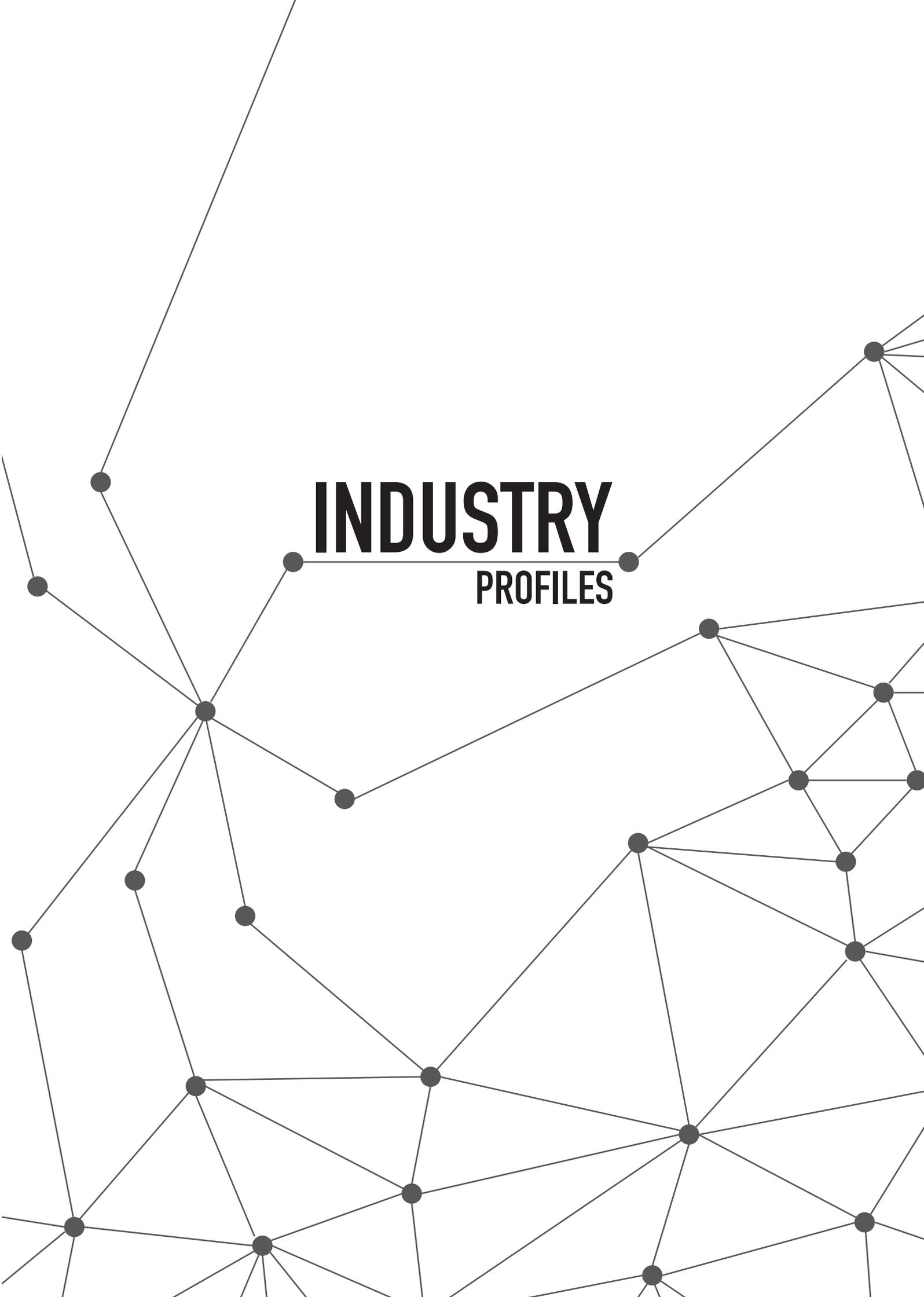
The program offers invaluable experience to all students by:

- Being part of a multi-disciplinary team that is solving real business problems
- Gaining exposure to relevant learning opportunities that support your studies
- Offering insights into your future profession
- Providing education and learning opportunities from leading industry experts

Want to know more

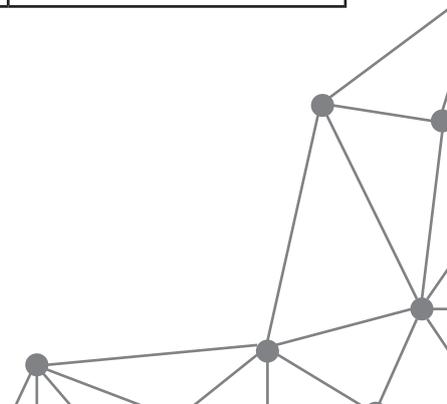
Visit the MITI website miti.monash.edu and watch the video located on the homepage for more details.



A network diagram consisting of numerous black dots (nodes) connected by thin grey lines (edges). The nodes are scattered across the page, with a higher density in the lower half. The lines form a complex web of connections, with some nodes having multiple connections and others having only one or two. The overall appearance is that of a digital or industrial network.

INDUSTRY PROFILES

		Vacation Employment Positions	Graduate Employment Positions	International Student Positions
Boston Consulting Group		?	✓	?
BP Australia		✓	✓	?
Deloitte		✓	✓	✓
Ego Pharmaceuticals		✓	✓	✗
Emerson Process Management		✗	✗	✗
Engineers Without Borders		✓	✓	✓
ExxonMobil		✓	?	✗
EY		✓	✓	?
Fluor		✗	✗	✗
Jacobs		✓	✓	✗
Macquarie		✓	✓	✗
Mars Australia		✗	✓	✗
MMG		?	?	?
Rio Tinto		✓	✓	✗
Santos		✓	✓	✗
Shell		✓	✓	✗
Suez		✗	?	✗
TFA		✓	✓	✗
ThyssenKrupp		?	?	✗
Wood Group PSN		✓	✓	✗





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The Boston Consulting Group (BCG) is a global management consulting firm and the world's leading advisor on business strategy. We partner with clients in all sectors and regions, with particular strength locally in technology, media and telecommunications, health care, industrial goods, consumer, energy, financial institutions, insurance and public sector.

Employee Attributes:

BCG is recruiting Associates to join any of our Australian offices in 2016, 2017 and 2018. Our Associates come from fields as diverse as music, philosophy and medicine, as well as traditional fields such as law, engineering and commerce. We are looking for students with outstanding academic records, strong analytical and interpersonal skills, intellectual curiosity, and great ambition.

Employee Development:

With BCG you will learn how to navigate complexity, draw unique insights, facilitate change, and become a leader responsible for real and lasting impact. Coached by a personal mentor and supported by your team and individual trainings, you will join a diverse group of highly driven individuals from different backgrounds who respect and trust each other. We ensure employees experience:

- Diverse case teams
- International experiences
- Personal mentoring
- Individual training – on and off the job
- Opportunity for personal development

Graduate Opportunities:

We are now recruiting Engineering students to join BCG. Please refer to www.bcg.com/careers for recruitment information, how to apply and application dates.

Other Opportunities:

BCG offers a Scholarship to students with at least one further year of study. Applications open in April 2016. Please refer to our website www.bcg.com.au for further information.

More Information:

Please contact australiacareers@bcg.com with any questions or feel free to contact us through Facebook at <https://www.facebook.com/TheBostonConsultingGroup> or LinkedIn at <https://www.linkedin.com/company/the-boston-consulting-group>





BP Australia is more than an oil and gas company, we are also a retailer. We are bringing distinctive offers and rewards to customers, opening modern retail sites and introducing new technology to the market. We deliver the high quality fuels and lubricants that take customers where they want to go – our brands include BP Ultimate, Castrol, Air BP and Shipping. But we also continue to deliver the fundamentals, refining fuels at Australia's largest refinery and transporting fuels through our supply chain. It's the breadth of our business that makes it the perfect place to build the foundation of your career.

Employee Attributes:

Our team, both local and global, live our values of Safety, Respect, Excellence, Courage and One Team and we look for employees who share these values.

Employee Development:

BP graduates have a development program which offers diverse learning experiences which set you up for success. This includes:

- A real job with real accountability
- A three year program journey
- Development activities that build your technical and leadership skillset
- Global and local networking opportunities
- A buddy and a program mentor
- Regular feedback and guidance

Locations:

Our Engineers operate in a range of environments and a career with BP offers the opportunity to broaden your horizons. We have graduates and vacation student roles at our Castrol Lubricants plant in Spotswood, Victoria and our Refinery in Kwinana, Western Australia. We also offer commercial graduate and vacation programs to those doing a Commerce double degree in our head office in Docklands, Victoria.

Vacation Opportunities:

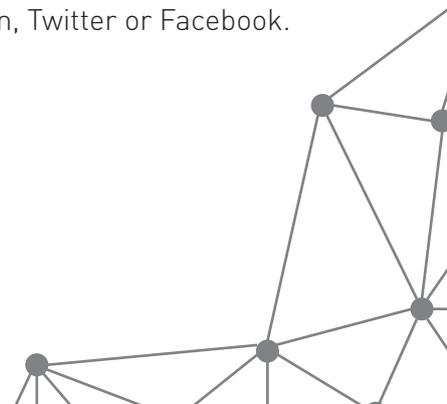
Our 12-week Vacation Student Program is the perfect opportunity to find out if a career at BP is for you and it is also one of the key ways in which we recruit for our graduate program. And what's exciting is we will give you a real job with real responsibility to help you to build your knowledge and experience in preparation for your final year of university. Our Vacation Program operates from November to February and applications will open in July.

Graduate Opportunities:

Applications for our 2017 Graduate Program open on Monday the 29th of February 2016 at www.bp.com/grads/au applications and close at midnight on Tuesday the 29th of March 2016. The application process includes an application form, online testing, video interview, assessment centre and interview. To be eligible for the BP Australia graduate program, you need to be an Australian or New Zealand citizen and/or permanent resident at the time of your application, have a minimum 65% GPA average, be in your final year of university, or recently completed, and have a relevant degree type.

More Information:

Visit www.bp.com/grads/au or search for BP Careers on GradConnection, LinkedIn, Twitter or Facebook.





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As one of Australia's leading professional services firms, Deloitte are redefining the way professional services are experienced for our clients and our people.

The Australian partnership of Deloitte Touche Tohmatsu is committed to growth, client service and its people – 640 partners and more than 5400 people located in 15 offices across the country, plus offices in PNG, Timor-Leste. Deloitte Australia's revenue of \$1.336 billion for the fiscal year ending 31 May 2015 is a 15% increase over the prior year.

In 2015, for the third year in a row, Deloitte has made BRW's Most Innovative Companies list, recognising the firm's commitment to innovation. Deloitte has in the region of 225,000 professionals at member firms delivering services in more than 150 countries. Revenues for fiscal year 2015 were US\$35.2 billion worldwide.

Employee Development:

Whether a graduate or an experienced professional, a learning journey has been specifically designed with you in mind. Within your journey you will complete a variety of initiatives that we believe will be key to setting you up for success at Deloitte. Throughout this journey you will have 24/7 access to digital learning focused on sales, client advocacy, industry awareness, leadership and people management content. To help our people and clients excel, we support access to best practice external programs and study (professional qualifications and post graduate or equivalent university courses) to complement the technical and non-technical programs delivered at Deloitte.

Vacation Opportunities:

Deloitte Australia's vacation employment involves three to eight weeks gaining exposure to client work, our award winning learning programs, and social events, with the prospect of securing a graduate position with the firm. If you're in your penultimate year at university you are eligible to apply.

Graduate Opportunities:

Surrounded by a large peer group, you'll be supported by a dedicated mentor and counselling team who will work with you to build your technical and business skills. If you are in your final year at university you are eligible to attend.

International Opportunities:

Deloitte Australia accepts applications for our graduate and vacation programs from students who do not yet hold Australian permanent residency. If you are in this category, you must meet certain criteria to be eligible. Check here for more information <http://www2.deloitte.com/au/en/pages/careers/articles/international-students-careers.html>

Other Opportunities:

Our Deloitte Development Program is a two day interactive program that offers you professional development, an insight into life at Deloitte and an advanced opportunity to secure a summer vacation position. You are eligible if you are in your first year of a three year degree, second year of a four year degree or third year of a five year degree.

Applications and Eligibility:

Applications for graduate 2017 and summer vacation work 2016/2017 open on our careers site as of Wednesday 17th February 2016.

Student Advice:

We have numerous tips and tricks on how to apply on our careers site. Visit Yourfuture.deloitte.com.au.

More Information:

Find out more at <http://yourfuture.deloitte.com.au>



Proudly Australian-owned, Ego Pharmaceuticals has led the way in the development, manufacture and marketing of innovative skincare products for over 60 years. Our mission is to exist for people who want healthy skin. Ego is the specialist in skincare, backed by science. We make our products in Australia for the people of the world. We provide consistently high quality productions, underpinned by heritage and integrity.

From its inception as a family business in 1953, Ego has grown to become a world leader, producing a comprehensive skin and health care range for sale in Australia and around the world. Our reputation is built on consistently delivering effective, high-quality and innovative products to meet a diverse range of needs, and we are committed to creating the best possible skin therapies for our customers.

The last few years have seen a large growth in production at Ego. As such, Ego has introduced various production plant and equipment into the manufacturing and packaging operations to increase capacity and improve efficiency. Last year, we have finished building a new Flammable Manufacturing Facility with new mixer, holding tanks and packaging machinery being tested and installed. This facility will double our capacity to produce bottled product. It is an investment of \$15 million in our future.

Employee Development:

At Ego, our people make the difference. Our people are our most valuable asset; while many may claim this, we at Ego have placed a premium on our people from day one. Regular training programs and professional development are offered by Ego to keep Egozites (that's what we call ourselves) trained in the latest developments and techniques in our respective fields of expertise.

Locations:

Our manufacturing site is located in Braeside, Melbourne. We distribute from our Dandenong South location, and we have sales offices around Australia and around the world.

Vacation Opportunities:

We will be offering vacation employment for the 2016-2017 summer period. Students in their penultimate year of Chemical Engineering degree are encouraged to apply.

Graduate Opportunities:

There will also be graduate opportunities for 2017. Graduate Chemical Engineers are encouraged to apply.

International Opportunities:

Candidates are required to have working rights in Australia. Please respond to advertisements as they are placed.

Other Opportunities:

Other positions for experienced engineers will be advertised from time to time.

More Information:

For more information about Ego, please visit www.egopharm.com





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Emerson Process Management is a leader in helping businesses automate their production, processing and distribution facilities in key industries including chemical, oil and gas, refining, pulp and paper, power, water and wastewater treatment, metals and mining, food and beverage, and pharmaceutical. Running a process operation means constant pressure to cut costs, increase output, reduce energy use and emissions, and improve safety — all while managing increasingly complex operations.

Emerson Process Management is a part of the Emerson Electric Co. organisation Founded in 1890 in St. Louis, Missouri (USA), Emerson is a Fortune 500 company, with sales of \$24.7B and more than 130,000 employees in over 150 countries.

Employee Attributes:

Emerson Process Management looks for qualifications and/or relevant experience in the field of interest. For an engineering career we seek tertiary qualifications in an engineering stream with a preference in Chemical Engineering for our DCS business (Distributed Control Systems) and Electrical Engineering for our Instrument business. We also seek people who are customer focused, have a 'can-do' attitude, have an ability to work in a complex and multinational organisation and enjoys working in a fast-paced environment.

Employee Development:

Emerson Process Management is committed to developing our employees through ongoing training and development programs throughout their career. We have specialised e-learning portals for technical development as well as dedicated technical trainers, both locally and internationally. We run a number of 'softer skill' courses throughout each calendar year and have excellent leadership development programs throughout Asia Pacific.

Locations:

Emerson Process Management have offices in Melbourne (head office), Sydney, Newcastle, Brisbane, Gladstone, Perth, Adelaide, Auckland, Taranaki and Christchurch. We also have a large presence in Asia Pacific, Europe, MEA and USA.

Other Opportunities:

From time to time, graduate or student opportunities become available and will be posted on our website and Seek.

Applications and Eligibility:

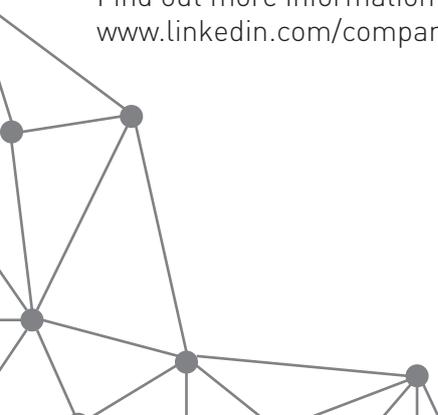
Applications can be made for open positions via our website and Seek.

Student Advice:

Try to complete a vacation program or internship in process automation to gain an understanding of the industry. Also prepare for any interview by researching the company, their products and projects they may be working on as well as reviewing the position you have applied for. Preparation is the key for a good interview.

More Information:

Find out more information at www2.emersonprocess.com/en-au/pages/home.aspx or on LinkedIn at <https://www.linkedin.com/company/emerson-process-management>



Engineers Without Borders



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Engineers Without Borders (EWB) was founded in Australia by local engineers and now has 2,000 active members and 15,000 supporters across Australia. We are the only dedicated organisation in Australia that connects STEM (science, technology, engineering and mathematics) professionals with local communities, industry, the education sector and government to address social and environmental issues. We have been engineering people out of poverty for over 13 years.

We do this by:

- Working in partnership to address a lack of access to basic human needs such as clean water, sanitation and hygiene, energy, basic infrastructure, waste systems, information communication technology and engineering education.
- Educating and training Australian students, engineers and the wider community on issues including sustainable development, appropriate technology, poverty and the power of humanitarian engineering.
- Leading a movement of like-minded people with strong values and a passion for humanitarian engineering within Australia and overseas.

OUR VISION: Everyone has access to the engineering knowledge and resources required to lead a life of opportunity, free from poverty.

OUR MISSION: We connect, educate and empower people through humanitarian engineering. Humanitarian engineering uses a people centred, strength based approach to improve community health, wellbeing and opportunity.

OUR VALUES: We build relationships based on mutual trust and respect and believe all relationships thrive on a two way sharing of knowledge and culture.

Employee Attributes:

EWB takes good intentions and turns them into meaningful impact. Anyone can contribute, you don't need to be an engineer and there are plenty of ways to be involved from simply spreading the word, engaging in meaningful volunteerism or making a donation.

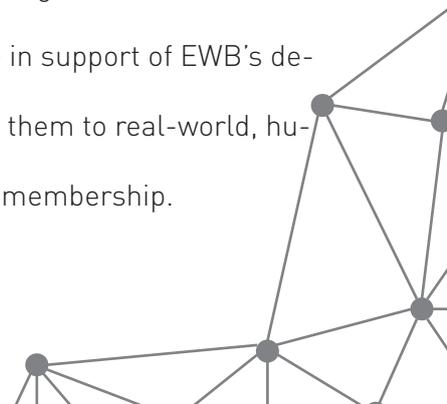
Employee Development:

The EWB Institute is the education, training, research and innovation section of Engineers Without Borders Australia.

The EWB Institute delivers high quality educational and training outcomes for students, professionals and EWB members. It also provides technical and educational support of EWB's development programs through courses, knowledge partnerships and university programs.

The key initiatives coordinated within the EWB Institute are:

- EWB Challenge - a design program for first year engineering students.
- Dialogues on Development - intensive study tours in Cambodia, India and in Aboriginal communities.
- Asian Humanitarian Design Summit: Student program in Cambodia and India focusing on community development and appropriate technology.
- High School Outreach Program - a member-led, hands-on science education program for school students.
- Knowledge Centres - communities of practice providing professional expertise in support of EWB's development programs.
- Research Program - program for engineering student researchers connecting them to real-world, humanitarian engineering projects.
- Training Activities - in support of EWB's Field Volunteers, chapter leaders and membership.



Engineers Without Borders



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Locations:

EWB operates local chapters in each State consisting of students, professionals and non-engineers who are passionate about humanitarian engineering and enacting change in the local community. We also have international placements in India, Cambodia, East Timor, Papua New Guinea, Sri Lanka, Nepal, Vietnam and Indonesia.

Locally, EWB Australia's National office is located in North Melbourne, and the EWB Monash Chapter is located at the Clayton Campus.

Vacation Opportunities:

EWB Australia offers unpaid internship opportunities at National Office for students, an exciting program that will engage passionate individuals with EWB's work. This program has the clear objective of seeking people with a social awareness and humanitarian commitment to contribute through diverse skills (engineering, education, marketing, communications, events and fundraising) to achieve EWB's mission.

EWB Monash also offers volunteering opportunities in a dynamic environment where you will be helping make a positive impact whilst making new friends, exercising your leadership, and your communications skills.

EWB encourages students to get involved with the Monash Chapter projects in order to get a feel of the culture and projects:

- Spokes in the Wheel —Bike Fixing Workshop : Volunteers assist in fixing up second-hand, donated bicycles for use at teaching sessions. Volunteers learn key bicycle skills and network with students and professionals.
- School Outreach - Teach students about challenges faced by developing communities with Hands-on activities that encourage problem solving, time management and teamwork skills.
- Greenhouse Project: Collaboration between Monash Permaculture and EWB to build a greenhouse at the Monash University Community Farm.
- Appropriate Technology: Technology looking at the bigger picture, environmentally, ethically, culturally, socially and economically viable.

Graduate Opportunities:

As EWB is a not-for-profit, we offer both national and international volunteer placements rather than graduate programs.

International Opportunities:

There are no restrictions, all opportunities are available to international students.

More Information:

To find more information about how to get involved with EWB, including applying for current position openings, please visit <http://www.ewb.org.au/getinvolved/> or email info@ewb.org.au and if you're interested about joining us on campus, just speak to any EWB member and/or visit www.facebook.com/EngineersWithoutBordersMonash/ or www.ewb.org.au/monash





ExxonMobil is an industry leader in every aspect of the petroleum and petrochemical business, operating facilities or marketing products in most of the world's countries and exploring for oil and natural gas on six continents. The ExxonMobil group of companies in Australia is one of this country's largest oil and gas producers and a major refiner and supplier of petroleum products. Approximately 1700 people are employed by our principal employer companies Esso Australia Pty Ltd, Mobil Oil Australia Pty Ltd and Mobil Refining Australia Pty Ltd.

Employee Attributes:

We look for capable, highly innovative graduates who display leadership skills, initiative, drive and innovation. Graduates must be suited to a team approach to work, be internationally mobile and prepared to take on a significant responsibility early in their professional careers.

Employee Development:

As a graduate with ExxonMobil in Australia you will have access to world-class training, state-of-the-art technology, a global network of highly talented colleagues and the opportunity to develop a wide range of skills and expertise throughout your career.

Locations:

Graduate engineers at Esso and Mobil will be based at one of three locations:

- The Exxon Mobil head office in Southbank, directly south of Flinders St. Station, Melbourne (adjacent to the Southgate shopping centre/ restaurant precinct).
- Longford Gas Processing and Crude Stabilisation Plant (near Sale).
- Mobil refinery, corner of Millers Rd and Kororoit Creek Rd, Altona.

Graduates work in technical and business roles involving one of our four main processing facilities:

- Bass Strait Offshore platforms - situated between 25 and 95 km offshore from Victoria's east coast, near Lakes Entrance.
- Longford - Crude Oil Stabilisation and Gas Processing Plants, located near Sale, approximately 3 hours east of Melbourne.
- Long Island Point - Fractionation Plant in Hastings approximately 1 hour south of Melbourne.
- Altona - Mobil refinery, approximately 15km west of Melbourne.

Vacation Opportunities:

Applications for 2016/2017 summer vacation student work opportunities will open mid July 2016, and will close mid-August 2016.

Graduate Opportunities:

At this stage ExxonMobil has not made any offers for engineering graduates in 2016. The number of positions available for engineering graduates is assessed each year based on strength of candidates, staffing requirements and current business environment. ExxonMobil aims to maintain a relatively steady intake of engineering graduates each year.

International Opportunities:

To be eligible to apply for Graduate work in ExxonMobil Australia, you must be an Australian Citizen or Permanent Resident (includes New Zealand Citizens). We do not process applications in Australia for jobs internationally (e.g. Malaysia). It is advised that you contact these Exxon Mobil affiliates directly. Information on opportunities within our affiliate companies around the world can be found at our Corporate website.





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Applications and Eligibility:

Applications for graduate engineer/vacation work positions at Exxon Mobil can only be received via our recruitment website. This is located at www.exxonmobil.com.au/careers. When you have successfully submitted your application to us, you will receive an automatically generated e-mail confirming that we have received your application. To apply for positions via the website, you will be required to provide us with a cover letter, electronic copies of your most recent academic transcripts and a resume that includes details of your education, prior work experience (engineering and non-engineering related), extracurricular activities and the contact details of suitable referees. As we run to a tight recruiting schedule, applications must be received by no later than the posted closing date.

More Information:

Further information can be found at our website www.exxonmobil.com.au/careers or come speak to one of our friendly representatives at your next careers fair.





EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services EY deliver help build trust and confidence in the capital markets and in economies of the world, working with start-ups to multi-national corporations. EY likes to look for smarter and better ways to do things. EY like to ask, what if? The biggest breakthroughs in the world happen by asking these two small but powerful words.

Employee Attributes:

EY want you to ask questions. Asking questions will help you learn and at EY, it is of the belief that the better the question, the better the answer, the better the world works.

Employee Development:

EY invest in the future by investing in our employees. EY provide world class development opportunities, from formal training and qualifications through on-the-job learning. EY's reputation is based on creating outstanding future leaders.

Vacation Opportunities:

As a 2016-17 summer vacation program, students can explore interests and can expect to participate in a structured program including an induction program and technical training, client projects, social events and development workshops. Students show EY the capabilities they possess and may be invited to join EY after graduation in a full-time position. If students are a high performing vacationer, students may be selected to attend EY 2017 International Intern Leadership Conference in Florida, USA. Penultimate year students are welcome to apply.

Graduate Opportunities:

Join EY full-time after graduation and students will be well on the way to achieving career goals. Students can enjoy early responsibility, expand networks and build skills. Students will get to work with experienced professionals who'll push students to achieve betterment. Students studying engineering are encouraged to apply for opportunities in our Advisory service line, Tax – Research & Development and Climate Change & Sustainability Services areas through EY's website.

International Opportunities:

EY's international student eligibility criteria can be found online at ey.com/au/careers/intl. At this time EY only accept applications from international students enrolled in an Information Technology Degree or an Accounting degree.

Other Opportunities:

Our Career Compass Program and Game Changers Club offers you a unique learning experience that will help you make smart decisions about your professional career. Apply if you are finishing in 2018 or 2019 when applications open.

Applications and Eligibility:

Apply online at ey.com/au/careers/apply. All applications will open on the 15th of February and will close on the 31st of March for our Graduate Program and the 7th of April for the Vacationer Program.

Student Advice:

There's no substitute for getting to know EY in person, so make the most of our events on campus. EY would welcome the chance to say hello, answer your questions and find out about you. Connect with us online and discover our interviewer tips at <http://bit.ly/EYInterviewTips>

More Information:

Get connected with EY by visiting ey.com/careers, [Facebook.com/eycareers](https://www.facebook.com/eycareers), twitter.com/EY_CareersAUNZ or [instagram.com/EYAUCareers](https://www.instagram.com/EYAUCareers)



VAC × GRAD × INT ×

Fluor is the world's largest publically owned Engineering, Construction, Procurement and Maintenance companies. Fluor has executed projects ranging in diversity from polypropylene plants in Siberia and Diamond Mines in Botswana to decommissioning former Cold War nuclear sites and constructing infrastructure. Fluor's work force numbers more than 40 000 employees with offices in every continent.

Employee Attributes:

Fluor relies on multi-discipline, client focussed teams to deliver projects on time and budget. Team members must be effective communicators who embrace diversity, are self-motivated, and are willing to relocate on a short term basis as and when required by the Project.

Employee Development:

Graduates join Fluor as a Graduate Engineer and typically work at this level for 3 to 4 years before becoming a Process Engineer. In addition to performing project related tasks, all employees are expected to complete in-house learning modules from Fluor University, which provides structured course content appropriate to the employee's profession.

Locations:

Fluor has offices in Melbourne, Brisbane, and Perth. Unfortunately, no Chemical Engineers are currently employed in any Australian office however Chemical Engineers are employed in Great Britain, the Netherlands, South Africa, and North America.

Vacation Opportunities:

At this point in time, there are no vacation employment opportunities in any Australian office.

Graduate Opportunities:

Graduate opportunities are market driven. Given the lack of market activity, Fluor does not anticipate the need for Chemical Engineers in its Australian offices in 2016 or 2017.

International Opportunities:

There are no restrictions provided that the International Student has the appropriate working rights as defined by legislation.

Other Opportunities:

Fluor's Mining & Metals team, located in the Perth office, have a small number of Chemical Engineers working as Process Engineers whose role is to develop process flow sheets, equipment lists, and operating costs estimates to meet the client's project needs.

Applications and Eligibility:

Aspiring employees can apply online at www.fluor.com/australia/careers. Applicants can also view international career opportunities via each Fluor office's specific web site.

Student Advice:

Aim to get some plant commissioning and or operating experience prior to embarking upon an Engineering career. Applicants should also try to gain some supervisory experience as well, i.e. team leading experience.

More Information:

Aspiring employees can apply online at www.fluor.com/australia



VAC ✓ GRAD ✓ INT ✗

Jacobs are a global multidisciplinary consultancy with over 60,000 employees worldwide. We work across all markets, including Oil and Gas, Mining, Pharmaceuticals, Infrastructure, Water & Environment, Buildings and Aerospace. Jacobs are involved in all phases of projects, from early stage conception and planning through to design, construction and operations and maintenance.

Employee Attributes:

Jacobs want employees who are customer focused, have good technical and organisational skills, and are willing and able to be innovative and resourceful. 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.

Employee Development:

Jacobs develop our staff through on the job learning opportunities and support for formal learning and development through their careers. At a graduate level, we have a graduate development program which features a range of learning and development programs and a strong emphasis on achieving Chartership through the Engineers Australia PDP.

Locations:

In Victoria our main office is in Melbourne, with a regional office in Tatura. We also have project offices in a variety of locations including Mitcham, Abbotsford and Hastings. Jacobs have a number of offices elsewhere in Australia, and over 70 offices worldwide.

Vacation Opportunities:

Vacation opportunities are advertised on Jacobs' website around mid-year.

Graduate Opportunities:

Graduate opportunities are advertised on Jacobs' website each year around Easter time. Opportunities depend on individual team needs; further information is available on our website.

International Opportunities:

Any international students wishing to apply must have a valid working Visa for Australia. International opportunities will be advertised on Jacobs.com

Applications and Eligibility:

All applications are accepted via the Jacobs website. Candidates will be shortlisted based on their application, and interviews undertaken with shortlisted candidates.

Student Advice:

Make sure you address the relevant selection criteria in your application. Try not to be generic, and be sure to tailor your application to the company you are applying for. Secondly, be yourself! Large companies like Jacobs draw success from the diversity of our staff – we need project managers, technical experts and field staff, so work to your strengths and do not assume you need to fit a particular 'mould' in order to be successful.

More Information:

Jacobs' website, Jacobs.com, provides a lot of information about the company, and there you will find links to job advertisements when they are available. An overview of the diverse range of projects we work on is available at <http://www.jacobs.com/jacobsworld/>





Macquarie Group is a global financial services provider. Our breadth of expertise covers advisory and capital markets, trading and hedging, funds management, asset finance, financing, research, and retail financial services.

Employee Attributes:

We look for people who share our drive for innovation, ideas and excellence.

Employee Development:

As a graduate, you can directly support community initiatives by joining the Graduate Volunteer Network (GVN). It is a great way to meet new people, get to know your fellow graduates, help community partners and maintain the significant contribution made by Macquarie staff.

Our graduate and internship programs will enable you to develop your skills and build your career. Every year we offer a range of graduate and intern positions across our business and service groups. Sitting side-by-side with business leaders, we offer the opportunity to work on live projects and transactions from day one.

We also have our wellbeing benefits program, Macquarie Plus, designed to further build our Macquarie community – and inspire us all to be our best selves – at home and at work. From our great office environments to onsite health checks, fresh fruit and community groups, Macquarie Plus includes a range of benefits to help make the most of working at Macquarie.

Locations:

Macquarie Group is a global financial services provider with offices in 28 countries. Our headquarters are located in Sydney, Australia.

Vacation Opportunities:

Macquarie offers summer internships to students in their penultimate year of study. The program runs for 10 to 12 weeks over the summer period. A summer internship offers you invaluable hands-on experience and can set you up for a successful career once you complete your studies. Working alongside leading industry professionals you will receive structured induction, on-the-job training and networking opportunities.

Graduate Opportunities:

Join the Macquarie graduate program and become an integral member of the team from day one. Your career development starts with a tailored orientation and business group specific workshops. You will then embark on a structured 12-month program with on-the-job training, access to a comprehensive range of external and internal courses and the opportunity to build your business network.

Applications and Eligibility:

Students can find out more information and apply via our website macquarie.com/graduates

More Information:

For more information you can visit our website, macquarie.com.au/graduates, to see our application deadlines. Alternatively, you can get in touch via graduate@macquarie.com or +61 2 8237 4477





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Mars Australia is part of the Mars Incorporated global organisation, with over 75,000 Associates employed worldwide. We are a leading food manufacturer for Chocolate Candy, Pet Care, Beverage and Food products with six manufacturing sites across Australia and New Zealand. Our brands include MARS®, SNICKERS®, M&M'S®, MASTERFOODS®, DOLMIO®, KANTONG®, PEDIGREE®, WHISKAS®, SCHMACKOS®, EXTRA®, STARBURST®, and SKITTLES®.

Employee Development:

At Mars Australia we believe that our graduates are the future leaders of our business, therefore from the outset, we give them real roles with real responsibility. To support our graduates in achieving this, we have structured our program in a way that allows graduates to have the freedom to explore new areas whilst giving them the support and tools they need to develop.

Locations:

The majority of our roles are regionally located in the following major centres; Victoria – Ballarat and Wodonga, New South Wales – Asquith, Bathurst and Wyong. Our field sales offices are located in Sydney and Melbourne.

Graduate Opportunities:

Mars Australia graduates join a three year program aimed to develop both their functional and technical skills as well as provide adequate time for development of leadership capability to enable them to progress to more senior roles. The program expands across all sites and divisions giving graduates the opportunity to work with a range of large brands in Chocolate, Pet Food, Gum and Food.

International Opportunities:

Australian citizens and permanent residents only, including New Zealand citizens.

Applications and Eligibility:

To be considered for the Mars Graduate Program you must have completed an Undergraduate degree within three years of commencement of the program. Applications are accepted via the Mars Australia website <http://marsgraduates.com.au/disciplines.aspx> from the 1st of February 2016 through to the 20th of March for our 2017 Graduate Program. For more information visit <http://marsgraduates.com.au/selectionprocess.aspx>

More Information:

Please refer to our website www.mars.com/australia/en/



VAC ? GRAD ? INT ?

MMG Limited is a global resources company which explores, develops and mines base metal deposits around the world. We are headquartered in Melbourne, Australia and listed on the Hong Kong Stock Exchange under Stock Code: 1208. At MMG, we mine for the progress for our people, our investors, our host governments and our diverse communities.

Employee Attributes:

We have various roles with a wide range of requisite skills, but common across all roles is a focus on safety, collaboration, local community partnerships and an affinity with our values and behaviours.

Employee Development:

We have a formal development plan for every employee, balanced so it caters for both their needs and the broader skills we need across the group.

Locations:

We own and operate the Century, Golden Grove and Rosebery mines in Australia, and the Kinsevere mine in the Democratic Republic of the Congo. In partnership with the government of Laos, we also own and operate the LXML Sepon mine. Our major development projects include Las Bambas in Peru, Dugald River in Australia and the Izok Corridor in Canada. We also have other significant explorations and partnerships in Australia, Africa and the Americas.

Vacation Opportunities:

At present our vacation programmes in Australia have been limited to our scholarship students.

Graduate Opportunities:

We typically advertise Graduate positions in March the year before the intake.

International Opportunities:

In the majority of cases we hire locally as we have a very strong commitment to the regions we operate. We presently operate in the DRC, Australia, Laos and Peru and our graduate intake reflect this.

Applications and Eligibility:

All positions are advertised at www.mmg.com

Student Advice:

Recently the Australian Minerals and Metals Association and the Minerals Council of Australia collected advice and feedback from the industry for graduates and published that on their respective websites. We encourage all pending graduates to research those sites.

More Information:

Please look for our YouTube, LinkedIn, Facebook, Twitter and Corporate Site.





We are a global leader in the mining and metals sector, with over 60,000 people operating across six continents in more than 40 countries. From our operations to our work with communities, everything we do is with the future firmly in mind. We're committed to sustainable and innovative ways to do business, deliver results and build a great work environment.

Employee Attributes:

Our people are our most powerful asset. We are a diverse team of talented, enthusiastic individuals who foster a culture of inclusion. We understand it helps us work together to develop focused yet flexible career paths for our workforce. We are looking for candidates with outstanding ability and specialist experience; people who have the hunger and drive to learn new skills and gain lifelong experience as part of a successful and dynamic organisation.

Employee Development:

Rio Tinto's Graduate Programme is a two year programme designed to develop the personal, technical and professional skills our graduates need to be a future leader, technical expert, or both, and to contribute to our business. This includes structured learning programmes supported by online learning and development programmes, along with technical skills development through on-the-job coaching, rotations to other teams or businesses, and a mentoring and coaching program.

Locations:

Rio Tinto's people work in more than 40 countries across six continents. In Australia, there are mines, ports and offices in Western Australia, New South Wales, Queensland and Northern Territory supported by regional hubs in Perth and Brisbane. Rio Tinto has a small presence in Victoria with the Technology & Innovation centre in Bundoora, and the Australian headquarters in Melbourne.

Vacation Opportunities:

Rio Tinto's Australian Vacation Programme offers paid work experience for university students – typically in their penultimate year – over a 12 week period from early December to February. Vacation students are recruited for engineering (mining, chemical, mechanical, and electrical), community relations or health, safety & environmental disciplines. Roles can be based at any of our Rio Tinto locations and relocation and accommodation are provided. Applications for the programme will open later in 2016.

Graduate Opportunities:

The Australian Graduate Programme commences in February 2017, and will be recruited for throughout 2016. Typically Rio Tinto seeks graduates with Engineering, Geology, Surveying, Community Relations, Health, Safety and Environment qualifications.

International Opportunities:

Applicants must have Australian work rights to be considered for the Australian Graduate or Vacation programmes.

Other Opportunities:

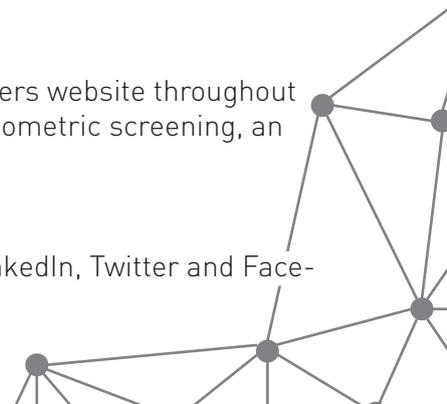
Various opportunities for graduates may be available. Vacancies will be advertised on our website.

Applications and Eligibility:

Applications for the Graduate programme will be advertised on the Rio Tinto Careers website throughout 2016. A typical recruitment process will involve an online application, online psychometric screening, an assessment centre or structured interview, and a site visit.

More Information:

If you would like to know about more careers at Rio Tinto, you can follow us on LinkedIn, Twitter and Facebook, or visit riotinto.com/careers





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Santos is a leading independent oil and gas producer in the Asia-Pacific region, supplying the energy needs of homes, businesses and major industries across Australia and Asia.

Employee Attributes:

Santos looks for the following qualities in a person: results orientated; demonstrated in high academic results, other commitments, hobbies or work, demonstrated initiative, communication skills, a commitment to achieving commercial outcomes through technical excellence, alignment to Santos values, capability shown through online testing.

Employee Development:

Our Graduate Program provides accelerated career development incorporating on-the-job technical training and specialist development activities including a Graduate Induction Program, Unlocking Performance and Potential system, job rotations, mentorship and support, Graduate Ambassador Program, competitive remuneration and benefits package, and flexible work options.

Locations:

Our graduates are generally placed in our Adelaide, Brisbane or Perth head offices and have the opportunity to travel and work at our site locations throughout Australia. Later in their careers, high-calibre graduates may have the chance to live and work at our overseas locations.

Vacation Opportunities:

Santos offers vacation employment for 12 weeks from November to February each year to chemical engineering students in their penultimate year of undergraduate study. The program provides opportunities for students to enhance their personal development through structured performance feedback, defined project work, and the delivery of a presentation on their project. Project work will generally be based in our Adelaide, Brisbane and Perth offices. Some projects will require students to travel to our site locations in South Australia and Queensland. Students undertaking a placement outside of their home state will be provided with return flights and student accommodation for the duration of the program. Applications will open via the Santos website for our 2016/17 program from the 1st of March 2016.

Graduate Opportunities:

Our Vacation Program is the primary pathway to the Santos Graduate Program, however there may be additional positions that become available and these will be advertised on the Santos website. To be considered for these positions, students are encouraged to submit an Expression of Interest via our website which is open outside of formal recruitment dates.

International Opportunities:

Applicants must be a permanent resident of Australia or New Zealand.

More Information:

Please visit our corporate website www.santos.com or specifically for careers either visit www.santos.com/careers/pathways or email www.graduate.recruitment@santos.com





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Shell has been operating in Australia for more than 110 years and is marked as a growth centre for Shell globally. We find, develop and supply liquefied natural gas (LNG), condensates and liquefied petroleum gas (LPG) to overseas markets and natural gas to domestic customers in Western Australia. Shell Australia has substantial holdings in Australia's oil and gas industry including interests in the North West Shelf Venture, the Gorgon Project and the Browse Basin, including Prelude; the first deployment of Shell's revolutionary Floating LNG technology. Shell is also responsible for the governance of Shell's coal seam gas business in Queensland, held via a joint venture with PetroChina.

Employee Attributes:

We will be observing your capacity for analysis, decision making and creating workable solutions. Other qualities we're looking for are drive and enthusiasm, resilience and confidence. Equally important is your ability to develop positive relationships and communicate well at all levels.

Employee Development:

Our graduate program helps develop the leaders of tomorrow by encouraging you to discover your own potential. The combination of your commitment and Shell's training will help advance your future and impact the future of energy. As a Shell graduate, you're part of a global company with real world opportunities and collaborative culture you need to build a long-term career. You'll work on game-changing challenges alongside world-class talent. Helping to shape a team who'll stretch and support you; inspire your ambition and encourage you to go further. Because, above all, with Shell you're in charge of where you want your career to go.

Locations:

Shell's head office in Australia is located in Perth, Western Australia.

Vacation Opportunities:

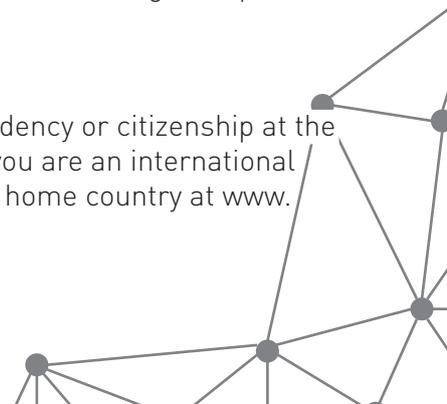
An Assessed Internship is one way to get to know Shell from the inside and immerse yourself in our industry. It will also help you decide whether a career with Shell is right for you. You'll join a project team and work alongside Shell employees, all professionals in their fields. Their perspectives will contribute to your understanding of our business, its demands and rewards. A supervisor and mentor will support you directly. You will undertake regular assessments throughout your internship. This is to ensure you get the most from the experience and receive feedback on your performance. The 12 week Intern program commences in late November and finishes mid-February.

Graduate Opportunities:

Right now, Shell is working on some of the most exciting, innovative energy projects in the world. We're in search of remarkable engineers who are curious to explore new ideas, experiences and frontiers. Do you have the passion, creativity and drive to bring to life the innovations that will help form the future of energy? Many forms of engineering are integral to Shell's overall operations. By creating advanced technology solutions and deploying them at scale, you'll help Shell to be a thought leader in designing the energy systems of the future. Establishing a solid foundation in Engineering will put you in good stead to capitalise on a range of future possibilities inside Shell's broad technical arena. An engineering role at Shell will advance your career within a pioneering global energy company, and give you the chance to make a meaningful impact on the future of the industry.

International Opportunities:

Please note you must possess current Australian or New Zealand permanent residency or citizenship at the time of applying for a graduate or intern position with Shell Australia. However if you are an international student, we encourage you to search for graduate opportunities with Shell in your home country at www.shell.com/graduate.





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Applications and Eligibility:

Our Assessed Internships are available to students in their pre-final year of study and applications open on the 18th of July 2016 and close on the 15th of August 2016. To join the Graduate program you must be in your final year or graduated with less than three years' work experience. You can search and apply online, and if successful will take part in an online assessment, which involves competency based questions, a decision-making task and a problem-solving task. If successful, this is followed by an interview, attending Shell Recruitment Day and finally if you are successful, an offer.

Student Advice:

If there's strong competition for places, how you present yourself and your particular strengths is vital. Ensuring you have a great CV/Resume and that you're fully prepared when invited for an interview is important.

More Information:

Explore the opportunities and discover your remarkable future today by searching our website www.shell.com.au/graduate, finding us on Facebook www.facebook.com/Shell, Twitter www.twitter.com/Shell_Careers or LinkedIn www.linkedin.com/company/shell/careers





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Suez Oil & Gas Systems (formally Process Group) is part of the global Suez organisation that employs over 80,000 people in more than 70 countries. Suez' activities include delivering clean drinking water and collecting and recycling waste for millions of people world-wide.

Suez Oil & Gas Systems (SOGS) has an established track record as a leading international supplier of modular process plant and complete process trains to a range of industries including the Oil & Gas and Petrochemical industries. Our clients include many major Oil & Gas companies such as Shell, BP, ConocoPhillips, McDermott, Petronas, Chevron, ONGC, Exxon Mobil, Technip and Santos.

SOGS is a strongly vertically integrated company providing services in project execution from front-end process engineering, through to detailed project engineering and management, and ultimately fabrication, commissioning and maintenance of the processing plant. The SOGS product range includes:

- Oil & Gas production facilities
- Crude Oil stabilisation & treatment
- Refining & Petrochemical applications
- Produced Water treatment systems
- Solids handling & Wellhead Desander systems
- Energy & Power generation

SOGS has designed and fabricated processing packages for some of the major oil and gas developments that have occurred in recent years. These include gas processing packages for INPEX's Ichthys and Chevron's Gorgon LNG projects off the Western Australian coast, Santos' GLNG project in Queensland, Exmar's floating LNG unit in Columbia and Oil Search's LNG project in the highlands of Papua New Guinea. Further afield, significant produced water packages have been supplied to Indonesia and Iraq and oil treatment packages to Tunisia and Venezuela.

Employee Attributes:

Suez employees embrace the challenges of working in a global environment, enjoy creating innovative solutions and are ready to "roll up their sleeves" to get the job done to the satisfaction of all parties.

Employee Development:

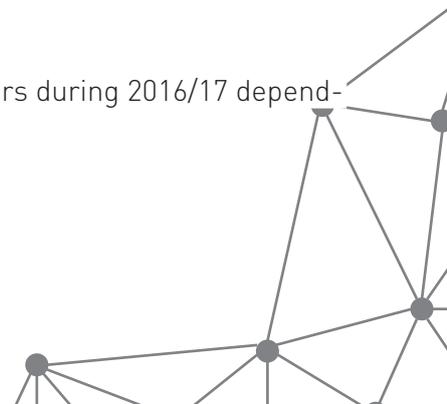
SOGS employs a wide range of engineers, including chemical, mechanical and electrical, as well as technical specialists. We offer extensive on-the-job training, development and mentoring tailored to the position and the interests and skills of the individual. Most training will tap into our extensive worldwide online resources managed by Suez and may also include internal or externally run courses. Specialisations include process design, mechanical design, detailed engineering, procurement, construction, fabrication, inspection and commissioning.

Locations:

SOGS is based in Rowville, Melbourne and also has offices in Singapore, Abu Dhabi and Houston. Our engineers regularly travel around the globe to visit clients and suppliers based in countries such as Oman, Iran, UAE, USA, Brazil, India, Pakistan, Sudan, UK, Australia, New Zealand, China, Thailand, Indonesia and Malaysia. The offices of our parent company Suez are located around the globe with headquarters based in Paris, France.

Graduate Opportunities:

SOGS anticipates that we may hire some graduate process and/or project engineers during 2016/17 depending on industry factors.





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International Opportunities:

International students must hold a valid visa that permits them to work in the country where the advertised position is based.

Applications and Eligibility:

Refer to our website Careers page for details of current available positions.

More Information:

Refer to www.suez-oilandgas.com for information about Suez Oil & Gas Systems and www.suez-environnement.com for information about the global Suez organisation.





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Teach For Australia is a unique Not-For-Profit organisation with a vision for an Australia where all children, regardless of background, attain an excellent education. We do this by transforming outstanding individuals into exceptional teachers and inspirational leaders, who will help change the lives of their students, and become future change makers in Australian education. Teach For Australia Associates (the title we give participants of the program) don't start out as teachers. Instead, we attract, select and train inspiring, passionate and high-achieving Australians to teach in disadvantaged communities for a minimum of two years, where they have a life changing impact on their students. During this time, Associates will complete a Master of Teaching (Secondary) on a significant scholarship, and receive full salary and benefits as a teacher. Engineering graduates are particularly sought after, as they are able to teach subject areas for which there is high demand. Our rigorous recruitment model, coupled with our award winning training and leadership program, supports participants to be highly effective teachers who can inspire students to achieve.

The impact Teach For Australia Associates and Alumni are having in Australia schools speaks for itself. 75% of principals find that Associates have a greater or significantly greater impact on student achievement than other graduate teachers after just one year in the classroom. Further, 100% of principals are likely to recommend hiring an Associate to a fellow school leader, with the key reason being the passion and energy that Associates bring to the school. Of our Alumni (the first cohort having graduated in 2011), almost 30% are Lead Teachers, one is a principal, two are acting principals and one is a co-principal.

Employee Attributes:

Teaching may or may not be something that you have previously considered. We look for well-rounded and passionate individuals, who have the qualities to create change, inside the classroom and beyond. We believe that great teaching is great leadership and this can be broken down into eight critical competencies:

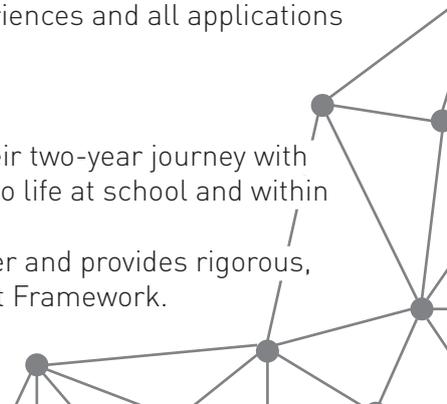
1. Problem solving - Are you able to think critically, analyse information and generate relevant solutions to problems?
2. Leadership and achievement - Have you gained significant, measurable results at university, extracurricular activities and/or work? Have you demonstrated leadership and achievement in your endeavours?
3. Commitment to mission - Are you eager to bring about change and make a difference in the lives of the students you teach? Do you passionately and actively believe in the power of education as a force for social justice?
4. Communication and influencing ability - Are you a clear and confident communicator and are you able to influence and motivate others? Do you have maturity and presence? Are you an active listener?
5. Organisational and planning ability - Are you able to plan, organise and prioritise your activities effectively to meet deadlines?
6. Resilience - Are you willing to work hard with resilience and optimism to overcome obstacles? Do you relish a challenge and are you driven to succeed?
7. Humility, respect and empathy - Do you operate with humility? Do you show respect and empathy towards others? Do you look for the best in the people around you?
8. Learning and self-evaluation - Are you driven to succeed? Are you open to learning from others and do you seek out opportunities to do so? Do you take ownership for development with regards to your own performance?

We recognise that these competencies can be developed through a range of experiences and all applications are looked at holistically.

Employee Development:

To ensure our Associates are ready for the classroom on day one, they'll begin their two-year journey with an intensive in-residence program. Following this, to help Associates integrate into life at school and within the local community they receive support from a:

- Teaching and Leadership Adviser - supports Associate development as a leader and provides rigorous, ongoing coaching in line with the Teach For Australia Leadership Development Framework.





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- In school mentor - Every Associate will have a veteran teacher in school to mentor them along the journey of becoming a strong classroom leader and content expert.
- TFA-School Academic Mentor (TFA-SAM): TFA-SAM provides the key link between theory, coursework and practice as well as ongoing support for the Associate and the School Learning Mentor. TFA-SAMs support and guide the development of Associates' professional practice in the classroom, and work closely with the School Learning Mentors and Teaching and Leadership Advisers in promoting their development through guided discussion.

In the second year of teaching Associates have the opportunity to be paired with a Leadership Coach who is a senior leader from a field of their choice, who will assist Associates to reflect on their experiences in the classroom and articulate a direction that will help them grow into an authentic leader. We have many high profile Leadership Coaches, representing the corporate sector (including engineering), social entrepreneurship, education and the public service.

Locations:

We currently place Associates in schools in Metropolitan and Regional Victoria, Western Australia, Northern Territory and the Australian Capital Territory. As education inequity is an Australia-wide issue, it is our hope to expand into further jurisdictions in 2016.

Vacation Opportunities:

In addition to the Associate program, we offer two-week internships for interested students at the start of each year. More information will be released in November 2016. Alternatively, email Emily Pearson (details below).

Graduate Opportunities:

The two-year Associate program, detailed above, is currently accepting applications for the 2017 intake. To learn more, Teach For Australia will host various Information Sessions during 2016, including one during each semester at Monash University. For more information, email Emily Pearson (details below).

International Opportunities:

Applicants for Teach For Australia must be a Permanent Resident or Citizen of Australia.

Other Opportunities:

As well as the internship program (listed above), if you are not in your final year in 2016 but still want to be involved with TFA, you can apply to be a Campus Brand Ambassador for 2017 (paid position). Applications will open in November 2016. For more information, email Emily Pearson (details below).

Applications and Eligibility:

Easy! Head to bit.ly/TFA-apply2016 to begin your application. The selection process involves three stages: an Online Application, Phone Interview and Selection Day. Keep in mind that our program is selective – only 9% of applicants who applied for the program became Associates in 2015.

Student Advice:

Emily Pearson is your recruitment contact at Monash University who is available to chat face-to-face or over the phone about the program. If you are interested in applying, or still unsure what 2017 holds for you and just want more information, we strongly encourage you to reach out to Emily to discuss the program and get assistance in putting your strongest foot forward during the application process. Emily is also an alumna of both Monash University (Bachelor of Science (physiology and biochemistry)) and Teach For Australia.

More Information:

Please see our website teachforaustralia.org/passiton, find us on Facebook at [facebook.com/TeachForAustralia](https://www.facebook.com/TeachForAustralia), email us at emily.pearson@teachforaustralia.org or apply@teachforaustralia.org or finally give call us on 1300 832 832



ThyssenKrupp Industrial Solutions (Australia) is a technology services and project delivery company. ThyssenKrupp provides facility and process design solutions which ranges from initial concept techno-economic studies, feasibility, FEED, detailed design to construction and commissioning. ThyssenKrupp also provides project management worldwide for clients. ThyssenKrupp service customers in the Oil Refining, Oil & Gas Processing, Petrochemicals, Chemicals, Mineral Processing, Alternative fuels and Clean Coal sectors. ThyssenKrupp clients expect and receive superior support through the expertise and skill of ThyssenKrupp people, the use of 'state of the art' technology and the application of the company's integrated business systems.

As a process engineer at ThyssenKrupp Industrial Solutions (Australia) Graduates will be involved in plant layout considerations, equipment design and optimisation, client meetings, safety reviews and many other aspects of project execution, which could potentially include construction and commissioning activities.

Employee Attributes:

ThyssenKrupp looks for motivated problem solvers with good communication and innovation skills. The Australian office was originally started by a chemical engineer and as well as a strong Technology Services Division, chemical engineers hold varied and senior roles within the organisation.

Employee Development:

ThyssenKrupp Industrial Solutions (Australia) offer Graduate jobs focused on training and development aligned with IChemE and IEAust Chartership requirements, career development planning, mentoring and buddy schemes. In addition there are potential secondment opportunities to other ThyssenKrupp offices both in Australia and globally, and site experience. ThyssenKrupp offers a rostered day off scheme and encourage company team participation in local sporting events such as the Corporate Triathlon.

Locations:

The Melbourne office of ThyssenKrupp Industrial Solutions (Australia's) comes under the Process Technologies Business Unit. TKISA also has offices located in Perth and Brisbane and personnel from Melbourne may be required to work in these locations. TKIS globally has an excess of fifty offices worldwide with the head office in Germany.

Vacation Opportunities:

Not determined – application of interest can be made to the recruitment email. The header should clearly indicate interest in either vacation work or graduation recruitment.

Graduate Opportunities:

ThyssenKrupp Industrial Solutions (Australia) will be accepting applications of interest. Please note that this is an expression of interest only and does not imply that ThyssenKrupp Industrial Solutions (Australia) will have positions available.

Applications and Eligibility:

Please send your expression of interest to jobs-is-australia@thyssenkrupp.com

Student Advice:

Attend JVCEC organised events to network with a variety of industry representatives and come meet a number of our engineers who are on the committee.

More Information:

For more information please visit www.thyssenkrupp-industrial-solutions.com





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Wood Group comprises three businesses: Wood Group PSN, Wood Group Kenny and Wood Group Mustang. Wood Group is a leading independent services provider for the oil & gas and power generation markets. Worldwide these services include engineering, procurement and construction management, facility operations & maintenance, and repair & overhaul of turbines and other high-speed rotating equipment.

Our global reputation has been built upon decades of successfully managing even the most complex engagements for our clients, offering a broad range of integrated services across the asset lifecycle. Today, as always, we are focused on safely delivering innovative, fit-for-purpose solutions to our diverse base of customers.

Employee Attributes:

We look for well-rounded graduates who have more than just great academic results. Apart from a D average we look at students who have had a wide range of experiences; extra-curricular activity in particular, travel, team sports, part time work (vac work in a related industry would be an advantage), understanding of Wood Group and the industry in which we operate and proven commitment to safety.

Employee Development:

Graduates undertake a series of business management courses leading to a Cert IV in project management. We also support graduates in becoming chartered through IChemE.

Locations:

We are a global organisation with presence in over 40 countries. In Australia we are located in Melbourne, Perth, Darwin & Brisbane.

Vacation Opportunities:

We have a vacation program and anticipate it running for 2016/2017. We advertise on our website in August of each year and it is available to penultimate year students only who are Australian citizens or have permanent residence. Positions are available in Perth and Melbourne.

Graduate Opportunities:

We have a graduate program and anticipate it running for our 2017 intake. We advertise on our website in March of each year and it is available to final year or recently graduated students only who are Australian citizens or have permanent residence. Positions are available in Perth and Melbourne.

International Opportunities:

Not available to international students, students must have either Australian Citizenship or permanent residence.

Applications and Eligibility:

Apply online at woodgroup.com. The application process involves an initial application (cover letter, resume & academic results), followed by a video interview then an assessment centre and finally a personal face-to-face interview.

Student Advice:

Come talk to us at a career fair or email us at australian.graduate.advisor@woodgroup.com

More Information:

Follow us on Facebook <https://www.facebook.com/WoodGroupStudentsGraduates>, Twitter <https://twitter.com/WGgrads>, YouTube <https://www.youtube.com/user/WoodGroupChannel> and also see our website www.woodgroup.com

A network diagram consisting of black dots (nodes) connected by thin black lines (edges). The nodes are scattered across the page, with some having multiple connections, creating a web-like structure. The text 'RESEARCHER PROFILES' is centered in the middle of the page, with a horizontal line passing through the word 'RESEARCHER'.

RESEARCHER PROFILES

Dr. Cordelia Selomulya

SMR✓ MST✗ PhD ? INT✓

Research Interests:

I focus on the design and delivery of nanoparticle vaccines, and functional particle assembly via microfluidic spray drying. The unique spray dryer can be used to synthesise various types of particles, including thermal sensitive and bioactive particles, microparticles for controlled release and microencapsulation, magnetic and fluorescent composites, and mesoporous microspheres with hierarchical structures and properties superior to those observed on nanomaterials. The method is scalable and is potentially a cost effective, energy and material-efficient route to produce high quality powders with better functionality and ease of handling. I also work closely with the dairy industry in Victoria. These studies centre around fields focused on both particle engineering and functional foods/nutraceuticals.

Major Projects and Impacts:

I am leading the Monash Advanced Particle Engineering Laboratory (MAPEL) in interdisciplinary research with Departments of Immunology on the design and delivery of nanoparticle vaccines targeting diseases such as malaria, ovarian cancer, and chronic pulmonary diseases. I am also leading the Biotechnology and Food Engineering group with an innovative capability for functional particle assembly via microfluidic spray drying. This technology is an integral part of our ongoing collaborations with Dairy Innovation Australia Ltd, French National Institute for Agricultural Research (INRA), Agrocampus Ouest (France), Dairy Research Institute (US), South Dakota State University along with several Chinese universities (Soochow, Xiamen, Fudan, Nanchang) and companies (Kingdomway Group, Guangzhou Ling Nan Intel Enterprise Group Co., Ltd, 3M, P&G, etc).

Examples include designing a more efficient DNA vaccine delivery system for malaria using magnetic nanoparticles, as highlighted in Nanowerk at <http://www.nanowerk.com>, understanding the role of nanoparticle adjuvants for ovarian cancer vaccines, and developing multi-stage vaccines for malaria. I collaborate with researchers from Materials Engineering in designing magnetic nanocomposites for electromagnetic interference shielding and developing new first order magnetic nanomaterials for magnetic heating (Prov. Patent AU2013905012). Some of the works with the dairy industry have been highlighted in Chemical Processing including the 2010 edition which can be accessed at <http://www.chemicalprocessing.com> and in the October 2013 Monash Magazine. Some of the fundamental research that we do will have long-term implications including providing a better understanding and demonstrating new applications in the field, or even other fields. The more applied research will help the industry to improve processes or design better materials.

Future Endeavours:

From Australia's perspective, the functional foods industry, for both better health and also aging population, will be key, especially considering the Asian and other emerging markets.

Student Attributes:

Students with a good academic record and a healthy attitude towards solving open-ended problems, as well as students who are proactive, have good communication skills and are good with time management as these are crucial attributes to develop as an independent researcher. Honours Class 1 or a Masters' degree from respectable institutions is looked upon favourably. Refereed publications in scientific journals would be great too.

Summer Research Opportunities:

Yes if students can be qualified through the faculty's summer research program.

PhD and Masters Research Opportunities:

PhD opportunities are usually advertised via the Department's or the University's website or at seek.com.au. However feel free to drop me an email at cordelia.selomulya@monash.edu or come by my office if you want to explore project opportunities.

Dr. Cordelia Selomulya

SMR✓ MST× PhD ? INT✓

International Students Research Opportunities:

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 very good record, and so I'm happy to consider accepting them in my group. Please see <https://www.monash.edu/migr-staging/future-students/apply> for more information.

Applications and Additional Information:

There will be industry-based PhD opportunities available in 2016 with dairy and related companies. The projects will enable students to be embedded in the company during their candidature. This may appeal to qualified students who would like to explore the possibility of an advanced industry career upon completion. Additionally there are two round of scholarship in the middle and end of the year for these students and if interested they are advised to prepare their documents, including their CV, and talk to potential supervisors around March and April or September and October.

Dr. Karen Hapgood

SMR ? MST ✓ PhD ✓ INT ✓

Research Interests:

My research interests include Powder Technology; especially granulation for pharmaceutical applications. Powders are interesting because they are so complex; they have a “memory”, and no two particles are the same which makes the behaviour of powders tricky to understand and control.

Major Projects and Impacts:

My work on how spray drops interact with the powder during wet granulation is now in many textbooks, including Perry’s Chemical Engineers’ Handbook. I have applied my research to real pharmaceuticals, including a HIV drug. All of my research is at the interface of industry and academia; I like to do work that helps industrial people understand their processes better, and that makes some sort of scientific advance that makes researchers take a fresh look as well.

Future Endeavours:

This always depends on grant funding, but I am interested in continuing in pharmaceutical and granulation research.

Student Attributes:

I have no particular skill or qualification requirements other than an interest in the research area. However I am looking for students who are able to manage their project mostly by themselves during the week and then come to discuss data and progress at a weekly meeting. Some supervisors are close to their lab and spend time wandering into the lab and chatting to students on a daily basis. As Head of the Department, my meeting schedules prevent that kind of flexibility. So whilst I can have a quick chat if something unexpected happens, I need students who can manage their own project most of the time, like a corporate environment where it’s your project.

Summer Research Opportunities:

I am not sure summer research positions will be offered until the end of the year. In general, I don’t offer them very often as it’s my only chance to have a couple of weeks of decent holiday! If I do offer a position it will be on the official Engineering Faculty website.

PhD and Masters Research Opportunities:

I will probably be taking on one, maybe two, students in 2017 as I am expecting a couple of graduations this year. I don’t know what areas these will be in yet.

International Students Research Opportunities:

I offer positions for International Students if they have a scholarship.

Applications and Additional Information:

Most Chemical Engineering Research Projects are posted on the department project website <http://www.eng.monash.edu/research/opportunity/list.php?dept=C>. I also post them on our MAPEL website, usually on the front page, at www.mapelab.com. For further enquiries about my research please email karen.hapgood@monash.edu. Finally to apply for a research position in general, follow the instructions at <http://www.eng.monash.edu.au/research/apply/>



Dr. Lian Zhang

SMR ✕ MST ✕ PhD ✓ INT ✓

Research Interests:

My primary research interest is in the development of low-emission clean coal technologies for Victorian brown coal. Our research interests cover high-temperature combustion and gasification processes, including in-situ diagnosis, computational fluid dynamics (CFD) modelling, ash slagging and fouling, production of value-added products from pyrolysis of Victorian brown coal and fly ash utilisation.

Major Projects and Impacts:

All my research projects are industry-driven and supported through both industry and Government sources such as the Australian National Low Emission Coal (ANLEC) R&D, Brown Coal Innovation Australia (BCIA), Australian companies (Coal Energy Australia, Energy Australia, GDF DUEZ, Latrobe Magnesium), and overseas companies (Shanghai Boiler Works Co Ltd, Hubei Yihua Chemicals). From these projects we have achieved: successful deployment of low-emission oxy-fuel combustion for Victorian brown coal in a 3 MWh pilot-scale combustion facility, successful development of advanced silica-based sorbent and its' commercial tests in industrial boilers for the minimisation of ash slagging and fouling in coal-fired boilers, and clarification of the Cr(III) oxidation mechanisms from the molecular level using a synchrotron-based X-ray absorption spectroscopy (XAS) facility.

Future Endeavours:

We aim to in the future deploy low-emission oxy-fuel combustion technology for Victorian brown coal in the Latrobe Valley, to reduce its carbon emissions in the near future, promote the commercialisation of mild pyrolysis technology for Victorian brown coal to produce export grade products in the near future. Additionally we look to clarify the molecular structures of ash-forming metals through molecular dynamic simulation and develop an advanced computer modelling tool for the prediction of ash formation behaviour upon the combustion and gasification of Victorian brown coal, under either conventional or advanced low-emission combustion mode.

Student Attributes:

Interested students require the completion of the following subjects; transport phenomena, chemical reaction engineering, heat and mass transfer and separation processes.

PhD and Masters Research Opportunities:

We would have around four PhD scholarships available next year.

International Students Research Opportunities:

International students need to secure a scholarship from Monash to cover their tuition fees. The project only allows me to pay a living allowance of approximately AUD 26,000 pa per student.

Applications and Additional Information:

Please discuss with Lilyanne Price in the chemical engineering general office. She is the most knowledgeable person regarding any scholarship applications. Lilyanne is also the first person to screen the applicants prior to informing the supervisors.

Dr. Lizhong He

SMR✓ MST× PhD× INT×

Research Interests:

I am interested in multidisciplinary research in the field of bioengineering and nanotechnology to develop products that are simple, cost-efficient and environment friendly. This work often involves bio-molecular interactions at various interfaces, like solid-liquid, liquid-air and nanoparticle surfaces. One objective is to develop a new and simple approach to controlling biomolecule orientations at interfaces in order to have desirable attributes.

Major Projects and Impacts:

The current projects in my group include; engineering enzymes as biocatalysts for applications including production of biofuels and valorisation of protein wastes, drug-delivery using nanoparticles and stimuli-responsive foams and emulsions which have broad application in the area of medical, pharmaceutical, biotechnological and food industries. We have established a panel of different strategies to control interfacial properties of biomolecules. These include; self-assembling of peptides at interfaces for foams and emulsion, low cost immobilization of enzymes using a scalable process and encapsulation of enzymes in nanoparticles. Fundamentally, we have deployed biophysical methods including neutron and x-ray scattering to reveal interfacial structure of proteins and peptides, guiding design and production of advanced products at interfaces.

Future Endeavours:

With the establishment of the platform technologies mentioned above, we are well placed to tackle important research problems including; how solar energy can be better harvested in order to convert CO₂ into fuels and how can enzymes be engineered and tailored to tackle this challenge. Additionally can protein wastes such as chicken feathers, whey proteins and soy bean wastes be converted into highly valuable products and can this objective be achieved at a low cost?

Summer Research Opportunities:

We will have summer research positions for voluntary students. Scholarships will depend on funding availability.

Applications and Additional Information:

Please email me at lizhong.he@monash.edu to arrange a meeting.



Dr. Meng Wai Woo

SMR✓ MST✓ PhD✓ INT✓

Research Interests:

My group undertakes spray drying research into pharmaceutical and food powders. Spray drying is a process which convert liquid materials into dried particulates. In addition, we also undertake research in food drying. My group covers a wide area of spray drying research and drying research in general. Some of the areas include: counter current spray drying, narrow tube spray drying, spray drying and crystallisation, fundamentals of drying, computational fluid dynamics simulation of spray dryers and the drying of fruits.

Major Projects and Impacts:

Our major projects are based around the areas listed above, save for spray drying and crystallisation. In these fields we aim to help the industry with their drying formulation and processing needs. The group also aims to develop and keep pushing the frontier in generating fundamental drying knowledge. Please see our published work at www.wai-research.com for more information. The group is very much industry oriented and the fundamental knowledge generated will benefit the drying community in the long run.

Future Endeavours:

We aim to in the future explore extrusion of food and pharmaceutical particulates.

Student Attributes:

I am looking for summer students, undergraduate final year students, Masters students and PhD students that have creativity and a willingness to be different. Students of all level are welcome and no prior qualifications are required.

Summer Research Opportunities:

Both summer projects and postgraduate projects are available currently.

PhD and Masters Research Opportunities:

Both PhD and Masters positions are available, however you will need your own scholarship.

International Students Research Opportunities:

Positions are available, however you will need your own scholarship.

Applications and Additional Information:

To apply please contact Dr. Meng Wai Woo at meng.woo@monash.edu and please visit www.wai-research.com for more information on the group's research activities.

Dr. Wenlong Chen

SMR ✕ MST ✕ PhD ✓ INT ✓

Research Interests:

My nanobionics lab research interest lies at nano-bio interface. We design nanoparticles for applications in healthcare, sensing and energy.

Major Projects and Impacts:

For details regarding the exact nature of our projects, please visit my group website at <http://users.monash.edu.au/~wenlongc/>. Fundamentally, my lab aims to publish research results in the highest-impact journals such as Nature. I have published five such papers in Nature groups. Practically, my lab is also aiming for patentable technologies with real-world impact. My work has attracted attention from a number of world-wide media outlets. In particular, BBC World Service interviewed me and reported upon our electronic skin wearable sensor in 2014.

Future Endeavours:

In the future I aim to establish my nanobionics lab to be one of most renowned worldwide labs in the field of nanoparticles and deliver real-world impacts benefiting mankind.

Student Attributes:

I am looking for students with a high academic record.

PhD and Masters Research Opportunities:

There are three PhD positions that are currently available.

International Students Research Opportunities:

The aforementioned PhD positions are also available to international students.

Applications and Additional Information:

Please write to me at wenlong.chen@monash.edu, attach your CV and the detail your motivation for doing a PhD.



Your link with industry

The 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 asking them to complete a short survey about their company/research and providing details of their graduate and vacation employment offerings. 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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