

CHEMICAL ENGINEERING CAREERS HANDBOOK

CHEMICAL ENGINEERING UNDERGRADUATE SOCIETY

JUNE 2022 ISSUE 5



INTRODUCTION

PREFACE

The fifth edition of the Chemical Engineering Undergraduate Society Careers Handbook has been developed by our 2022 Industrial Relations Team. This handbook serves as a guide for future students when applying for industrial training and graduate positions. It includes helpful tips for resume and cover letter development as well as examples of the types of chemical engineering careers available beyond tertiary study. It does not however provide all the answers to getting a job. Being an active member of CEUS and attending industry events, improving your networking skills, and being proactive in your search for opportunities are also all essential in achieving your career goals.

This year's issue includes the addition of an internship guide, which discusses the types of industrial training opportunities available for chemical engineering students. This includes traditional process engineering and consulting internships, as well as non-traditional projects and programs such as Taste of Research and Vertically Integrated Projects.

Feel free to use this handbook as well as resources provided on our Trello Jobs Board to give yourself a head start in applications.

Disclaimer

Please note, whilst all due care has been taken in researching this information and ensuring that the material is correct at the time of publishing, it is still based primarily on public websites that may change without notice.

The Chemical Engineering Undergraduate Society of UNSW takes no responsibility for any errors and any such reliance upon them.

We suggest students interested in organisations noted in this publication to pursue them directly for further information.

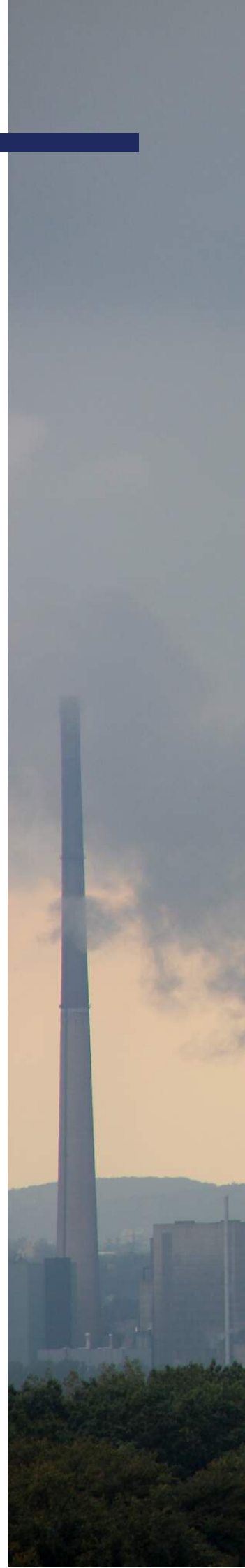
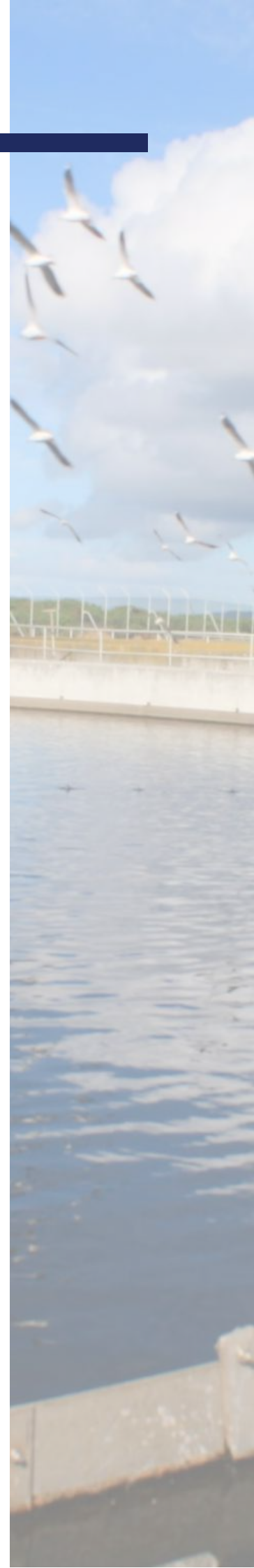


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CHEMICAL ENGINEERING UNDERGRADUATE SOCIETY

SECTION 1: CAREER GUIDE

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GUIDE FOR UNIVERSITY

Your years at university help prepare you for your future career by creating useful experiences, skills, and knowledge. In general, this section will outline some steps you take to fully utilise your time at university. The main steps being maintaining your grades, getting work experience and partaking in extracurriculars.

FIRST YEAR

- Make friends with lots of people, and talk to your tutors and professors. This will start your network.
- Get involved with societies and do some light volunteering.
- If you want to take it up a notch, you can join the various development programs offered by societies at UNSW, e.g. Engsoc's VDP and EIP or WIESOC's Development Program.
- Go to networking events held by the different societies
- Do some research on UNSW careers online <https://careersonline.unsw.edu.au/>.
- Attend the various resume workshops provided by the university and societies to build your resume.

MIDDLE YEARS

- Attend more networking events
- Completing internships and gather references to use in the future
- Take on an executive role in a society
- Go on exchange for a term
- Completing Industrial Training. Internships are very important for your career so it is vital that you prepare properly. Make sure you apply to many places and keep track of your applications. Apply as early as you can, do not leave it until the last minute. Use an excel spreadsheet or some other application to keep information about your applications in one place. Note down the date the application is due, when and where you have an interview, when the results will be released, if you failed or passed, etc.
- Practise being in an interview setting with family or friends. You can refer to the interview section of the handbook for more advice.
- Have a personal statement ready; i.e. a short blurb about yourself that you can tell the interviewer if they ask or during networking events. This can include your name, degree, what you are interested in doing in the future, etc.

FINAL YEAR

- The end of your university life is the start of your professional career. Make sure you update your resume and cover letters and look at applying for graduate positions.
- If you are interested in completing a PhD in Chemical Engineering, make sure you speak to a supervisor of interest. We suggest contacting the Chemical Engineering Research Society (CERS) at cers@unsw.edu.au for more information.

INTERNSHIP GUIDE

All engineering students at UNSW are required to undertake 60 days of industrial training (IT) before they can graduate. This section discusses the types of internships available to chemical engineering students.

TRADITIONAL INTERNSHIPS

Traditional internships refer to placements relevant to your program or specialisation in a professional engineering workplace. This can either be paid or unpaid, however UNSW strongly advises against unpaid internships. A minimum of 30 days of traditional IT must be taken, but these internships can count towards the full 60 days of IT.

Consulting

Consulting firms such as GHD, Aurecon and KPMG offer internships to chemical engineering students. These internships often run over the university summer holidays for 10-12 weeks. Sometimes they offer the possibility to continue working part-time on the same team after the internship has ended. Consulting firms deal with a range of projects and you may work in the areas of water management, process simulation, advisory, project management or risk management. The teams are often diverse and you get the opportunity to interact with people from all areas of the business. They generally offer mentoring and other professional programs for interns to network and build skills.



Process Engineering

Generally referred to as 'vacation programs' these are internships offered by more traditional chemical/ process engineering companies such as BHP, Glencore and Sydney Water. They run for 10-12 weeks over the summer holidays. Often the work site is located out of Sydney, such as in remote areas of NSW, Queensland or Western Australia. They offer residential placements, where you relocate for the summer to the site, or Fly-In-Fly-Out (FIFO) options. The type of work you can do may be in metallurgy, mining, chemicals processing, quality control, process control systems or project management.

Research and Development

Examples of companies include Resmed, Cochlear, CSIRO, James Hardie, GSK, and Selleys. Internships at these companies expose you to the behind the scenes of product development and innovation. You may be involved with laboratory work, quality control or product testing. It is likely you will collaborate with professionals in areas such as science, business and marketing.

Supply Chain

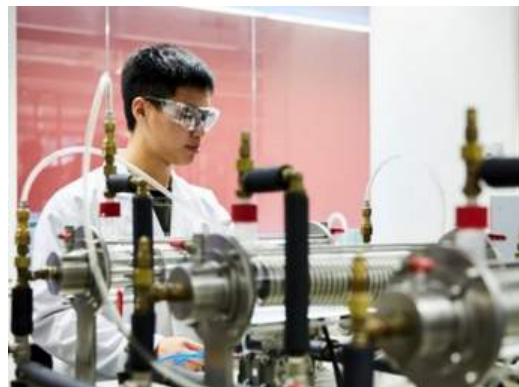
Companies such as Asahi, Arnotts, Unilever, and other consumer goods brands offer these internships. These companies produce FMGCs or 'fast moving consumer goods' and rely on efficient supply chain management to get the products to consumers. In this type of internship you will likely work with data management systems, collaborate with professionals from all across the company and be involved in project management operations.

NON-TRADITIONAL INTERNSHIPS

Non-traditional internships refer to programs, projects or courses (either provided by UNSW or a 3rd party provider) that expose students to engineering related tasks and technical skills. A maximum of 30 days of non-traditional IT can be taken over two placements.

Taste of Research

This is a research program and scholarship run by UNSW Engineering in which undergraduate students work with a research team to get hands on experience of university research. Research areas include (but are not limited to) virtual reality plant design, degradable batteries and hydrogen production from seawater. These provide students with the opportunity to collaborate with PhD students, post doctorate researchers, and senior professors. This program must be completed over 60 days, and students receive an allowance of \$6000. More details on the Taste of Research program can be found [here](#).



Vertically Integrated Projects

VIP is an elective course that extends project-based learning over the course of a year. Students work in multi-disciplinary teams on research projects or design competitions to tackle real world problems. Projects include sourcing hydrogen from food waste, using solar energy to power small devices, future energy storage, and developing novel fermentation and distillation processes. Depending on the project, it is possible to gain up to 30 days of IT. More information on VIP can be found [here](#).

CDEV3000 Practice of Work

This is an interdisciplinary project-based course in which student learn professional skills and work with industry partners on a real-world project. The course provides skills in professional practice, presentation skills, project management, communication and teamwork. A maximum of 18-30 days can be counted depending on the specific project.

Project Everest Ventures

Project Everest is a humanitarian organisation that offers immersive overseas internships for university students. They undertake work in developing areas where they collaborate with local communities to solve complex issues. Collaborate with industry partners and students from around the world, receive mentoring and participate in career enhancing workshops. A maximum of 20 days can be counted towards IT for group projects. This can be exceeded for individual internships. A fee is associated with participating in these projects. More details on Project Everest can be found [here](#).



CHEMICAL ENGINEERING FIELDS

There are many industries that chemical engineers can work in. Below are a list of some available fields.

- Bio-processes – Working in pharmaceuticals and the food and drink industries.
- Chemical processes – Involving the fertiliser industry, including pesticides and herbicides, caustic soda, glass and specialty chemicals.
- Combustion – Large industrial furnaces such as those for steel manufacture or for power generation from coal or gas, or the recovery of valuable energy from waste.
- Environmental – Waste and water treatment, environmental regulations and recycling. Recovering and reusing valuable materials instead of dumping them.
- Minerals – Major minerals industries such as alumina/aluminium, steel, copper, lead and gold.
- Petrochemicals – Converting oil and gas into plastics, synthetic rubber and other things.
- Pharmaceuticals
- Process control – Instrumentation and control systems which make a manufacturing process run smoothly, safely and efficiently.
- Petroleum – Producing oil, gas and LPG from onshore and offshore fields.
- Project delivery – Converting the design of a process plant into an efficient, safe operating plant.

The following section describes some of the roles that chemical engineers can have in these fields.



ROLES OF A CHEMICAL ENGINEER

PROCESS DESIGN

ABOUT THE ROLE

Process design is one of the leading roles for a chemical engineer, tying together the key aspects of chemical engineering. Process design engineers are responsible for conceptualizing, developing and implementing processes or systems to produce a desired end product on an industrial scale. This can involve designing a whole new plant (process development), optimizing or adapting one that is existing (process improvement) or implementing existing designs to enable new production capacity (process capacity).

Process design requires a keen understanding of a problem in order to develop and engineer a viable solution that meets the criteria. In designing a process, the engineer requires more than just a technical knowledge and must also consider additional factors and constraints such as costs, regulatory laws and standards, safety and environment in order to meet the necessary objectives. Chemical engineers often will participate in all stages of engineering design process, implementation through to commissioning (process validation) as well as post implementation of the plant.

Potential Employers and Industries

- Water treatment
- Food and beverages
- Oil and petroleum
- Any manufacturing company, e.g. building, pharmaceuticals, polymers and other goods
- Chemical
- Utilities

Required Skills

- Strong communication and ability to work in a team
- Adaptability
- Analytical skills
- Problem solving skills
- Process design documentation
- Project management
- Control and design philosophies
- Technical knowledge
- Computer modelling

ROLES OF A CHEMICAL ENGINEER

ENVIRONMENTAL ENGINEER

Potential Employers and Industries

- Consultancy for civil engineering projects
- Water and wastewater treatment
- Industrial waste management
- Contaminated land assessor
- Department of Environment and Agriculture
- Land evaluation
- Logistics and Infrastructure

Required Skills

- Strong communication skills both written and oral as you will be working in teams and writing reports
- Technical knowledge of hazard identification and environmental protection measures
- Project management including planning, execution and ability to meet deadlines
- Incident management skills for breaches in release limits and environmental projects
- Analytical skills for the collection of data and prediction of industrial environmental impact
- Field work, laboratory skills and computer skills

ABOUT THE ROLE

Although environmental engineering is also a separate degree to chemical, there are many crossovers which make it possible for chemical engineers to work in this role. Environmental engineers are primarily concerned with the protection of civilisation from harsh environments and the protection of the environment, primarily from human interference or activities. Chemical engineers may be employed, similarly to environmental engineers, to control the waste products from industries and civilisations and maintain process sustainability.

Environmental engineering involves many skills similar to chemical engineering including construction of risk and hazard analysis for potential threats to the environment and public health, such as setting release limits for industrial wastewater. Environmental impact assessments (EIA) are a necessary document for all engineering projects and are primarily completed by environmental engineers. An EIA is required to assess the potential damage to all aspects of the environment and possible mitigation techniques which could be applied by engineers.

ROLES OF A CHEMICAL ENGINEER

CONTROL ENGINEER

ABOUT THE ROLE

Control Engineering is the discipline of automation, of applying mathematical constructs to various physical processes in order to control them in such a way that a logic controller (eg a computer) can do the job without excessive human interference. This field has played a pivotal role in modern chemical engineering, as it has allowed production lines to progress from a few batch processes which required direct human monitoring, to immense factories where the only people required for general operation are in a single control room.

The way this occurs is through the use of various sensors throughout the factory which relay the key properties of the processes being controlled to a computer which then uses actuators (valves, heaters, and the like) to ensure the process is performing as desired. It is the Control Engineers job to know what sensors and actuators are required; but most importantly, it is their job to tell the computer what it should be doing to make everything run smoothly.

Potential Employers and Industries

- Any manufacturing company
- Petroleum and gas
- Minerals processing
- Utilities industry

Required Skills

- Strong intrapersonal skills to be an effective member of a team
- Good documentation ability so that another could operate and maintain your work
- High level of mathematical literacy, including university calculus and laplace transforms
- Strong computing ability, including knowledge of programming, usually C, C++, or PLC native languages
- Troubleshooting and problem solving skills
- High attention to detail, as the control systems you create could prevent or cause catastrophes

ROLES OF A CHEMICAL ENGINEER

RISK AND SAFETY ENGINEER

Potential Employers and Industries

- Any manufacturing company e.g. building, pharmaceuticals, polymers and other goods
- Water treatment
- Food and beverages
- Oil and petrol
- Consulting
- Mining

Required Skills

- Strong communication both written and verbal
- Ability to work in a team
- Technical expertise in process safety
- Problem solving skills
- Hazard and risk identification, assessment and analysis
- Critical thinking and decision making
- Understanding of laws and government regulations

ABOUT THE ROLE

The safety of personnel, plant and environment is of top priority when designing and operating a plant or process. Due to the many inherent hazards present in industrial and manufacturing processes, chemical engineers are often tasked with providing specialist risk and safety expertise.

Chemical engineers understand the risks associated with operating plants at elevated temperatures and pressures, and offer the support required for maintaining the integrity and efficiency of the system, without compromising the safety of plant and personnel. They are tasked with identifying the hazards and risks in new and existing equipment and developing both preventative and control measures.

Safety chemical engineers are often required to perform regular risk assessments and reviewing existing measures to ensure regulatory compliance. Inadequate consideration of plant safety can result in safety incidents such as severe injury, explosions, loss of containment affecting the environment and decreased production. Chemical engineers are often employed in this role due to their ability to participate in all stages of engineering process (design, installation and commissioning) as well as being able to implement programs.

ROLES OF A CHEMICAL ENGINEER

RESEARCH AND DEVELOPMENT

ABOUT THE ROLE

Chemical engineers in the research and development sector apply their expertise to design new and innovative methods and technology within the context of chemical processes. R&D engineers are often tasked with developing new solutions to difficult problems, which often involves combining their own technical knowledge with novel research. They are responsible for managing their project from conceptualizing to trialling and implementation.

The scale at which Chemical engineers are responsible for include small scale laboratory conceptual studies, pilot plant to full commercialisation. They may also be required to evaluate existing processes and devise necessary improvements to make a process more safe and efficient.

R&D engineers are creative in their ability to implement new ideas and research into a workable product or process. Strong communication skills are essential, as R&D must effectively combine and convey their own research and ideas to a variety of disciplines and occupations.

Potential Employers and Industries

- Often any industrial company will have a R&D facility to support the growth of the business. The size of the R&D division will depend on the strategic focus of the company. If the primary strategic focus of the company is due to product development and innovation, R&D division will have a significant role in the business.
- Any industrial process e.g. pharmaceuticals, polymers and other goods
- Water treatment
- Food manufacturing
- Oil and petrol
- Consulting
- Raw materials

Required Skills

- Strong communication both written and verbal
- Ability to work in a team
- Technical expertise
- Problem solving skills
- Creativity
- Self Motivation
- Critical thinking and decision making

ROLES OF A CHEMICAL ENGINEER

INDUSTRIAL CHEMIST

Potential Employers and Industries

- Pharmaceuticals
- Polymer Manufacturing
- Petrochemicals
- Food Science
- Minerals

Required Skills

- Good practical laboratory skills, most of your time will be spent in one
- A desire for in-depth knowledge
- Attention to detail
- Great teamwork skills, you will be required to work in teams with other engineers
- Strong communication skills, you will have to convey your in-depth chemical knowledge to other engineers

ABOUT THE ROLE

Working as an Industrial Chemist is unlike many of the other possible professions a chemical engineer can go into. Instead of working with Process & Instrumentation Diagrams, Computerized Process Controllers, or Hazard & Operability Studies like other chemical engineers, the chemist works in a lab with their trusty beaker and pipette.

A chemist has two main roles, that of quality control or R&D. For a chemist who chooses to go into quality control, their role is to take samples of their company's products, and measure key properties of said product to ensure that it meets strict guidelines. Quality control is a pivotal aspect of any modern industry, and is required to ensure that products are consistent, and the production process is safe and efficient.

The other role of an Industrial Chemist is to work in Research and Development. An Industrial Chemist working in R&D is the link between research and industrial-scale chemical engineering. Their role is to utilize their broad chemical knowledge to build upon and develop new chemical processes to be used on an industrial scale. They can be considered the "prototypers" of new products, developing novel, small scale chemical reactions into pilot plants with many orders of magnitude higher throughput - which are then given to process engineers to optimise and make economically viable.

ROLES OF A CHEMICAL ENGINEER

ANALYTICAL CONSULTANT

ABOUT THE ROLE

The role of an analytical consultant is to utilize the scientific method, experimental design, as well as mathematical and statistical modelling in order to make evidence-driven decisions for clients.

A typical project for an analytical consultant would be for a client to approach them with a specific question, whether it be operations related (such as, whether our company should expand its production, and where) or marketing related (what would be the optimal timing and location of our new product release). Then the consultant would work closely with the client, building up data and a model to achieve a final product over the span of a few to many months. Being an analytical consultant is a non-traditional role for a chemical engineer - working in this field is unlike many of the other roles listed in our handbook, as it does not directly utilize normal chemical engineering skills.

In fact, as an analytical consultant one would rarely ever be working on a traditional manufacturing or chemical industry project. However, chemical engineers are in high demand as analytical consultants for their grounding in the scientific, evidence-driven approach, and for their highly adaptable problem solving skills.

Potential Employers and Industries

- Banks and various financial institutions such as Commonwealth Bank
- Consultancy companies such as Deloitte and PwC

Required Skills

- Strong interpersonal skills, a key aspect of this job is interacting with your client to extract information
- Varied and adaptable problem solving skills, the primary aspect of this profession is solving problems of many different kinds
- A passion for solving problems, as that is the core of this role, one must enjoy doing so
- Data collection and management skills
- A solid understanding of mathematical concepts, in order to model your data to provide evidence

A top-down view of a person's hands typing on a silver laptop keyboard. The person is wearing a silver digital watch on their left wrist. The laptop is open, and the keyboard is clearly visible. The background is a dark wooden surface.

SECTION 2: JOB APPLICATION



UNSW CAREERS AND EMPLOYMENT

JOB APPLICATION

The job market today is very competitive and if you want to stand out to potential employers you will need to market yourself effectively through the application process. If you want to feel more confident about applying for a job, here you will find great tips and examples on each stage of the process. You can even take workshops and book individual consultations.

The following information has been republished with permission from UNSW Careers and Employment. For more information and resources visit:

<https://student.unsw.edu.au/careers>

<https://trello.com/b/o1pcnodF/ceus-opportunities-board>

COVER LETTER

A cover letter is often the first part of your application that an employer will read. You need to make a great first impression or they may not continue on to read your resume.

What are cover letters?

A cover letter is a one-page, tailored letter articulating one's suitability for a position in an organisation. It is submitted with a resume to further personalise your application by describing not only your experience and skills, but also your motivation for applying and how you would fit into the organisation's culture and share their values.

Example Cover Letter

Jack Precious
81 Stanton Street, Surry Hills, NSW 2010
Mob: 04** 123 10
jprecious@gmail.com
date

Company Name

Company Address

Dear Recruitment Team/Dear Mr Jones/Dear HR Manager,

I am writing to you to express my interest in the role that has been advertised for the 2019 Industry experience program, as well as my interest pursuing a career in the water treatment industry, particularly, I am eager to learn more about the innovation and technology behind wastewater treatment and producing safe drinking water. I am that I confident that I have the ability, innovation skills and experience that are required to undertake the program and successfully fill this position. Currently, I am studying a Bachelor of Chemical Engineering at UNSW, and am in my third and penultimate year of study.

Throughout my studies in chemical engineering, I have undertaken group projects that have required teamwork, communication, with the addition of having a drive to complete set projects. Such projects include the 'Wastewater Management', in which my role involved conceptualizing plant designs and methods, as well as research in chemical and medical technologies to obtain information to reduce a wineries wastewater. From this I have also gained a significant amount of knowledge and expertise in technical drawing, flow charts, material selection and chemical processes that have all required high attention to detail.

From 2017, I have gained a significant amount of leadership skills through my time as a manager at West Leagues Hotel, Sydney. This role has involved overseeing occurrences throughout the work place and providing leadership through staff operations, and further gaining excelling communication skills. Furthermore, I have gained organisation skills through planning functions to give the best experience of patrons, as well as completing audit reports.

From the above, I believe to carry the following attributes that I would be honoured to deliver to your team:

- Experience in a laboratory environment involving chemical engineering principles,
- Time management and preparation to complete tasks in a set timeframe,
- Teamwork and Leadership skills to communicate well within projects,
- Professional manner and presentation both over the phone and in person,
- Creative and Critical thinking in order to solve problems and thinking outside the box,
- Mathematically organised to solve advanced numeric problems,
- Computer skills (Basic Programming, Excel, PowerPoint, Word, CAD, Flow Chart design),
- Attention to detail in order to identify complexities that will allow me to oversee the smallest to largest of mistakes to avoid failure,
- Adaptability and Flexibility to be open minded to the diversity of tasks that my role will consist of.

In conclusion, I believe my experience in teamwork activities and management combined with my passion for teamwork, assisting others and undertaking a challenging, yet exciting role with a passion for hard work and a determined personality would make me an ideal candidate for your organisation.

I look forward to hearing from you.

Yours Sincerely,

Jack Precious

Steps to Writing an Effective Cover Letter

1. Analyse the job advertisement

Tailor your letter to the requirements of the organisation – do not send the same letter to every company. To prepare your letter, make notes on what the job's selection criteria and examples of how you meet them.

2. Find out as much as possible about the company and the role

Research the organisation's products and services, current/recent projects, new initiatives, awards or achievements, values and culture.

3. State your potential contribution to the organisation that will meet their needs

Identify what needs the organisation may have and/or how you could potentially contribute to their future success.

4. Address your cover letter to a person

If the advertisement includes the name of someone to write to, make sure you spell that person's name correctly. For advertisements without a name, you should contact the company and ask for a name. If you cannot get the person's name, your greeting should be "Dear Sir / Madam or Dear Recruitment Manager or HR Manager", with "Yours faithfully" to sign off.

5. Grab and keep the reader's attention

First paragraph – state what attracts you to the company and/or industry and/or role.

Middle paragraphs – briefly outline how you meet the role's selection criteria by referring to your experience. Use relevant examples drawn from your work history, studies and/or extracurricular activities. Ensure that you address at least three to five key criteria.

Final paragraph – provide a brief summary, thank the reader, state your expectations. Use succinct sales pitch or marketing brochure language. Describe the benefits you offer rather than lengthy explanations.

6. Value your skills and experience

It is important that you enthusiastically describe your skills and experience.

7. Format your letter effectively It should be one page only

Allow plenty of white space at the left and right-hand margins. Use easy-to-read fonts such as Arial or Calibri in size 10.5 or 11 and keep the font and font size consistent between your resume and cover letter.

8. Check your spelling and grammar

Mistakes show poor attention to detail. Do not rely entirely on your word processor's spelling and grammar checker (especially with Australian vs. US spelling).

9. Manage your time effectively

Writing a good cover letter can be time consuming, and application closing dates can fall around exam times or assignment due dates. When applying through an online portal or via e-mail, aim to send your application before the closing date.

RESUME

A resume is a marketing document that lets an employer know what you have done, the experience that you have gained and what you can offer the organisation.

Your resume should match your skills and experience to the needs of the position/organisation.

Personal Details

You can include your personal details in two lines. Only the most important contact details should be provided including: name, address, telephone and email.

Employment history (or professional history/background)

Describe your general role, achievements within the role, projects undertaken, skills used and responsibilities in this section.

Use detailed, concrete description, including:

- Skills, equipment, knowledge, procedures used.
- The scope of your activities. (eg how many, how long, to what degree, what percentage etc).
- How did your achievement in this role contribute to the department's or organisation's success?

Objective

There are at least 4 uses for the objective:

- To align your values and purpose to the values and purpose of the company and the job.
- To explain any confusing discrepancies in your resume
- To inform recruiters as to what type of position and company you are seeking.
- To capture the imagination of the reader - to stand out.

Education

Tailor this section to the job you are applying for. Don't just repeat your transcripts. Highlight particular knowledge and/or skills gained in the course that are relevant to the job. You could also highlight any relevant research projects, thesis topics or even applied projects.

Many graduate employers are interested in your academic achievement at university. Highlight any achievements such as: awards, prizes, good results or high average grade point, even consistently good grades as this shows consistent quality and effort.

Include non-university educational qualifications here, such as technical courses or other TAFE or community education activities. This helps to display your range of skills and your motivation to learn practical skills.

Achievements

Try not to use only high school achievements.

If listing scholarships and other awards, show what criteria the award was based upon.

Skills (or key competencies or core competencies)

Select approximately 6 of the most important skill areas for the job and detail your professional and transferable skills/knowledge and any relevant personal qualities.

Ensure that any claims to skills are supported somewhere on the resume. Employers should be able to see, from other sections in your resume such as employment history, education, or extra curricula activities, where you have gained each of the skills and how you used them.

Give clear, detailed and accurate descriptions of your skills here as it often creates an impression of what you can do.

Professional memberships (or professional associations/qualifications)

This section demonstrates your interest in continuing professional education. It can also be used to demonstrate that you have the appropriate qualifications to allow you to practice your profession in the state and the country.

You may wish to include any details of professional status or qualification you have received. Include dates and any ongoing professional education activities you have undertaken with the association.

Example Resume

Jack Precious

0402 123 105 | jprecious@gmail.com | linkedin.com/in/jprecious | Surry Hills NSW

CAREER PROFILE

- Seeking to gain an engineering role, which will allow me to apply all problem-solving skills and teamwork experience learnt, into a practical field that is challenging, interesting and innovative.
- Third year, distinction average Bachelor of Chemical Engineering student
- Leadership applied through management at West Leagues Hotel, Sydney
- Effective communicating skills through 4 years experience in customer service and sales positions.
- Teamwork built from 2 years in hospitality through communicating with colleagues in bar and function work at Macleay Hotel, Sydney

EDUCATION

Bachelor of Chemical Engineering
UNSW Sydney

2017 expected 2020

Distinction average | WAM: 80

High School Certificate
School

2011-2016 “example” High

Chemistry, Physics, Extension Mathematics, Advanced English, Engineering Studies | ATAR: 95

RELEVANT PROJECTS/EXPERIENCE

Chemical Engineering Lab, UNSW Sydney

July 2018 – Present

- Carried out experimental work and analysed data in order to solve complex engineering problems
- Used industry-based units to understand the physical concepts behind rigorous process operations
- Completed written reports about experimental findings and methodology to improving process efficiency

Minimising Waste Water

Aug 2017 – Oct 2017

Process Engineering Design, UNSW Sydney

- Organised production flow sheet diagrams that analysed the process of preventing winery wastage
- Calculated Mass and Energy Balances to ensure system was not damaged and processes ran smoothly
- Suggested methods of using waste water for beneficial environmental and societal use
- Awarded a high distinction mark of 87 in this project

Energy Storage for Sustainable Transport

March 2017 – June 2017

Engineering Design and Innovation, UNSW Sydney

- Conceptualised battery designs and compositions that would power a small motor
- Worked in a team of 8 to collaborate ideas in order to accomplish an optimal result
- Researched information to construct a prime battery and obtain exact amounts of chemical species

EMPLOYMENT

Duty Management

Sept 2017 - Present

West Leagues Hotel, Sydney

- Directed staff ensuring teamwork, service to customers and maintaining a healthy work environment following work guidelines
- Handled large amounts of money through safe balancing, dispatching funds to and from armaguard, cash drops and till operations
- Completed reports on stock, staff, payroll and spend that were addressed to higher management

Example Resume cont.

Food and Beverages **Macleay Hotel, Sydney**

Feb 2017 – Present

- Served food and beverages, while under pressure from large numbers of customers.
- Communicated with fellow colleagues to ensure processes were being completed accurately and adequately. (Smooth running of customer service, Clearing dining areas, Keeping a clean bar,)
- Ensured legal processes were followed in understanding not to serve intoxication patrons or those under the legal age of 18.

Retail Assistant **Best & Less, Miranda**

Dec 2013 – Sept 2015

- Provided customer service to ensure a satisfactory shopping experience for each individual
- Operated a register for cash, cheque and credit card transactions with 100% accuracy
- Stocked and replenished merchandise according to store layouts.
- Alerted customers on upcoming sales, events and promotions
- Educated customers about brands to excite them about the companies mission and values.

EXTRACURRICULAR INVOLVEMENT

White Ribbon Ambassador **Woollooware High School**

2015 - 2017

- Visited local schools to educate students on the importance on respect and neglecting violence
- Created video presentations that were presented at awards to encourage support for lowering domestic violence
- Worked closely with the principal to develop new ideas that would promote anti-violence across society

Flourish Mentoring Program

April 2016 – July 2016

- Gathered with students and mentors weekly to organise group study habits and teamwork activities
- Discussed the importance of life decisions with mentors and choosing the correct paths

TECHNICAL SKILLS

- VBA Coding – utilised excel through university courses to arrange and organise data for projects
- Computer Aided Design – Basic understanding in using CAD systems to design 3D models
- Microsoft Office Suite – organised spreadsheets for multiple uses including financial data, business profits and data analysis

INTERESTS

- Music Production – Produced for 3 years
- Italian language – intermediate level

REFEREES

AVAILABLE UPON REQUEST

Other details

Make it interesting! What type of person would you want to work with?

Use this section to help complete your image on paper.

You can also use this section to include other personal details that don't fit easily anywhere else. For example, you could include details of your work visa status if it was important to the job you are currently applying for.

Referees

You do not have to list referees, unless requested by the employer.

Usually at least two current employment (within the last two years) and one academic referee are expected when referees are requested.

Always notify ask whether your referees are prepared to act as your referee and, if possible, give them some details about the position you are applying for.

Avoid listing contact details for referees if you are using recruitment agencies, unless specifically requested by the employer.

INTERVIEWS

A job interview is a two-way process. For the employer, it is the opportunity to discuss your application, your ability to meet the role's requirements, what motivates you and whether you will fit in with the team and organisation as a whole.

For you, it is the opportunity to convince the employer of your potential by expanding on the information in your application. You can also use this opportunity to find out more about the job and the company and decide whether or not it fits with your career plans

Preparation is essential to maximise your chance of success. The more prepared you are, the easier it will be to cope with your nerves and the easier it will be for you to be able to fully answer their questions.

Prepare yourself in the following ways:.

Know what you're getting yourself into

- Find out as much as you can about the organisation, its structure (eg. number of staff, departments) and range of activities
- what products and services it offers, who its customers are, who its main competitors are
- what kind of jobs are available, the recent growth, their plans for expansion and think about how this will affect the position for which you are applying

Find out more about the job being offered

Determine the main focus, challenges, barriers, opportunities, tasks and responsibilities involved. Knowing this will help you predict questions for the interview and will help show that you have the right skills, education and qualities to succeed in the role.

Preparing for the interview

1. Receiving the interview invitation

If you are invited to an interview, then hopefully by now, you know a fair amount about the company. Now it's time to obtain critical information that you can take with you into the interview, so you can recall it in a heartbeat. The earlier you prepare this, the better, the employer will be able to tell how much you know about the company depending on how you present your knowledge

Examples can include: Specific short term and long term goals of a company, Increase in their profits over the years, how their products are developed etc.

2. Gain knowledge on previous interviews for that company

Think of it like a past paper! Invest your time in understanding the process experienced by previous candidates of the company. There are websites like 'Glassdoor.com.au' that allow job applicants to share their experience of the application process, such as the questions asked and crucial tips for that specific companies interview. By knowing what to expect, you will get a head-start compared to other candidates and be able to prepare your responses more efficiently.

3. Prepare how you are going to look

Yes, first impressions do count! If you go into an interview wearing a suit that poorly fits with your hair not well groomed, the employer will take this into account. Some companies will specify on how they want you to dress, whether it be smart casual all the way up to formal. Make sure you dress according to these specifications as it shows you have a level of commitment

The week leading up to your interview is vital to ensure you have an outfit prepared, as well making sure your hair is well groomed, you are well shaved (for the gents) and well presented.

4. Know the person interviewing you

While this sometimes won't be available information to you, it is important to chase up if you can. Remember, they are human too, knowing their role in the company, their achievements, challenges they have faced and how they got to where they are, will not only help you build a friendly relationship with them, but will allow them to see your ambition in working your way up the hierarchy. Think of it like a date... The more interested you are in the person, the more likely you are to hear back from them. It's the same with a job interview, the employer wants to see that you are a "people person" and that you have an extensive range of communication skills. Remember, you're going to be working in teams for the rest of your life, and this is a good way to show that you are capable.

5. Know what you are worth

Your skills, work history, references etc. are all very important. The employer will ask many questions based on your history, and the more confidently you can link your answers to your skills and experience, the better your answer will be. Make sure you have references that will be able to reflect on all your skills and accomplishments. Being able to recall your skills shows your individuality, and more importantly that you have something to offer.

6. The night before and morning of

Have everything you need packed before you go to bed. Have your outfit ready and alarms set. The worst thing to do the morning of is to be rushing. Make sure you get a good night's sleep so you feel 100% the next day. Have a big breakfast in the morning, knowing you're well fed will keep your mind at rest for the whole day and will play a big role in ensuring you don't get distracted. Whatever you do, DO NOT drink excessive amounts of caffeine, if you are regular coffee drinker, just stick to your normal morning coffee, drinking too much caffeine will throw you off guard, give you the shakes and potentially ruin your whole interview, drink something else like tea or water, that will help calm your nerves and keep you in the loop.

Most importantly, be yourself. Don't try too hard to put on a show for your potential employer. Stay as calm as possible, and answer all their questions like anyone who you have just met is asking you. Be polite, ask questions and remember, its okay to said "i don't know", you aren't a thesaurus, you are someone trying to become a part of the larger world, lying in questions or forcing an answer will not help you do that, you will get caught!

Know what to expect in the interview

Be prepared for a call from your potential employer at any time. Answer the call in a professional manner and try to find out as much about the interview as possible. Employers may be evaluating your level of professionalism, language skill and interest in the position from your very first contact.

Some sample questions to ask a contact officer include:

- What are the names and job titles of the selection committee members?
- What format will the interview take?
- Will I be required to perform any tasks during the interview (eg. presentation, case study)?
- How long is the interview likely to be?
- Am I required to bring anything to the interview?

Predict interview questions

A useful approach is to write out likely questions, based on the selection criteria and role descriptions. Sample questions include:

Introductory/ Background	Objectives
• What are your strengths and weaknesses? • Is there an achievement of which you are particularly proud? What is it and why is it significant?	• What are your long term and short term goals and objectives? How are you preparing yourself to achieve them? • What do you see yourself doing 5 years from now? • Why did you choose this career?
Job interests	Your contribution to the organisation
• What are your strengths and weaknesses? • Is there an achievement of which you are particularly proud? What is it and why is it significant?	• In what ways do you think you can make a contribution to our company? • What others skills would you like to develop in the future?
Education	Work experience
• What led you to choose your field or major of study? • What courses have you taken that prepared you for this position? • What do you like about your discipline of study?	• What type of work experience have you had and how do you feel that it has helped prepare you for a graduate position? • Most jobs have their frustrations and problems. Describe some that have been particularly dissatisfying to you.
Approach to work	Communication
• How do you balance work priorities and those of your personal and family life? • Give me an example of when you had to work to an important deadline. What did you do to ensure that the deadline was met?	• Have you ever had to persuade people to your way of thinking? • Describe a situation when you had to explain a difficult concept to someone. Tell me about your approach. How do you know they understood?

Problem solving / analytical skills

- Tell me about a time when, despite careful planning, things got out of hand.
- How would you deal with a problem you had not encountered before?
- Tell me of a time when you generated a creative solution to a problem.

Prepare and practise responses

When preparing responses use: a one-sentence summary answer, key points with keywords to spark your memory in the interview, and an example which demonstrates your point. Having a clear structure when you answer questions will demonstrate your ability to think and communicate in a clear and analytical manner.

A good methodology for answering interview questions is the STAR approach - situation, task, action and response. What was the situation, what tasks were you responsible for, what actions did you take and what was the overall outcome of it?

Prepare questions to ask the interviewer

Ask questions to show your interest in the direction and the success of the organisation and HOW your contribution can add value. Your questions should demonstrate a clear and up-to-date understanding of the role and of the organisation's strategic goals and directions.

- Why is this position open?
- How is performance measured? (Goals should be clearly defined so measurements have some objectivity.)
- Are there opportunities that are unique to this job within the organisation?

Take appropriate documents

In order to feel confident and well prepared you may wish to take the following documents to an interview:

- spare copies of your resume and application
- your planned answers to predicted questions
- academic transcripts
- written references
- copy of the original job advertisement

Teamwork / leadership

- Have you been in any situations where you have been required to perform as part of a team? What was the situation, what part did you play in the team and what was the outcome of the exercise?
- Can you describe a time when your team fell apart. What was your role in the outcome?
- What kind of people do you find difficult to work with? Why?



Interview DO's

- Dress appropriately. Look neat and clean.
- Be punctual. Make sure that you are 10 minutes early and if you are going to be unavoidably detained ring and let them know.
- Express yourself and your views clearly.
- Listen carefully to the questions and answer clearly and thoughtfully.
- Make eye-contact. Remember to talk to the person (not the top right hand corner of the room or at their shoes).
- Make sure you fully understand the question and query any point about which you may be doubtful.
- If you are being interviewed by a panel, ensure that you direct your answer to the person who asked the question, while still including the other interviewers by making brief eye contact.
- Show enthusiasm for the company and the position.
- Make sure that you always present your skills in a positive light. Even when describing your weaknesses you should always show them what you are doing to rectify it.

Interview DON'T's

- Don't dress too casually or look untidy.
- Don't make derogatory remarks about past or present employers.
- Don't fidget or twitch, try to control other nervous mannerisms.
- Conversely, don't sit there like a statue. If you feel more comfortable talking with the aid of your hands for emphasis, then use them, but try not to be too excessive in your gestures.
- Don't interrupt the interviewer before they have finished asking you a question and never finish their sentences for them.
- Don't Lie. If you have to lie about what you are like or your abilities in order to obtain the job, you are likely to find yourself in a position that you don't really like and probably one in which you will have problems fulfilling successfully.
- Don't worry if you answer one question badly. Treat each question individually. Remember that if you mess up the second question but answer the next 15 brilliantly they won't place much emphasis on the second question putting your poor answer down to nerves. If however, you get so caught up in chastising yourself for making a mistake, you will continue to make mistakes, have more problems thinking about your answer and finish feeling extremely anxious and knowing that you made a mess of the interview.
- Don't talk about salary, holidays or bonuses unless they bring them up.
- Don't answer questions with a simple "yes" or "no". Make sure that you explain your reasoning fully.
- Don't wear too much perfume or aftershave.
- Don't smoke even if invited to do so.

NETWORKING

The ability to network effectively is vital to professional success in a variety of industries, including Chemical Engineering. It involves interacting with people with common professional interests, usually in an informal setting, and is a critical competency in building a strong and expansive network and gaining insider information on job openings and movement inside the company. Networking is a huge contributing factor in professional growth, and with engineering projects becoming more complex and multi-disciplinary, soft skills such as communication that are integral to Networking are become even more crucial for success.

What is CEUS' Involvement with Networking?

CEUS holds several industry events each year that are designed to help students learn about different careers and industries, giving opportunities to undergraduate students to gain insight into potential careers options. This is designed to help students make connections with industry representatives such that they can fulfil the 60 day industrial training requirement for Engineer's Australia Accreditation. Thus, developing one's networking skills is essential in helping to secure placements with different companies.

What types of networks can I have?

Students, Tutors, Supervisors, Lecturers and Academics

These groups are a large part of your network throughout university life. Your peers and teachers alike may be able to provide you with insight and opportunities into the career you want to pursue - hence, staying connected to these circles is not only useful in a social sense, but also in an educational sense as well. Great places to meet people include classroom environments, clubs, societies, faculty activities, mentoring events and communal spaces; along with social platforms such as university discussion chats and CEUS year group pages.

LinkedIn Network

Developing a professional, online profile on platforms such as LinkedIn is becoming increasingly useful in developing and sustaining a network of connections and contacts in your field, providing niche insight into networking and career opportunities that may not be widely advertised. LinkedIn profiles are used to display your resume, search for jobs and enhance professional reputation by posting updates and interacting with your network. For more information on LinkedIn, see the last page of this section.

Industry Representatives

Attending networking events is a very effective way to connect with people from a variety of industries and expand your network. Industry Representatives, businesspeople, entrepreneurs, and employers within your field often meet at these events to share information, recruit employees, and alike yourself, build professional relationships in expanding their own professional network. CEUS' annual Industry Night, Speed Networking Night and other industry events throughout the year are all environments that allow university students to expand their network.

How to make a good impression on Industry Representatives

What to do before a Networking Event

Before attending an industry event, it is extremely important to do your homework. This involves familiarising yourself with companies in attendance (or if there are many, those that you are interested in), so you are aware of any major projects they are undertaking, the industry issues they are aiming to solve, and how your experiences may relate to these or what you would like to learn more about. This will help give you a point of conversation with representatives. Following multiple companies on social media platforms, subscribing to industry newsletters and gaining information from other members of your network can help you achieve this.



Attire

It is very important to wear appropriate clothing for an industry event, as it indicates professionalism, respect, whilst also giving you a sense of confidence in putting yourself in a work frame of mind. Industry events generally call for business attire, similar to that of a job interview.



Body Language

Body language is equally important as verbal communication in expressing and conveying information and can include things as simple as eye-movement, facial expression and posture. When conversing with an industry representative, develop a confident smile and offer a firm handshake. Acting interested throughout your conversation with them can be achieved through maintaining eye contact and using subtle gestures such as moving your fingers when conveying ideas are signs of openness, honesty and engagement.

Conversation Starters

Approaching an industry representative can be daunting, hence having a conversation starter prepared beforehand can be useful. Here is a list of conversation starters that you could use for your next Industry Event. You are best to start off with introducing yourself (a basic example is given below) and the numbered examples are exemplars of what you could continue with.

Starting Line: Hello, nice to meet you! My name is [insert name] and I am a Chemical Engineering student at UNSW.

- I was wondering if you could give me some insight into the nature of the company you work for, and what you are intending to get out of today's event?
- How did you hear about this event?
- What did you think of that speech/presentation? I thought it was very well said. Did you get anything out of it? (Use this if a speech/presentation was delivered)
- What industry do you work in? What skills do your employees emphasise in your profession? As a Chemical Engineer I was wondering how the knowledge I have gathered in my own degree could be used in a potential job in the future.
- You must be the representative from [insert name of company]! (Acting like you know who they are prior to speaking to them can be flattering and give them further incentive to want to get to know you and answer any questions you may have). I have heard that [insert information that you have gathered prior to event about industry/company]. Would you be able to tell me more about it/your involvement in this project?

It might be useful to also prepare an elevator speech. This can include your degree, what you are interested in doing in the future etc. You can round up by including something about your future career goals and the results you aim to achieve from the interaction (such as you aim to learn something about the company, or learn about a particular project).

Maintaining the Conversation - questions to ask an Industry Representative

If the conversation starter is successful, maintaining the conversation is equally as important. Often, the topics discussed afterwards will stem from the 'icebreaker' that you use, yet if you find yourself drawing a blank halfway through the conversation, here are some follow up questions you can use.

- What would make someone the ideal employee at your company?
- How has your company changed over time in meeting the demands of a changing market? (You could also ask about the changes that may have been made in response to COVID, if any)
- What are your companies' overall goals for this year?
- What are the values of your company? How do employees embody these values?
- What is the company culture? Is it very collaborative or do people work independently?
- What do you enjoy the most and the least about your job?
- What advice would you have liked to have heard when you were my age/in my position?
- What are the three top skills you have found to be most essential for success?

ASSESSMENT CENTRES

The term 'Assessment Centre' does not refer to a location, but to a process which is being increasingly used by middle to large organisations in Australia and overseas. A typical Assessment Centre incorporates a set of varied exercises which are designed to simulate different aspects of the work environment. These exercises may run from 1/2 to 2 days.

While the process is intensive and commonly viewed as 'stressful' by candidates, it provides additional opportunities for recruits who feel that they are not able to demonstrate their abilities as strongly during an interview. Assessment Centres also enable candidates to obtain a practical idea of what the employer expects from staff, and opportunities to network with other participants during group activities.

How do they work?

The expense of conducting Assessment Centres mostly restricts their use to high volume recruitment such as graduate recruitment. Assessment Centres are usually used after the initial stages of the selection process. It may follow short listing, online assessments and/or an initial interview.

Assessment Centres are highly structured in their design, application and procedures. They may be conducted by external consultants who have invested large amounts of resources into researching and designing Assessment Centres. In other cases, Assessment Centres may be conducted by Human Resources staff. Each Assessment Centre is specifically adapted for the particular position, to assess factors such as level of skills, aptitude and compatibility with organisational culture.

During each activity in an assessment centre, a group of trained observers will rate individual candidates on a range of competencies, using a prescribed performance scale. Results are then compared against the same competencies, which are measured in other activities. On completion, observers meet to discuss the test results and reach a group consensus about each individual's ratings. Observers may be visible during the test, or may review each individual's performance via videotape.

What to expect

At the beginning of the Assessment Centre, candidates will receive an initial briefing about the organisation and the structure of the day.

The most common type of activities include:

- Group activities
- Case Studies
- In Tray exercises
- Technical skills assessments
- Role plays
- Group activities

You cannot study for an Assessment Centre, although it does help if you have some idea of what to expect:

- If you have been given pre reading material prior to the Assessment Centre day - read, prepare and understand what is asked of you.
- Re-familiarise yourself with the job description, duty statement and other background reading material about the organisation. This will provide some clues as to what type of employee they are seeking.
- Get a good night's rest before the big day.
- Arrive early so you do not feel rushed. Perhaps your waiting time in the reception area can provide you with a 'feel' for the environment - i.e. the written material in the reception/waiting area, other candidates you may see.
- Read all instructions carefully. Are all the resources, which are listed on the test instructions available and working?
- Be yourself - bring your own personality and experience to the Assessment Centre.
- Take the exercises seriously - the hypothetical scenarios will require you to 'suspend your belief' and go along with the exercise. They are not designed to match the employer's real life workplace.
- Do not guess what is being measured as this may affect your participation and assessment
- Treat your attendance as a day at the workplace.
- View the Assessment Centre as an opportunity to learn about the employer and the advertised position.
- Consider the process as a positive learning experience.
- Ask for feedback if you were not successful so that you can improve your performance in the future.

PSYCHOMETRIC ASSESSMENTS

There is no test that can tell an employer exactly who is the right candidate for the job, however, psychometric assessments can go a long way to helping organisations choose candidates that are more likely to fit in and perform better. Find out more about psychometric assessments.

In general, psychometric assessments can be broken into 6 broad categories:

- Personality
- Ability - may be general or more specific including Abstract, Verbal and Numerical reasoning tests.
- Aptitude - tend to be job related and often carry names pertaining to a specific aptitude
- Motivation / Values questionnaires
- Interest / Beliefs Inventories
- Integrity Tests

The most commonly used in selection settings are Personality, Ability, Aptitude and Motivation / Values scales, as these are deemed the most useful when trying to predict someone's future level of performance in a particular role or to gauge their likely level of "fit" with the company. Integrity tests are a relatively recent development that may be used when the situation is deemed to warrant it.

Preparing for Psychometric Assessments

- Remember that psychometric tests are not generally like examinations. There are no right and wrong answers to many "tests" (eg personality scales) although speed of completion is a factor in most ability tests so work as fast and accurately as you can.
- Your individual profile is made up from relative strengths and weaknesses and it is from the combination of these results that selection decisions are usually made. Therefore being strong in one area and weaker in another, will not necessarily count against you. You may be exactly what the company is looking for!
- Ask the organisation what type of tests you will be taking (in advance).
- Practice maths mental, do simple mathematical problems with and without a calculator, brush up on reading and analysing tables and figures, and complete case study examples. Educational publications addressing most of these aspects are available at large newsagents and bookstores.
- Complete practice sets
- Get a good night's sleep beforehand. You are unlikely to perform your best if you are too tired.
- Remain calm – psychometric testing can be a positive experience (particularly if feedback is provided).

Personality Inventories

Personality inventories are designed to assess the relatively stable and enduring characteristics of a person that may affect job performance and work place behaviour.

Please choose the option that is most representative of you:

I feel most comfortable being around people who are...

(a) hard-working (b) focussed (c) driven

I prefer to take my time when making important decisions?

(a) always (b) often (c) never

I prefer things...

(a) confirmed (b) pencilled in (c) flexible

Procrastination is never a problem for me.

(a) True (b) False

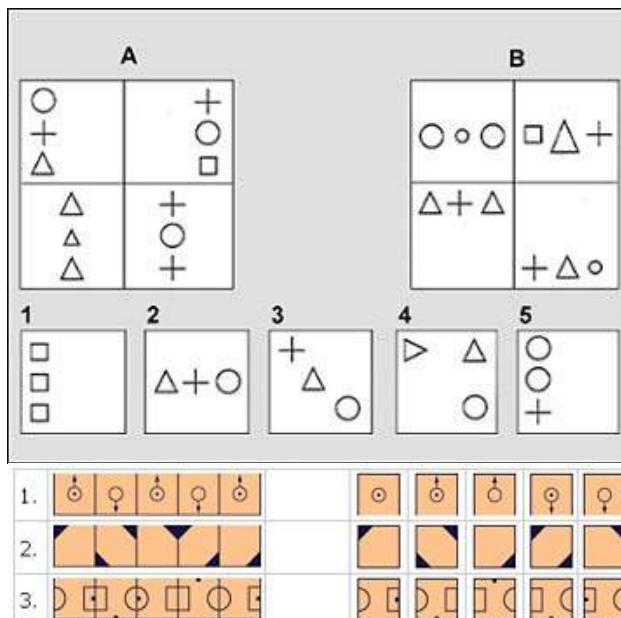
Ability Tests

The underlying goal of general ability tests is to assess potential candidates in terms of their overall intellectual potential and build a profile of their individual strengths and weaknesses.

ABSTRACT REASONING

This is a test of skill at finding similarities and differences in groups of patterns.

- Indicate whether each pattern in boxes 1-5 belong to Group A, Group B or neither group.
- To the right you will see a series of diagrams, each following a logical sequence. Nominate from the options at right, which one logically completes the sequence on the left.



VERBAL REASONING

This is a test of skill at finding similarities and differences in groups of patterns.

The test consists of a series of short passages of text, each of which includes a number of statements intended to convey information, or persuade the reader of a point of view.

Each passage is accompanied by four statements relating to the information or arguments it contains.

NUMERICAL REASONING

These tests may take a form similar to the verbal reasoning test above, where information is presented in text, graphs, charts etc... followed by statements. You must indicate whether the statements are true or false, or choose between options.

Motivation/values

These questionnaires investigate those aspects of work that hold most importance for you. They are designed to uncover your preferences in terms of work style, environment, desire for development, preferred level of responsibility etc.

Rate each of the following in terms of their importance to you in performing your work using the following scale:

Not at all important 1 2 3 4 5 Extremely important

Financial reward

Friendly colleagues

Autonomy

Creativity

Career advancement

Interest/belief Inventories

Interest inventories

Using the scale below please rate the extent to which you agree or disagree with the following statements.

Strongly Disagree
Disagree
Neither Agree nor Disagree
Agree
Strongly Agree

- (a) I would feel like a failure if I could not work in the field I was trained in.
- (b) I would move to another state if I got a good job offer.
- (c) The approval of others is important in my career choice.
- (d) I am determined to learn new skills in order to get the job I want.
- (e) There is a perfect job for every person.

Integrity tests

Using the scale below please rate the extent to which you agree or disagree with the following statements:

Strongly Disagree
Disagree
Neither Agree nor Disagree
Agree
Strongly Agree

- (a) I sometimes need to ignore minor rules in order to get the job done.
- (b) If I were caught stealing I would justify it with a believable story.
- (c) It is acceptable to make local phone calls from work but not long distance calls.
- (d) Everyone takes small stationery items from the office at some time or another.
- (e) A person who takes stationery or small disposable items from work without permission should lose their annual bonus.

LINKEDIN

LinkedIn is a social networking platform designed specifically for the corporate community. The site allows members to establish vast networks of professional industry connections. Individuals are able to utilise LinkedIn for professional networking, connecting and job searching, whilst employers are able to utilise the platform for recruitment and sharing company information and achievements.

As a university student, LinkedIn is particularly beneficial, especially during society networking events. After speaking with various industry representatives at events, you can easily add them to your LinkedIn network, allowing you to stay in touch with them once the event has come to completion.

Getting Started:

It is extremely easy to get started using LinkedIn. Start by signing up for an account using the following link:
<https://www.linkedin.com/>

It is free to sign up for a basic account on LinkedIn. Generally, a basic account offers plenty of features for university students. Alternatively, you may choose to sign up for a premium account, which has an associated cost.



Once you have created your account, it is time to upload a profile photo. When potential employers see your profile, your profile picture acts as a first impression. You want to communicate to the viewer that you are friendly, likeable and trustworthy.

Now you are ready to connect and engage with potential employers in the industry!

MORE INFORMATION

For further assistance with the job application process attend a Careers and Employment seminar or book an individual career advice appointment with a Careers Consultant at:

www.careers.unsw.edu.au

For further assistance or industrial training advice, email our School's Industrial Training Coordinator, Sarah Grundy.

s.grundy@unsw.edu.au

SECTION 3: COMPANY PROFILES





UNSW SYDNEY CHEMICAL ENGINEERING

ABOUT THE SCHOOL OF CHEMICAL ENGINEERING

The School of Chemical Engineering at UNSW Australia is well known in the industry as a top provider of quality education and cutting-edge research. Their focus has been and always will be to deliver the best they possibly can to the future of the fields of chemical engineering, industrial chemistry and food science and technology. They have passionate academics who are eager to share their vast knowledge and experience with students, they are at the forefront of exciting innovations and emerging technologies through a number of international research groups and centres, and their state-of-the-art facilities provide the perfect support for our students.

ROLE OF CHEMICAL ENGINEERS

At UNSW Australia School of Chemical Engineering our researchers are challenging some of the most pressing issues of our time. They are providing ideas and solutions that refine and improve manufacturing processes, introduce smarter, better-performing materials, and address the increasing importance of sustainability in everything we do.

The school's research expertise and priorities range across the following areas:

- Energy
- Food, health and medical science and technology
- Macromolecular and interfacial engineering
- Advanced products and processes
- Environmental technology



EMPLOYMENT AND INVOLVEMENT OPPORTUNITIES

Ranked as one of the top Chemical Engineering Schools in Australia, the School of Chemical Engineering is a leader in fundamental and applied research. With modern facilities, nine research centres and groups working in the areas of Chemical, Food Science and Biomolecular and Process Engineering research, the School of Chemical Engineering is a vibrant environment. The School is at the forefront of today's most exciting technological advancements, offering local and international students the very best research training.

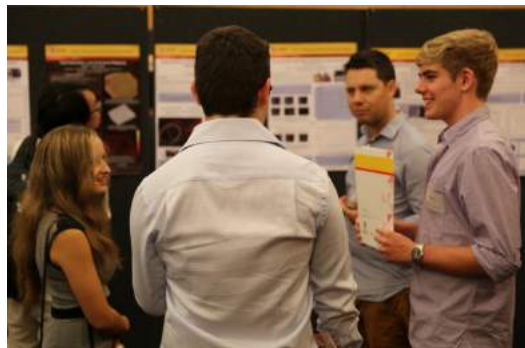
There are a number of opportunities for researchers to join the school.

TASTE OF RESEARCH



The Taste of Research program was set-up by UNSW Engineering to allow undergraduate students to work with a research group to understand what real research is about at university and in industry.

The program gives second and third year students the chance to do a 60 day project with an existing research team within the Faculty and receive a tax exempt allowance of \$6000. The program is run part time with full-time uni over Term 2 and 3, or offered full-time over summer.



The program is open to local and international students who meet the following criteria:

- Be a high achieving second or third year undergraduate student enrolled in a full-time program
- Be enrolled in a relevant program at UNSW
- Submit an online application form

UNSW Engineering students may use their Taste of Research Scholarship to contribute towards their industrial training (up to 30 days of non-traditional training).

Each applicant will be assessed on the basis of academic merit, interest in undertaking research activities, and intended career plans.

For more information visit:

<https://www.unsw.edu.au/engineering/student-life/undergraduate-research-opportunities/taste-research>

For 2021 projects, visit:

<https://www3.eng.unsw.edu.au/scholarships/tr2021/projects/school.cfm?id=2>

POSTGRADUATE RESEARCH



Postgraduate research students undertake research through supervision with some of Australia's leading researchers to produce a thesis or other piece of written or creative work. You can choose from a Doctor of Philosophy (PhD) or Masters Degree by Research.

A PhD requires a minimum of three years full-time study. The Masters by Research program requires a minimum of one to two years full-time study and is designed for students with professional experience wishing to engage in research training but who are not in a position to devote three or more years full-time study required for a PhD.

There are also a number of scholarships available to assist with the expenses involved.

For more information visit:

<https://www.unsw.edu.au/engineering/chemical-engineering/study/postgraduate>



ABOUT CARLTON & UNITED BREWERIES (CUB)

CUB brews some of Australia's most iconic and loved beers, including Victoria Bitter, Carlton Draught, Great Northern, Pure Blonde, Carlton Dry, Melbourne Bitter, Crown Lager, Cascade Premium Light and the Yak Ales. Our stable of brands includes global premium brands such as Corona, Budweiser, Stella Artois, Beck's, Hoegaarden, Leffe and, our most recent additions, leading craft brands 4 Pines and Pirate Life.

We trace our origins to the mid-nineteenth century when we first brewed Victoria Bitter and even earlier to the Cascade Brewery which was established in 1824 and commenced brewing in Tasmania in 1832. We employ nearly 1,600 people at our five Australian breweries and various offices around Australia. In Australia, CUB is a proud part of the AB InBev family.

THE ROLE OF CHEMICAL ENGINEERING

Chemical engineers at CUB play a variety of roles in brewing operations, manufacturing and logistics, procurement, sales and strategy.

At CUB, chemical engineers are highly valued and can generally explore any position, department and role.

Due to their knowledge and expertise in chemical engineering, many employees start work in CUB process operations but later end up in plant management, finance and marketing roles. The opportunities are endless.



EMPLOYMENT OPPORTUNITIES

GRADUATE PROGRAMME

CUB offers 'Talent Programs' to university graduates, through which the company fosters growth through early leadership opportunities where you will be empowered to lead real change as you accelerate through the business.

There are three roles that graduates can apply for:

Global Management Trainee:

From brewery operations to sales, you'll master the fundamentals of every department in the company across a 10-month rotational program.

Supply Management Trainee:

Develop the technical skills to brew the beers CUB is famous for across a 12-month functional training program in the Supply function.

Working closely with our senior leaders, you'll also expand your leadership skills by managing hands-on projects centered around technical and practical challenges.

Commercial Management Trainee:

Work on CUB's well-loved brands and impact sales and revenue growth while driving customer engagement across a 12-month functional training program in the Commercial functions.

In this program, you'll experience a mix of formal and experiential learning. You'll start with an in-depth 4-week company induction, then participate in cross-functional commercial projects and also accelerate into your first role in the trade representing Australia's leading brewer and beer brands.

VACATION PROGRAMME

Challenge yourself to dream big with a 10-week summer internship at CUB.

You'll be placed in sales, marketing, supply or support to work on real business projects, engage with senior leaders and deliver tangible results.

At the end of your program, you'll put what you've learnt to the test by delivering your project presentation to senior leadership.



WHY JOIN CUB?

- Demonstrating flexibility and adapting to new environments.
- Setting goals that help you grow.
- Dreaming big.

That's what it means to work at Carlton & United Breweries.

For more information visit:

<https://cub.com.au/careers/>
<https://cub.com.au/careers/talent-programs/>
<https://cub.com.au/>



ABOUT BLUESCOPE

Bluescope is an Australian steelmaking company employing around 14,000 in more than 100 facilities in 17 countries, including New Zealand and North America. The company produces a range of flat products including “Colorbond” and “Zincalume” as well as steel building products and engineered buildings. The largest of the company’s operations is the integrated Port Kembla Steelworks located in the Illawarra region. Bluescope holds a diverse portfolio of businesses in some of the fastest growing economies of the world, and a strong balance sheet, which enables strategic flexibility. BlueScope is a global leader in premium branded coated and painted steel products - the third largest manufacturer of painted and coated steel products globally. They have great strengths in engineered steel buildings in key markets and are number one in building and construction markets.

THE ROLE OF CHEMICAL ENGINEERING

Chemical engineers play an integral role in steel production, both in ensuring safe and optimised process operation and product quality. Within steel production, they have diverse and often highly specialised roles and responsibilities to manage various parts of the process. In the integrated steelworks, this ranges from water treatment plants, cooling systems and gas systems for furnaces and other large-scale equipment necessary to produce the required steel from its ore to the final coated product. As they are often concerned with waste gas and water, chemical engineers can also be responsible for meeting environmental regulations and requirements.



Chemical engineers at Bluescope are required to keep up with dynamic day to day plant operations and quickly respond to unexpected problems as they are often the first point of contact for process safety related issues. They are an important aspect of the diverse network of people working together to maintain a safe, inclusive work environment and deliver steel inspired solutions to the community.



EMPLOYMENT OPPORTUNITIES

Bluescope offers a range of cadetships, including chemical engineering. The number of positions available vary depending on the required intake. Cadetships combine full time work and part time study for the duration of your degree. You gain exceptional work experience in your role and financial support to complete your studies. The first 2 university years are spent at the University of Wollongong completing the first year of a Bachelor of Engineering in Mechanical Engineering part-time, followed by 3 years fulltime at UNSW completing a Bachelor of Engineering in Chemical Engineering.



WHY BECOME A BLUESCOPE CADET?

- Work for a great company in a great community
- Get paid to study
- Great career opportunities
- Gain invaluable industry experience whilst completing your university degree

For more information visit:

<https://www.bluescope.com/careers>

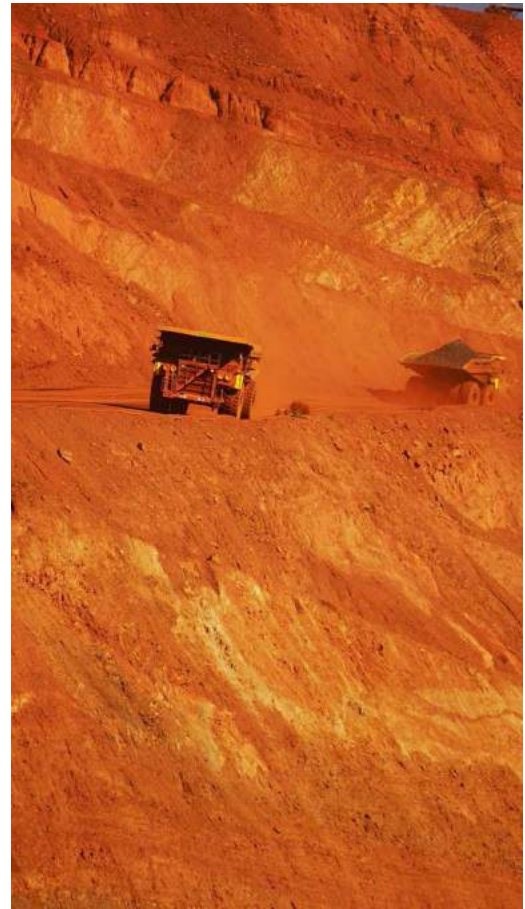
<https://www.bluescopeillawarra.com.au/working-at-bluescope/cadets-apprentices/bluescope-illawarra-cadets/>





ABOUT BHP BILLITON

BHP is a world-leading resources company. They extract and process minerals, oil and gas, with more than 60,000 employees and contractors, primarily in Australia and the Americas. Their products are sold worldwide, with sales and marketing led through Singapore and Houston, United States. Their global headquarters are in Melbourne, Australia. They have a simple and diverse portfolio of tier one assets around the world, with low-cost options for future growth and value creation. Allowing them to apply their values and culture, emphasise safety and productivity, deploy technology and exert capital discipline to extract the most value and the highest returns from their assets.



EMPLOYMENT OPPORTUNITIES

BHP offers internships and graduate positions.

Interns are a penultimate student and start in November working with the company for 10-12 weeks. This is the time to apply all you have learnt in real life situations and use your initiative to seek out projects to showcase your capability.

Do well as an intern and you will go to the front of the queue to receive a graduate job offer.

Graduates start in mid-February joining a global cohort of like-minded graduates who will work on real business problems. As a permanent employee you will start on the global Graduate Program where you will get unprecedented access to senior leaders to mentor and guide your course work.

Their fast paced 18 month program will accelerate your career giving you access to opportunities across commodities and regions. Towards the end of the program the choice is yours to stay in the same commodity or find an opportunity elsewhere in BHP to demonstrate all that you have learnt.

Their Australian intern opportunities for engineering and science will be residential or Fly-In-Fly-Out (FIFO) either way giving you the chance to support and live in a thriving local community. Roles such as Technology, Finance and Supply will support their operations from their city locations, but they are never far from the action.



WHY BHP?

BHP offers you the chance to grow, to think big and make a difference.

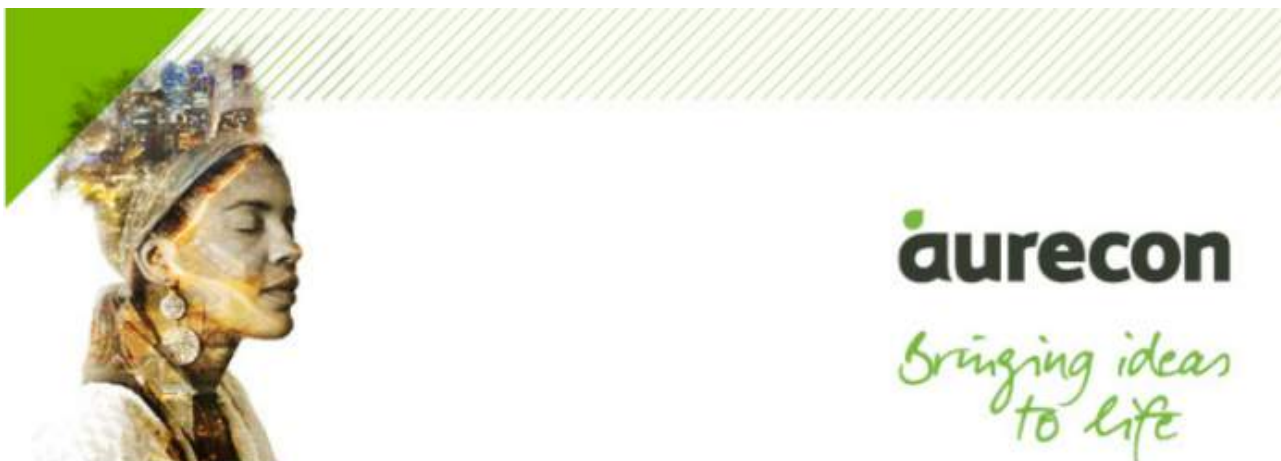
You will be a part of a global company who embraces new ideas and new voices to speak up and explore what is possible. Their people are committed to working ways that embrace our charter values of Sustainability, Integrity, Respect, Performance, Simplicity and Accountability.

For more information visit:

<https://www.bhp.com/our-approach/work-with-us/graduate-and-student-programs/australia>

<https://www.bhp.com/>





ABOUT AURECON

Aurecon is an engineering and infrastructure advisory company, but not as you know it. We've re-imagined engineering.

Our clients' ideas and aspirations drive all that we do. We work alongside them like no other firm to co-create clever, innovative solutions to some of the world's most complex challenges, adding value across the project lifecycle through deep technical and advisory expertise. We serve our clients across a range of markets, in locations worldwide. Hardwired in our DNA are engineering, design and the deep need to leave a legacy.

Drawing on our deep pool of knowledge, we bring vital engineering experience, technical capability and design expertise to the table. Then we listen deeply and intently. We see the opportunities, possibilities and potential that others don't. Through a range of unique creative processes and skills, we collaborate with our clients to re-imagine, shape and design a better future.

We believe humanity depends on engineering; and we recognise we have a broader stewardship role to play. A deep responsibility to hold. As we continually strive for a life in balance, Aurecon clients will be both future ready and engineered for life.

THE ROLE OF CHEMICAL ENGINEERING

Chemical engineers play a varieties of roles in steel production, utilising skills from process engineering, project design, control engineering and others. At Aurecon, the main positions available for a chemical engineer are in the Manufacturing, Oil & gas, resources, and water sectors. These are the sectors of Aurecon which are actively seeking out new chemical engineers to join their team.





EMPLOYMENT OPPORTUNITIES

GRADUATE PROGRAMME

Aurecon has challenged the traditional approach to graduate programmes, creating an environment where you can pursue your personal career interests, instead of being locked into a rigid rotation schedule where you spend several years in different areas of the company. At Aurecon, you can express your interest in a preferred team, focus on the technical skills you are most interested in, and fast track your experience and development. You will also work alongside industry leading professionals, mentors and peers. If you would like to experience numerous areas of Aurecon's business, we can facilitate that too. We treat our graduates as emerging professionals from day-one. We don't confine you to a development timeframe but rather equip you with skills and provide development opportunities; allowing you to design your career. Bringing ideas to life at Aurecon is about being creative, grabbing new opportunities and getting the support you need to find your niche.

VACATION PROGRAMME

Choosing a career path as an undergraduate can be challenging. While you may have an interest in a particular area, you sometimes don't know which path to follow until you've had some practical work experience. In our vacation programme, you will be placed in a technical field of your choice (where possible) for approximately three months to gain experience in that field and help you decide if it is right for you.

In our vacation programme you can:

- Get a real taste of what it's like to work at Aurecon and in your chosen field of study
- Earn some money during your holidays
- Work on real projects in a supportive environment
- Learn from and partner with experienced professionals and current graduates
- Start building your professional network
- Get a feel for whether a graduate position at Aurecon is right for you

Aurecon's vacation programme coincides with university summer break, so students typically start after their exam period in November/December and work through until university resumes in February/March. At the end of the experience, we give our vacation students structured feedback on their performance to assist in their professional development.

WHY BECOME A PART OF AURECON?

Are you inquisitive – fearless – engaging – resourceful – co-creative – commercial – a sense maker or an unconventional thinker? As a graduate, you will learn from future ready leaders and gain development opportunities and mentors who will invest in you. You will also work on some of the most challenging and complex projects around the world. We believe you should have fun at work and our leaders are working to create teams that have fun – even when they are working on tough and stressful assignments.

For more information visit:
<https://www.aurecongroup.com/about/about-aurecon>



ABOUT UNILEVER

Unilever is a Multi-national Fast Manufacturing Consumer Goods Company . The company produces goods from sandwich spreads like margarine to toiletries.

THE ROLE OF CHEMICAL ENGINEERING

Chemical engineers have roles in research and development of products and process engineering for manufacture. Chemical engineers have roles associated with supply chain and logistics/planning. Supply chain management (SCM), the management of the flow of goods and services, involves the movement and storage of raw materials, of work-in-process inventory, and of finished goods from point of origin to point of consumption. Logistics Management deals with the efficient and effective management of day-to-day activity in producing the company's finished goods and services. Logistics is about getting the right product, to the right customer, in the right quantity, in the right condition, at the right place, at the right time, and at the right cost.





EMPLOYMENT OPPORTUNITIES

SUMMER LEADERSHIP INTERNSHIP PROGRAMME

For penultimate year students at university and if you are an Australian/New Zealand Citizen or Australian Permanent Resident. Placements are from 12 weeks in duration over summer starting in December. You will gain hands-on working experience in one of the world's leading consumer goods companies. Internships are available in the following areas:

- Marketing
- Supply Chain
- Research & development
- Customer development
- Finance
- Human resources
- Information technology



WHY JOIN UNILEVER?

Large multi-national company, options to work in other nations. An agile and dynamic workplace, often with flexible working hours and working from home options. A fun and engaging work culture, where you're truly encouraged to be yourself. We have lots of events to bring the whole company and teams together; brand launches, social activities and volunteering opportunities alongside your other colleagues, as well as many ways to contribute to our sustainable living plan beyond your daily job. External study assistance. Staff shop - an unbeatable opportunity to buy Unilever products at really cheap prices. Free ice-cream - at all our offices, all day, everyday.

For more information visit:
<https://www.unilever.com.au/careers/graduates/uflp/>
<https://au.gradconnection.com/employers/unilever/our-internship-program/>



ABOUT RESMED

ResMed focuses on building and supporting technology to help people live healthier, happier lives by helping them to sleep better. They are an industry leader in the biomedical engineering field, as they are directly at the intersection of technology and better health research. With a consumer base in over 140 countries, ResMed provides and designs comprehensive out-of-hospital software platforms to support professionals and caregivers who help those with sleep apnea and other sleep related chronic diseases. Their current focus is on improving healthcare delivery and reception in settings outside of the hospital.

THE ROLE OF CHEMICAL ENGINEERING

Chemical engineers have flexible roles. As an engineer with us, you can expect to:

Contribute to our growth and commitment to producing a world-class product line.

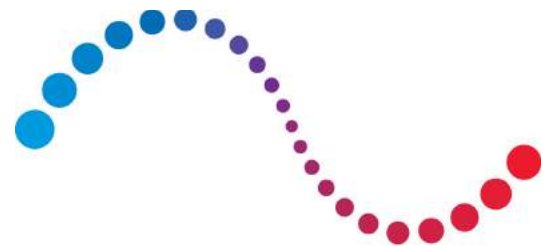
Deliver on increasingly advanced cost-effective products in order to bring our life-changing devices to more people around the world.

Enhance and improve the look and feel of our products for patient comfort and safety.

Contribute to ResMed's success through the development of commercial or embedded software solutions.

Never stop innovating and identifying opportunities to streamline our processes.

We welcome engineers of all backgrounds, with a preference for flexible and proactive thinkers who are eager to explore new and better ways to help patients.



ResMed





EMPLOYMENT OPPORTUNITIES

ENGINEERING INTERNSHIP PROGRAM

Taking place between November and February, this three-month internship program is open to second-, third-, fourth-, and fifth-year students looking to grow their base of expertise and contribute to our mission of changing lives with every breath. In this program, you'll work in product development or manufacturing, depending on your degree. The application period usually runs from early March to early April.

GRADUATE PROGRAM

This two-year, mentored development program includes six monthly rotations across areas of the business such as product development, product marketing and manufacturing. The program is designed to expose you to a range of disciplines in a wide variety of business units. The application period usually runs from early March to early April.



WHY JOIN RESMED?

At ResMed, we believe that there are three key statements that sum up our employees and what we do:

- We are innovative people
- We have extraordinary passion
- We change lives we every breath
- We believe that we have built a great company and we will continue to be a leader in the market because we recruit, encourage, invest in and reward our people.

We are critical thinkers and problem solvers. We are relentless in our drive for results. We are intensely curious and always learning. We collaborate and engage with our global team members. Join us on our journey to change lives with every breath. Join the world's premiere tech-driven medical device innovator who's leading the next frontier of connected devices and solutions to reduce costs across the healthcare continuum, improving tens of millions of lives worldwide.

For more information visit:

<https://careers.resmed.com/>
<https://careers.resmed.com/global-locations/australia/programs/>

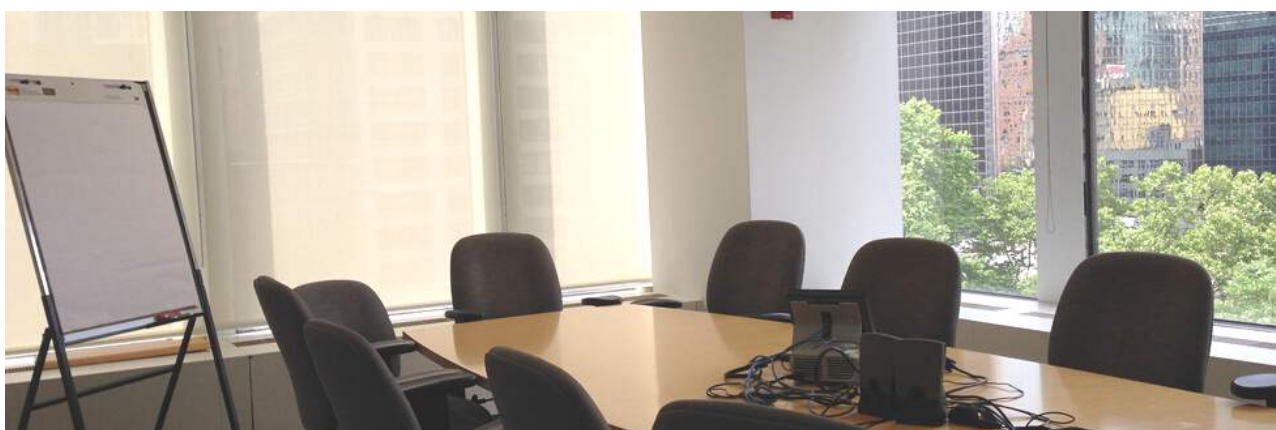


ABOUT PWC

A network of firms in 157 countries with more than 223,000 people who are committed to delivering quality in assurance, advisory and tax services. Supporting more than 20,000 companies worldwide. With close to 6,000 professionals in our tax, assurance and advisory network, we have the knowledge, skills, tools and resources to help contractors and related industry leaders focus on key issues affecting their businesses. PwC's Engineering & construction practice provides guidance in such areas as global industrial products, global engineering and construction industry mergers and acquisitions (M&A), cost containment, sourcing strategies and supply chain management.

THE ROLE OF CHEMICAL ENGINEERING

Chemical engineers have roles in consulting and assurance (auditing). The Audit team examines each client's financial reports to form a view on whether the information presented, taken as a whole, reflects the financial position of the organisation at a given date. With the knowledge gained through the process of audit, we provide support to our clients and broader society. Consulting can transform the way IT works for our clients by reducing costs, increasing efficiency, and making it easier for their IT function to respond to the needs of the organisation, or perhaps you'll be part of the Project Delivery Services team where you'll manage of direct client projects or get involved in project work with clients from other business areas.



EMPLOYMENT OPPORTUNITIES

VACATION PROGRAM FOR STUDENTS

If you're in your second last year of university in an undergraduate or postgraduate degree, our summer Vacation Program offers you first-hand experience at the heart of our business. The program runs over three to eight weeks (length varies per state) and includes full-time work experience during your university break, allowing you to get a head-start in your career before graduating.

TRAINEE PROGRAM

Our Trainee Program is a unique three-year opportunity that offers real paid work experience while you complete your degree. Putting what you're learning at uni into practice, you'll join our Assurance, Private Clients or Tax teams to work on solving our complex client problems. And like many Trainees before you, you may also receive an offer to join us as a full-time Graduate afterwards. If you're a first-year single degree student or a second-year double degree student, our Trainee Program might be for you. We look for students from a range of degree backgrounds including Accounting, Commerce, Information Technology, Law – just to name a few! As a Trainee you'll be assessed against the competencies of our global framework, the PwC Professional. This is how we define and encourage leadership at all levels - from Vacationer to Partner. Closes around 19th August.

INSIGHT ACADEMY

This one and half days experiential event will give undergraduate students with two years left on their degree an opportunity to immerse themselves in the PwC culture and the chance to secure a spot on our Vacation program the following year. By interacting with our different business areas and networking with mentors, you'll learn where your potential, skills, and passions may fit in a professional services environment. Participating in interactive workshops, you'll undergo a process of self-reflection and develop some of the practical skills required for future success in assessment centre situations, helping you on your journey to becoming job ready. You'll walk away with newfound knowledge about the role of professional services in today's complex world and a better understanding of the learning and development opportunities available to you throughout university. Insight Academies are held annually in Melbourne, Sydney, Canberra, Brisbane and Perth.

GRADUATE PROGRAM

Creating a meaningful career is important, but so is creating yourself. To do both, you need the right opportunities – to grow equally as a professional and an individual, and to make an impact in a community where creating positive difference matters. The skills, experience and connections you will gain with PwC provide that opportunity. As a Graduate, you'll receive the opportunity and support to develop your business and technical skills through a range of programs and professional qualifications. We encourage further tertiary study by providing subsidies, paid study leave and flexible working arrangements.

WHY BECOME A PART OF PWC?

Large multi-national company, options to work in other nations. An agile and dynamic workplace, often with flexible working hours and working from home options. A fun and engaging work culture, where you're truly encouraged to be yourself.

STEM ACADEMY

PwC's STEM Academy is an immersive two-day experience that will give you a unique opportunity to gain insight into a world of innovation and disruption. Through engaging workshops and networking sessions, you'll learn about the global shift towards STEM in business and the innovative work we do every day. Through a hands on, interactive experience, you will develop skills in design thinking, and better understand how your STEM skills can be used to solve important problems and create positive change in real life business cases. STEM Academy will help you broaden your business acumen and help set you up for success when applying for future roles within the firm - those who perform well may have the opportunity to be fast-tracked through to our Vacation or Graduate program! STEM Academy occurs annually in Melbourne, Canberra and Sydney. It runs over a two-day period and is open to penultimate and final year STEM students along with recent STEM graduates.

For more information visit:

<https://www.pwc.com.au/careers.html>

<https://www.pwc.com.au/careers/student-careers/trainee.html>

CHEMICAL ENGINEERING UNDERGRADUATE SOCIETY

SECTION 4: INTERVIEWS

JUNE 2022 ISSUE 5





PROCESS ENGINEER REDSIDE TECHNICAL & SUPPORT WORSLEY ALUMINA

CASEY KILLEN

“

**Be energetic. Always put safety first.
And be sure to network and build
relationships with people of different
skill sets and experiences to your own.**

”

What has your career journey been like so far?

My career so far has been fun, engaging and varied in opportunities. I started with a cadetship which allowed me to study whilst taking on engineering roles in industry. This gave me hands-on experience in a variety of processes and insight to the many skills utilised by chemical engineers.

The roles I've taken on so far have been in pyro and hydro metallurgical processes which have given me experience with gas systems, furnaces, solids handling systems, dust collection, slurry systems, water treatment systems and more. I love the variety of things I get to do each day- from being hands on during shutdown or commissioning to analysing data for investigating an unusual event or engaging with people from a variety of functions to implement an improvement project.

Can you explain your current role?

I have recently started a process engineering role in the alumina industry. I work with a variety of other engineering disciplines, maintainers, operators and specialists to drive stable and efficient operation in the Bayer process. I get to work on the optimisation of industry leading technology and investigate opportunities to improve process safety.

What do you do day-to-day in terms of roles, responsibilities and function?

My responsibilities are wide ranging and include troubleshooting process and maintenance issues, providing technical advice and leadership in work place and process safety, performance monitoring, improvement projects, and capital projects.

What tech skills overlap with uni?

Uni teaches many skills but the most important is effective technical communication as this is how you provide advice, influence as well as ensuring proper documentation of design and operations for regulatory purposes.

Uni also teaches you about deadlines and how to learn quickly by knowing the resources available and the concepts that will be useful.

What are employers looking for?

Employers are looking for people with good problem solving skills who are effective communicators. Emotional intelligence is key to fostering good working relationships and high performing teams. As engineers, we need to show commitment to finding the safest solutions, setting the standard and actively engaging with the people and problems that require our support.

What is the most valuable chem eng skill?

Mass balances! So many problems can be better addressed by first understanding the mass and/or energy balance. Also, a good understanding of statistics regularly comes in handy.

In the end, my university degree has armed me with a box of tools so that I can effectively investigate and analyze whatever lands in front of me. Learning the value of detail and knowing the bigger picture of an operation means I can develop the right solutions.



SUPPLY MANAGEMENT TRAINEE CARLTON & UNITED BREWERIES

EMMA DANIELS

“

The more knowledge that you can attain **BEFORE** you even write your resume, the more likely your resume is to stand out from the crowd. Tailor your resume to the company and be passionate about it!

”

What is your current role?

I am a supply management trainee in the brewing department at CUB's largest brewery based in Queensland. In this role, I learn about everything that goes into beer production - from raw materials all the way to the finished product. The graduate program that I am undertaking focuses on learning and developing leadership and management skills, so I hope to move into a team leader position once my training is complete.

What responsibilities and tasks do you carry out day-to-day in your role?

When I arrive at work in the morning, I generally have a couple of introductory meetings to attend with team leaders, operators, management etc. During these meetings, key topics are discussed such as safety, tasks, production and maintenance.

Every day at 10:30, I attend a quality assurance tasting meeting, where I am required to taste test raw materials such as malts, yeasts, water as well as final products. All team members are required to complete advanced taster training to be able to detect certain compounds in the samples to ensure that the products are of acceptable quality.

The rest of my day is spent exploring different roles in different departments. I often coordinate with operators and get involved with things like kegging, quality control, safety control etc.

What is the most valuable skill you learnt at university?

Problem solving! Being able to think on your feet quickly is so helpful in completing tasks and assignments at work.

What is the workplace culture like at CUB?

At CUB, everyone is passionate about beer, quality, safety and exceeding targets. The team fit and culture at CUB can be described by asking "Would you go and have a beer with them after work?" and almost all of the time, the answer is "Yes of course!". At CUB, everyone shares the desire for a fast paced, challenging, competitive and highly active environment where growth mindsets are maintained. The personalities of the people working here strive for excellence at all times, and any new challenges are openly accepted by the workplace.

What career options are available at CUB for Chemical Engineers?

Chemical engineers are very adaptable, so at CUB, you have various opportunities. You may work in brewing, packaging, optimization or you may decide to work in marketing, management or finance. As long as you are willing to put your hand up and try different things, you may end up in any career at CUB.

How did you attain your role and what advice would you give to aspiring students?

I was fortunate enough to skip the generic interview process for my current role, as I was able to secure this internship by networking with CUB during my time as Industry Representative for CEUS.

Student societies like CEUS, EngSoc, WIESoc etc. are awesome opportunities to get involved and meet people who you may work with in the future. I encourage you to actively utilise LinkedIn to make genuine connections with people during your time at university, as it has been very beneficial for me in kickstarting my career.



PROCESS ENGINEER INTERN WASTEWATER TREATMENT SYDNEY WATER **AIMEE CHONG**

Who are Sydney Water and what do they do?

Sydney Water is Australia's largest water utility which provides water, wastewater, recycled water and stormwater services to over 5 million people across the wider Sydney region. Sydney Water's Vision is to be the lifestream of Sydney for generations to come. With climate change, the rising population and decreasing water availability, water is becoming a more valuable commodity by the day and Sydney Water understands the importance of Sustainability in the Water Industry.

What entry options are there and what are they like?

There are a couple of entry options at Sydney Water, which include the Industry Experience Traineeship and the Graduate Program. In the Traineeship, you are placed in a technical chemical engineering based role which is very useful in completing the competencies required for Industrial Training. More importantly, being a trainee will give you a bit more than just a taste of what it is like to be a Chemical Engineer in the Water Industry, as the traineeship goes for one year.

The graduate program on the other hand will give you an opportunity to try (if you want) areas of the business which are not chemical engineering based. For instance, in your first placement of the graduate program you may work at a Wastewater Treatment Plant, afterwards you decide that you want to try Corporate Strategy or Communications. If you are almost certain that pure chemical engineering is the path for you, either way Sydney Water is a great place for you. But as they say, you never know till you try.

What career options are available at Sydney Water for Chemical Engineers?

Sydney Water offers a wide range of opportunities for Chemical Engineers in the business areas of Water and Wastewater Treatment, Water Quality, Corrosion and Odour, Urban Design and Engineering, Integrated Systems Planning and Production, Planning and Optimisation.



My experience as a trainee was in Wastewater Treatment at St Marys Water Recycling Plant. I was part of the production team who monitor and maintain the various treatment processes which produce high quality effluent. At the plant, there are five main production officer roles, all of which I learnt during my time at St Marys. A big project that I had the opportunity to be a part of was the Biosolids Dewatering Upgrade (BDU), where I participated in various HAZOP and CHAZOP studies, FAT's, CHAIR's and had the opportunity to optimise new dewatering technologies such as centrifuges and a rotary screw press.

Also, I have witnessed the value that Sydney Water puts on its employees, my professional development including hands-on experience of all the wastewater processes; analysis, risk management, controls and reporting, subcontractor management, change management and training in software control applications.

“

If you are genuinely interested and passionate about a company and its contribution to society, then when you present yourself in an interview they will see your true motivation

”

Reflection

I remember before I got my internship, I was worried about the possibility of not finding one and as a result I went on an application rampage and was applying for any and every internship that was somewhat related to chemical engineering. The numerous cover letters, online assessments, video interviews and assessment centers, all paid off.

I owe my success to Passion. I think if you are genuinely interested and passionate about a company and its contribution to society, then when you present yourself in an interview they will see your true motivation. In the end everything works out, so don't stress it and do your best.





SENIOR ANALYST
SYDNEY WATER

EMILY RYAN

“

While your courses at university teaches you the fundamental skills and ways of thinking, application on the job is where some of the real learning begins.

”

Where did you do your industrial training and what was your role?

I was fortunate enough to complete my industrial training with two different employers, Orica Watercare (now part of Ixom) and Arrium. At Orica Watercare, I was an undergraduate process engineer, and at Arrium I was an undergraduate process metallurgist.

What responsibilities and tasks do you carry out day-to-day in your role?

At Orica Watercare my role was office-based and largely consisted of supporting in the design and some operations/maintenance of water treatment package plants for clients. One of my main projects was in developing operation and maintenance manuals for the plants to provide to clients following commissioning. I also spent a lot of time honing my Excel skills by building basic mass balance models of the process trains.

At Arrium Mining, I worked with a team of metallurgists on process improvement, mostly related to ore beneficiation. While the role was nominally office-based, I would be out in the field (visiting plant, mine sites, labs) 1-2 days a week. One of my main projects involved designing a new ore quality test and negotiating a contract with the lab services provider, and later analysing the results of these tests for reporting back to the metallurgy team.

What did you learn from your industrial training roles?

My first role taught me the importance of learning to manage myself and my time in a professional context. My manager was located at a remote site in Queensland while I was located in the Melbourne office, and we would often only speak for 1 hour a week. I learned to plan my work and make requests for further work around these meetings.

My second role taught me how to be commercially minded and to manage relationships with stakeholders across different parts of the business to deliver useful outcomes.

Both placements taught me the value of getting out in the field and seeing/experiencing the operational environment. When designing plant or process equipment, it's essential to be able to see and interact with the problems you're designing for.

How will this placement benefit you in the future?

Both placements benefitted me when I came to my first grad job, as I had a few of the basic skills needed to manage yourself and your performance in any professional role. The experiences also prepared me for how steep the learning curve is when you start any new role, while your courses at university teaches you the fundamental skills and ways of thinking, application on the job is where some of the real learning begins.

Would you recommend this placement and why?

I'd recommend both placements, although each had quite a different focus and style of working.

What was the recruitment process like?

For both roles I went through the traditional recruitment process to win the role, however I'll note that for both roles, I was actually rejected after the final interview stage. In both instances, there were no roles available in NSW, but after speaking with the recruitment rep, I was able to be placed in roles in other states (Orica in Melbourne and Arrium in Regional SA). I'd recommend enquiring further about how to make the placement work.

Have you gotten any future placements? What are you doing now?

I completed one further practicum/internship as part of my commerce degree, though this was part of a course. I currently work as a Senior Analyst for Sydney Water, after starting there as a graduate in 2016.

Do you have any advice for students who are currently looking for industrial training?

Companies may be open to negotiating on the terms of an industrial placement. When Orica called me to tell me there were no roles available in NSW, I enquired further, and they were able to create a role in Victoria. I never would have had the role had I not enquired further and negotiated on the terms of my relocation.



RESEARCH ENGINEER
JAMES HARDIE R&PD

JACK PUN

“

You miss every shot you don't take!

”

Where did you complete your industrial training and what do they do?

I did my industrial training with the National Measurement Institute - Nanometrology team. The NMI plays an important role in the Australian economy by maintaining and regulating Australia's measurement system, developing and maintaining national measurement standards, and delivering world-class measurement products and client services.

What is your role and what did your day-to-day look like?

I was a part of a research-focused project. My role was to set up and perform experiments to accurately measure nanoparticles. I had the opportunity to be trained on expensive spectroscopy instruments, work in an official lab environment. I was also able to work closely with my supervisor, receive feedback on written reports and be mentored about my career plans.

A typical day for me would be going into the research centre, check in with my supervisor on the work to be done for the day. Then, I would set up the instruments, get the required samples, sketch up my own data recording sheet and perform experiments. If I fail to achieve what I expected, I will ask my supervisor and they would explain the concepts to me and continue on with the experiment.

What did you learn? How will this placement benefit you in the future?

For my thesis, it was very research heavy. Working previously in a lab environment definitely boosted my work experience and allowed me to work with a high achieving academic group (Prof. Rose Amal). This placement also helped me train my report writing skills, using professional language.

Would you recommend this placement?

Absolutely!

How did you find the job?

Chemical Engineering newsletter/ Email.

What are you doing now?

I am a Research Engineer at a global company James Hardie.

Do you have any advice for students who are currently looking for industrial training?

Don't give up! Keep applying, and adapt your resume after every application. Do not be afraid of rejection. You miss every shot you don't take!



GRADUATE ENGINEER
SYDNEY WATER

**LALITHA
PARTHASARATHY**



Go with an open mind and be open and honest about your skill sets. Always demonstrate that you are proactive and keen to learn.



Where did you do your industrial training and what was your job role?

I completed my industrial training in 2 stints. First is in Deloitte – Risk Advisory Sustainability Services. I participated in their 2017/2018 Vacationer program. The second is PARTCAT UNSW as a Research assistant to aid in the synthesis of catalysts for clean energy initiatives.

What is your role and what are the responsibilities?

As a vacationer at Deloitte, I worked on energy assurance plans for the sustainability audit of big clients for the clean energy regulator. This allowed me to learn a lot about the business side of chemical engineering especially with respect to sustainability and reporting and allowed me to learn about cool concepts like carbon credits. I also worked on a workers health and safety project and obtained a greater understanding of the legal obligations of a business to maintain the safety of their workers.

I found the work at Deloitte to be very dynamic in nature! Most of the days, you don't really know what's in store for you. And as cliché as it sounds, every day is truly different. Usually, I would check my emails, have meetings with my coach and the team and learn how I can add value on sustainability related audit and assurance tasks.

My placement at PARTCAT was fairly relaxed and felt a lot like my labwork for my honours thesis. Planning is crucial to ensure that all the catalysts are synthesised in the most effective way.

What did you learn from your industrial training roles?

By completing the placement at Deloitte, I learnt a lot about the business consulting industry. Initially I was unsure as to which career path I wanted to take and completing this placement gave me a lot of clarity. It gave me the perfect opportunity to meet some great people and learn about things I didn't even know existed! Networking was also something that they really encouraged and I found that to be beneficial in learning more about other business units.

By completing my placement at PARTCAT, I expanded my skill set to also be able to synthesise metal catalysts supported on metal oxide supports.

How will this placement benefit you in the future?

The skills on reporting and insight into advisory/assurance services have given me a better insight into the corporate world. Every engineering company will ultimately have sustainability reporting and targets to meet and this placement really helped me understand what that involves.

Completing a placement at PARTCAT gave me further insight into nanoparticle catalysis research.

Would you recommend this placement and why?

I would recommend this placement for anyone who is unsure whether they want to pursue a career in the business consulting industry. This may not be seen as a traditional engineering placement at first glance, however when you look at the Engineers Australia guidelines, being an engineer is so much more than just designing a reactor or optimizing a process. Sustainability reporting, workers health and safety and understanding fundamentals of business management are also highly valued skills and are puzzle pieces that fit very nicely around the technical knowledge that are delivered at lectures.

I found the culture in Risk Advisory to be very friendly and both my coach and buddy were very supportive of my development. Ultimately, any placement you do is going to teach you something you didn't know – whether it is good or bad!

What was the recruitment process like?

Deloitte was my first time going through the recruitment process. Therefore, I had no expectations of myself. I was almost convinced that they'd pick someone better! I think this helped me a lot in the sense that I was myself the entire time, kept nerves at bay and just tried to do my best. I found my interviewers very nice (even when I forgot what the question was halfway through my answer...) and the whole atmosphere was fairly relaxed

Have you gotten any future placements? What are you doing now?

Ultimately, I chose to pursue a career in the water industry. I'm currently working as a 2nd year graduate at Sydney Water. I've been loving it so far!

Do you have any advice for students who are currently looking for industrial training?

My advice would be to go with an open mind and be open and honest about your skill sets. Always demonstrate that you are proactive and keen to learn. Usually, people are willing to help you if you ask for it. Also, research the company well. Know their values and determine whether their values are in alignment with yours and how you can provide value.



SUPPLY CHAIN INTERN UNILEVER AUSTRALIA

LIAM O'CONNOR

“

We are referred to as the “universal engineers” for our adaptability and so there are plenty of opportunities out there for everyone...you just need to find them!

”

Where did you do your industrial training and what was your job role?

During my penultimate year of a double degree of Chemical Engineering and Commerce, I was part of the Unilever Internship Programme (ULIP) within their Supply Chain team.

Unilever is a global consumer goods company and owns brands such as Dove, Lynx, Rexona, Continental, Lipton, Omo and Sunsilk. Throughout my placement however I was positioned at their Streets' Ice-Cream factory in Minto where I was the factory's "Finite Scheduler". This role required me to sequence and schedule all production runs for their Paddle Pop, Gaytime, Magnum and Blue Ribbon products which were spread across three (3) different production lines. I was required to work with R&D, Quality, Engineering and Customer Service teams to ensure that production plans were optimised to maximise factory output and ensure we could service all our customer and consumers.

What is your role and what are the responsibilities?

On a day-to-day basis I was involved in numerous meetings designed to best capture a realistic picture of how the factory was currently running and any changes which need to occur within the immediate or medium term future to optimise the factory's output. For example, changing over a production line from Magnum to produce Bubble-O-Bill was a lengthy and very involved task. Therefore, the minimum order quantities (MOQ) of that run had to be adhered to and overall, the correct quantities planned so that unnecessary downtime would not occur in the following weeks as we returned to that product.

I was required to track the daily outputs of the factory and report back to upper management while leading a weekly waste meeting. This wastage was looked at very closely in line with Unilever's mission to "Make Sustainable Living Commonplace" and therefore various actions and 'deep dives' were performed to understand the root causes and potential factory improvements.

What did you learn from your industrial training roles?

Although university provides you with the technical teachings of engineering and systematic thinking, it does not prepare you for the interpersonal aspects of working in an office with real people. Having been my first exposure to both a corporate and factory environment I was able to gain insights into the relationship between the two areas of the business. For most companies the end goal is to generate profit and so being able to see how interrelated factory optimisation is to the overall financial side of the business was very interesting. Other more general learnings came from the way to conduct yourself in a corporate environment as well as the importance of working in a team.

How will this placement benefit you in the future?

This placement provided me with widespread exposure to the FMCG industry. Being able to work for a company manufacturing in Australia was not an experience I take for granted as more businesses move their factories offshore. Consumer brands and the FMCG industry was one area which had a particular interest to me and so this placement allowed me to start from the

beginning of the supply chain (factory) and see the importance of ensuring strong outputs to benefit the end customer. This placement also provided me with a strong professional network and a number of ambassadors who saw my capability and showed a keen interest in me progressing through the company.

Would you recommend this placement and why?

I would definitely recommend Unilever's Internship Programme (ULIP). From day one I was placed in an actual day-to-day role giving me the genuine experience of what it is like working for a fast-moving consumer goods (FMCG) company such as Unilever. I was never viewed as a "just an intern" which can at times have some negative connotations around it and instead I was part of the team with a fresh, energetic set of eyes who could add real value to an already established business.

How did you find the job and what was the recruitment process like?

The UNSW Careers and Employment portal was my first notification that applications were open for Unilever's internship programme. After filling out a quick questionnaire, Unilever had a set of online games that needed to be completed. A virtual interview was the next stage before finally going through a full day discovery centre. Out of the 12 applicants in the 2018-19 Supply Chain discovery centre, 4 were selected.

Have you gotten any future placements? What are you doing now?

My initial programme lasted for three months however was extended for a further couple of months as the business went through a transition period. After this, a separate role opened up and was offered to me as a full-time opportunity. I (tried to) balance work and full-time uni eventually succeeding and graduating at the end of last year. Since finishing at UNSW I have transitioned through two further roles in different teams allowing me to gain widespread exposure across all areas of the business. Without the initial internship programme none of this would have been possible and so I cannot emphasise enough the need for students looking for IT to view them as more than just an "internship" and instead consider what bigger opportunities can come out of it.

Do you have any advice for students who are currently looking for industrial training?

Persistence is key to eventually securing an industrial training placement. I'd recommend building a tracker of all potential companies you'd consider working for and when the applications open/close. This will ensure you don't miss any of them and get a full picture of how you are progressing through the different stages of each application. Another bit of advice is to not be too set on a particular company. There are thousands of applicants all applying for the same roles so that is only asking for disappointment if you are not open to the idea of branching out. Not everyone that does a Chemical Engineering degree needs to become a Chemical Engineer. We are referred to as the "universal engineers" for our adaptability and so there are plenty of opportunities out there for everyone...you just need to find them!



RESEARCH AND PRODUCT DEVELOPMENT INTERN JAMES HARDIE R&PD **MADDISON TRIKILIS**

Where did you do Industrial Training and what was your job role?

I did my industrial training during 2018 at James Hardie. I was an intern in the Research and Product Development (R&PD) as a part of the Coatings team. I was involved in research and experimental work of two main projects during my industrial training.

What are your responsibilities and what is a typical day like?

Whilst I can't explain the specific details of either project due to confidentiality, what I can say is that I was involved in the testing of the durability of both fibre cement based and non-fibre cement based products. A typical day involved attending meetings, assessing the safety of tasks in the laboratory, completing experimental work and writing reports.

What did you learn in your role?

I learned that one of the most important things when working in industry is that safety is a top priority. I have also learned a lot from a both a technical and professional perspective. I was in 2nd year engineering at the time when I did industrial training and given I'm a Chemical Product Engineering Student, I was able to learn about process engineering through the production of fibre cement. This allowed me to invest time to expand my knowledge into basic plant design and separation processes used in chemical plant design in 3rd year. Interpersonal skills such as communication, organisation and teamwork are attributes that are highly valued as an engineer, so I was able to learn how to work and communicate with professionals with both engineering and non-engineering backgrounds.

“

Having connections with people in industry is important when looking for internships, so attending industry events is a good starting point for building connections with a potential employer.

”

How will this placement benefit you in the future?

My placement has already benefited me. It has taught me the importance of constantly expanding my knowledge beyond my specialty areas of chemistry. It has also allowed me to continually improve my interpersonal skills, especially communication when working on different projects with different people.

Would you recommend this placement and why?

I would highly recommend this placement. The tasks that I worked on were very challenging. They allowed me to learn how to solve different problems and work in a team that were willing to help me out when I needed help.

How did you find your placement?

I knew someone who knew someone who worked in the company, so my resume was submitted to them which was passed on to Human Resources (HR). From there, I was able to obtain an interview, so had to sit an interview with three team leaders in R&PD.

Have you gotten any future placements? What are you doing now?

I haven't gotten any future placements since my industrial training as I've completed the 60 days. I plan to start working towards doing both a Research Thesis and the Chemical Product Engineering Design thesis and finding a graduate program for when I graduate next year.

Do you have any advice for students who are currently looking for industrial training?

If you know someone who works in the industry or in an engineering job that you are interested in, utilise the connections because it will give you the foot in the door towards an internship. I found that having connections with people in industry is important when looking for internships, so attending industry events is a good starting point for building connections with a potential employer. Always prepare for interviews and research the company that you are applying for. I found that the employer does take notice when you are well prepared for an interview.



PROCESS ENGINEERING INTERN AT GLENCORE, MANGOOLA COAL OPERATIONS SITE

ALICIA SHIH

What are the most useful learnings and experiences have you gained from your internship opportunity?

I think greater understanding of where my degree can lead into after I finish uni. In first and second year, it felt difficult to realise how my learnings applied to an industrial context, but now I feel I sufficiently understand what the role of a process engineer entails and am aware of various career paths available to me in future. I also learned how to better manage and prioritise my time, which has been incredibly valuable at uni.

Was the industrial training you completed associated with your future career plans?

Yes, I really enjoyed the balance between working at the desk and walking around the plant. I can't see myself working at a desk job for my whole life, so spending time completing tasks on site really helped to break up my day. I would love to work in some sort of processing industry after I finish, whether that be coal or another industry.

Did your internship have a specific selection process? What advice could you give to students who are currently looking to secure industrial training?

The selection process involved an online application followed by an interview. For both aspects, I would strongly recommend that you thoroughly research the company involved; what are their values, what opportunities do they offer, and what projects are available that you would be interested in working on? Highlight these elements in your cover letter and in your application and ask questions about them during the interview to show your enthusiasm.

“

In first and second year, it felt difficult to realise how my learnings applied to an industrial context, but now I feel I sufficiently understand what the role of a process engineer entails and am aware of various career paths available to me in future.

”

What was the most challenging aspect of your internship, and why?

I would certainly say learning and understanding every aspect of the plant in such a short period of time. I had no understanding of process plants prior to working at Glencore, so it was challenging to learn about different types of separation equipment to a degree where I could properly inspect them and educate operators on their function.



QUALITY CONTROL INTERN AT GIVAUDAN AUSTRALIA - SMITHFIELD SITE

JOANNA LI

What are the most useful learnings and experiences have you gained from your internship opportunity?

Some of the more technical things that were unique to this internship are listed below:

- Exposure to quality control in the food industry
- Exposure to supply chain and quality management processes in food industry, as well as general everyday happenings (safety meetings, site tours, warehouse and production safety)
- Experience in using instrumentation and analysing results (lab-work)

On top of these, general exposure to a big business and how it operates was quite insightful, especially in regards to the different teams within the business and how they work together (QC, production, sampling, continuous improvement, quality management, etc).

Was the industrial training you completed associated with your future career plans?

I think that the internship was better suited for someone in Food Science or Chemistry as it didn't have the design elements that a typical engineering role would have (which is something I would like to pursue in future, perhaps in research and development). Ultimately, I think that it was great exposure to the food industry, and definitely opens that up as a pathway because I found many other avenues for research and development within the industry that I would be able to pursue.

“

"-general exposure to a big business and how it operates was quite insightful, especially in regards to the different teams within the business and how they work together"

”

Did your internship have a specific selection process? What advice could you give to students who are currently looking to secure industrial training?

The position was advertised through Sarah Grundy (emailing to all students). I sent in my resume and a cover letter to the HR Manager who asked me if I had a car and what my availability were, but there was no interview process.

What was the most challenging aspect of your internship, and why?

The most challenging part of the internship was being thrown into something head first and not understanding anything at all. The environment was quite fast-paced with a lot of jargon and abbreviations that I did not understand. It definitely takes a while to get used to all the terminology and remember all the methods/processes but it is something that you learn more with each passing day. It was really helpful that my co-workers were more than happy to answer any questions I had.



GRADUATE MATERIALS AND CORROSION CONSULTANT

CAROL KE

What is your role, and what are your responsibilities?

As a graduate materials/corrosion consultant, I carry out visual inspection and analyse various testing results (i.e., Tensile, SEM/EDS, FT-IR etc) to collect relevant information. I then use the information to identify the causes, and provide mitigation plans to corrosion related material failure. In addition to this, I am also responsible for reviewing architectural/structural specifications and drawings as per standards/requirements, to identify any underlying corrosion related risks and provide control and preventative recommendations.

What do you enjoy about your role and your company?

The part that I enjoy the most is: exposure. I have the opportunity to gain exposure in various fields (i.e. marine, oil/gas industry, commercial construction, etc). Of course, no two jobs are the same. That is why it brings a lot of exciting learning opportunities.

I truly enjoy the PEOPLE that I am working with in my company. They have been rather inclusive, supportive and encouraging to me since day one.

What are the most useful learnings and experiences you have gained from your graduate position?

I have learnt a lot about cathodic protection and gained hands-on field experiences.

“

"Of course, no two jobs are the same. That is why [this position] has brought a lot of exciting learning opportunities"

”

Did your graduate role have a specific selection process? What advice would you give to students who are currently looking to secure industrial training or a graduate role?

The selection process in my company has two face-to-face interview rounds after the online application, which in my opinion, I consider them quite straightforward and quick.

For those who are currently looking for a graduate role, show them you are a genuine person with a can-do attitude by providing actual examples (i.e., any internship/uni teamwork experiences, any achievements etc). This is how I got hired.

What has been the most challenging part of your graduate role, and why?

The most challenging part of my role is being able to simplify and deliver information in a way that audiences with different professional backgrounds can easily understand.

I find it rather challenging. Because in the university, the readers who review/mark your reports always have the same knowledge background as you. As a result, I tend to use "fancy" terminology without explaining which makes it unfriendly to other readers.



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