



FEM INDUSTRY GUIDE

2019

IN THIS GUIDE

- 1 INTRODUCTION
- 2 PRESIDENT'S ADDRESS
- 3 SPONSOR COMPANIES
- 23 CAREER ADVICE AND ENGINEERS' STORIES
- 37 EXTRA-CURRICULAR AND CPD OPPORTUNITIES
- 46 FEM 2019 RECAP
- 49 ACKNOWLEDGEMENTS



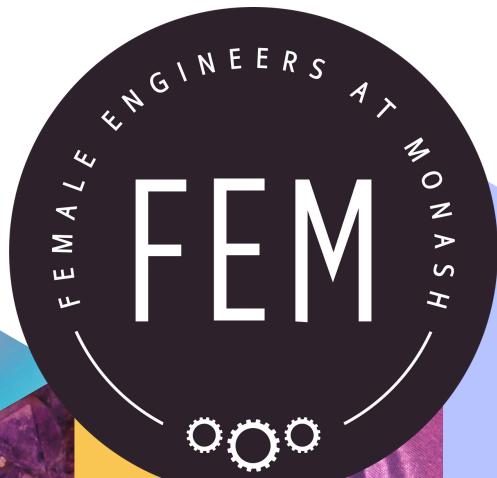
INTRODUCTION

Engineering is an exciting field of study that plays an important role in making people's lives better, safer and easier. However, it is also one of the most male-dominated professions, with only 13.6% of women in the engineering labour force in Australia. There are many women who study engineering degrees who quit and never enter the profession because of self-doubt or a lack of a sense of community.

Female Engineers at Monash (FEM) aims to support females in engineering by providing resources and opportunities for our members to develop their professional skills and network, whilst also building rapport amongst one another. One of the biggest misconceptions about FEM is that we are a female-only club, but what we try to spread is inclusivity and not exclusivity. Advocacy from the whole engineering community for females in engineering is crucial in order to achieve diversity in the profession.

It is our hope that this industry guide makes information about the engineering industry and available career pathways accessible, to aid you in the transition from university into the workplace. It is also here to highlight the abundance of available opportunities you can be involved in whilst you are still in university to build up your knowledge and skills.

Natalie Yan
Industry Liaison



PRESIDENT'S ADDRESS



It is an honour to be representing Female Engineers at Monash (FEM) in 2019. I am highly passionate about continuing to spread the vision of gender diversity in engineering and working towards making gender diversity in engineering a reality. I am so thankful for the amazing and tireless work the FEM committee has done to help achieve this vision.

This year is an exciting time for FEM with huge membership growth from just under 350 members at the end of 2018 to being so close to hitting the exciting 500 members mark as we near the end of 2019. This growth has been exciting as we have seen increased involvement from our male counterparts, showing that we are getting male champions of change involved in FEM, allowing us to journey together towards gender diversity in engineering.

Our event offerings have continued to grow with an amazing number of new events including the Diversity in Engineering Panel Night, FEM's Cocktail Night, tutoring and SWOTVAC study sessions, and Power Tools Workshops. Furthermore, we held events with our Platinum Sponsors including the FEM x GHD - Personal Branding Workshop, where topics such as personal branding in a consulting environment and client relationships were explored.

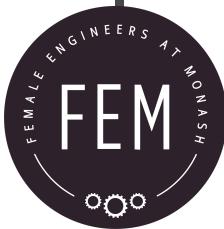
We have launched new initiatives such as the inaugural FEM Mentoring Program in partnership with our industry sponsors. Through this program, we've connected our committee members with industry mentors who support and challenge us in our career development journey and serve as our role models.

I'd like to thank all of our sponsors, especially our platinum sponsors: GHD, Accenture and the Department of Materials Science and Engineering for supporting FEM in 2019. It is through your support we could create invaluable connections between exceptional students and our industry partners.

Looking forward, the future of FEM is increasingly exciting with new opportunities for our members to engage with industry, connect with the FEM community, gain assistance in their academics and encourage other students to study engineering.

Renee Meaney
President

- 4 COMPANY OVERVIEWS
6 ACCENTURE
8 ANSTO
9 AURECON
10 CUB
11 DOWNER
12 GHD
14 INVETCH
15 LENDLEASE
16 LXRP
17 SCHNEIDER ELECTRIC
18 STELARLAB
19 MULTIPLEX
20 VIVA ENERGY
21 WOOD
22 WORK 180



FEM

S P O N S O R S

COMPANY OVERVIEW

	Accenture	ANSTO	Aurecon	CUB	Downer	GHD	Invetech
Aerospace Engineering	x		x				
Chemical Engineering	x	x	x	x	x	x	
Civil Engineering		x		x	x	x	
Electrical and Computer Systems Engineering	x	x		x	x	x	
Environmental Engineering	x	x		x	x	x	
Materials Engineering	x	x	x	x	x	x	
Mechanical Engineering	x	x	x	x	x	x	
Mechatronics Engineering	x	x	x	x	x	x	
Research	x	x		x	x	x	
Resources Engineering	x			x	x	x	
Software Engineering	x	x		x	x	x	
Hiring of international students		X (Summer internship at Clayton only)	x	x		(Valid work visa required)	
Interstate opportunities		X (Grad program at Sydney)	x	x	x		
International opportunities						x	

	Lendlease	LXRp	STELaRLab	Multiplex	Viva Energy	Wood	Schneider Electric
Aerospace Engineering		x					
Chemical Engineering	x		x	x	x		x
Civil Engineering	x	x	x	x	x	x	x
Electrical and Computer Systems Engineering	x	x	x	x	x	x	x
Environmental Engineering	x	x	x	x	x	x	x
Materials Engineering				x	x	x	
Mechanical Engineering	x	x	x	x	x	x	x
Mechatronics Engineering	x		x	x	x	x	x
Research				x			
Resources Engineering						x	x
Software Engineering				x		x	x
Hiring of international students						x	x
Interstate opportunities	x			x		x	x
International opportunities						x	x

x = Available opportunity



OVERVIEW

Not sure of what we do? Our purpose is simple. We bring innovation to help improve how Australia lives, works, plays, protects and grows. Underpinned by local and global experts from across our business. Through Strategy, Consulting, Digital, Technology, Operations and Security, we bring together the best teams to solve complex problems.

Wondering how you can find out more or where you could fit in? We're looking for students from all fields of study and we offer a range of programs and activities that could suit you. We want you to bring your best self to work each day and we will support you to gain skills and real-world experience that will help you launch your career.

CULTURE & VALUES

YOUR RULES, YOUR FUTURE

Kick-start your career by making an impact on how Australia works, lives, plays, protects and grows! In our own unique ways, we collaborate and innovate to bring groundbreaking solutions across industries. Our inclusive and diverse teams also join causes that matter, from empowering movements like Tech Girls are Superheroes to Girls in Steam. Aside from these, our Women's Advisory Group offer a network of support as you move into the fast-paced world of Consulting. Connect with fellow female professionals and our Male Champions of Change as we build a gender-equal world.

WHAT MAKES ACCENTURE STAND OUT

WE'RE #GETTINGTOEQUALWORK

Work with our global teams as we aim to achieve a gender-balanced workforce by 2025. Join us and discover new interests while enhancing your skills along the way. Let your own uniqueness shine as you explore where your engineering degree will take you!

>
accenture

BE YOURSELF, MAKE A DIFFERENCE



Accenture brings innovation to help improve how Australia lives, works, plays, protects and grows. And we offer a range of roles and activities to help you fit in. We want you to bring your best self to work each day and we will support you to gain skills and real-world experience that will help you launch your career.

Whatever stage of study you're in we have something for you.
Find out more about our business and available opportunities at accenture.com.au/campus

TESS

Bachelor of Business and IT Graduate turned Application Development Analyst.

OVERVIEW

ANSTO is the home of Australia's most significant landmark and national infrastructure for research. Thousands of scientists from industry and academia benefit from gaining access to state-of-the-art instruments every year. ANSTO has 2 main campuses. One up in Sydney, which is home to the OPAL research reactor. OPAL is used by members of the scientific, medical, environmental and industrial communities, as well as Australian Universities. The second campus is at Clayton VIC, which is home to the Australian Synchrotron. The Australian Synchrotron produces powerful beams of light that are used at individual experimental facilities to examine the molecular and atomic details of a wide range of materials. The advanced techniques are applied to research in many important areas including health and medical, food, environment, biotechnology, nanotechnology, energy, mining, agriculture, advanced materials and cultural heritage.

CULTURE & VALUES

CURIOSITY

Harness our curiosity to explore new opportunities and create an environment where ideas can thrive

TRUST & RESPECT

An inclusive environment that's built on our trust and respect for each other's contributions and capabilities

EXCELLENCE

Consistently delivering high value outcomes and looking for ways to improve the quality of our performance

LEADERSHIP

Ownership, accountability and working with integrity to inspire and motivate others

WORKING TOGETHER

Success through collaboration, team work and a sense of collective purpose

SAFE, SECURE & SUSTAINABLE

Three key principles that underpin everything we do and every decision we make

WHAT MAKES ANSTO STAND OUT

ANSTO has been awarded an Athena Bronze Institution Award in acknowledgment of our dedication to improve workplace equality and inclusion. The award acknowledges our plan to address workforce diversity over the next 4 years. We aim to achieve 50/50 representation by 2030, and are actively working on increasing our numbers of diverse candidates in the talent pipeline.

We aim to have all leadership teams made up of a minimum 40% male and 40% female by 2020. ANSTO seeks to create a culture of inclusion, where our diversity of thought and differing perspectives are a source of organisational agility, resilience and renewal. We provide empowering and effective work-based policies which support flexibility and the individual needs of our employees, including flexible work practices and family friendly programs. Our inclusive culture enables us to retain our talent within a rewarding environment, and attract the best talent to work with us in future.



Australian Government



AURECON

Aurecon is a global engineering and infrastructure advisory company, but not as you know it. We've re-imagined engineering. Formed in 2009 from the merger of three businesses, Aurecon's offices span 28 countries across Australia, New Zealand, Asia, the Middle East & Africa. Our clients' ideas and aspirations drive all that we do.

With over 7000 employees internationally, and 4000 here in Australia & New Zealand, we work alongside them like no other firm to co-create clever, innovative solutions to some of the world's most complex challenges.



SO WHAT MAKES AURECON UNIQUE?

We explore new frontiers to step from the impossible into the possible. We believe in Flexibility. Choice. The Freedom to be your authentic selves. For our staff to make an impact & design a better future. It's all possible. If you choose to work with us, we'll want you to embrace your uniqueness to reimagine our approach to challenges by asking 'What if?', 'What's next?' and 'Why not?' We want to cultivate curiosity in our staff and have that underpinned by proper processes & methodology, not only to explore and innovate using our internal toolkit (which you can be trained in!) but also to develop technical excellence. We're an organisation underpinned by workplace flexibility, every position in Aurecon has the right to work in a flexible manner, without the need to feel as though you need a reason, or to make excuses. We aspire to strike the balance between delivering for our clients and creating a culture which empowers our staff. For students who identify within the LBGTI+ community, Aurecon is a member of Pride in Diversity, has Aurecon Pride Networks in our offices and in New Zealand has been accredited as the first engineering firm to receive the Rainbow Tick.



Chelsea Simanhadi • 2nd
Graduate Overhead Wiring Engineer at Aurecon
3d · Edited

...

Although we are missing out on Day 1 of Limelight week, today Lauren Thompson and I had the pleasure of attending the second forum for RISSB Horizons Program in Melbourne.

[...see more](#)



We are also an Accredited Employer of Choice for Gender Equality. Whether a future intern or graduate, we're an organisation that embraces flexible work, exploring the why behind our client's challenges and developing creative solutions to problems underpinned by deep technical expertise, something we want to develop in you right from the start of your Aurecon journey. If this sounds exciting and you want to find out more, take a look at some of our social media pages to see the great work we do and people you'll meet if you start your career with us.

aurecon

OVERVIEW

Carlton & United Breweries (CUB) is one of Australia's most iconic companies. We brew some of Australia's most beloved beers and ciders including Victoria Bitter, Carlton Draught, Great Northern, Pure Blonde, Strongbow, Mercury and Bulmers. We employ nearly 1,500 people in Australia, at our five breweries and various offices across the country. We also brew and distribute global iconic brands such as Corona, Stella Artois and Budweiser. Carlton & United Breweries is on the hunt for the next generation of graduates who are determined to dream big and are empowered to lead change. Are you up for the challenge? If you are, these are the employee attributes we look for: For the Supply Management Trainee (SMT) program, you will have less than two years of full time work experience, with an undergraduate degree preferably in Engineering (Chemical, Mechanical, Process, Production or Electrical) or Science (Bio-chem, Micro-biology, Brewing, Food Science and Pharmacy). But you must have work authorisation for Australia and be geographically mobile. Culture is a huge component for CUB so it is important that you get to know our culture and determine if it aligns with what you stand for!



CULTURE & VALUES

Carlton and United breweries dreams of creating a better world. One that is cleaner, greener and more sustainable. One that is safer because all people drink responsibly. One where we help make a better Australia for everyone. We are committed to using our scale, resources, and ability to bring people together to help create a Better World. And every member of CUB, from procurement to sales to marketing is responsible for helping deliver this commitment.

WHAT MAKES CUB STAND OUT

CUB is very motivated towards achieving its goals and we believe that we achieve more together. We set ambitious targets and achieve them well before the targeted timeline we set for ourselves. An example of this would be how we are well on track to achieving 100% renewable energy by 2021 when the initial target for the goal was for 2025.

CUB is not only leading the way with sustainability but also with innovation. CUB was named as one of Australia's most innovative companies. The award confirms CUB as the brewing industry's leading innovator. Last year, we developed draught cocktail range Lexington Hill, which is now in sale in the UK, while mid-strength Great Northern Super Crisp has become one of Australia's most popular beers despite only launching four years ago.



OVERVIEW

Downer designs, builds and sustains assets, infrastructure and facilities and we are the leading provider of integrated services in Australia and New Zealand. With a history dating back over 150 years, Downer is listed on the Australian Securities Exchange and New Zealand Stock Exchange as Downer EDI Limited (DOW). We are an ASX 100 company that also owns 88 per cent of Spotless Group Holdings Limited (SPO). Downer Group employs more than 53,000 people across more than 300 sites, primarily in Australia and New Zealand but also in the Asia-Pacific region, South America and Southern Africa.



WHAT MAKES DOWNER STAND OUT

At Downer, we support our customers through the full life of their assets - from initial feasibility and design through to production and operations and eventual decommissioning. We build strong relationships of trust with our customers, truly understanding and predicting their needs and bringing them world leading insights and solutions. We aim to employ the best people and bring thought leadership to each stage of the asset lifecycle as we support our customers to plan, create and sustain.

CULTURE & VALUES

At Downer, our customers are at the heart of everything we do. Our Purpose is to create and sustain the modern environment by building trusted relationships with our customers. Our Promise is to work closely with our customers to help them succeed, using world-leading insights and solutions.

OVERVIEW

GHD is one of the world's leading professional services companies. We operate in the global markets of water, energy and resources, environment, property and buildings, and transportation. Proudly owned by our people, GHD is rich in diversity of thought, background and experience. Today, more than 10000 empowered people in 200+ offices on five continents collaborate seamlessly to understand our clients' objectives, solve their problems and bring imaginative solutions to life.

CULTURE & VALUES

GHD is driven by a culture of service excellence, we partner with our clients to develop engineering, architecture, environmental, advisory, digital and construction solutions together. We apply high standards of safety quality and ethics to create value throughout the project lifecycle.

WHAT MAKES GHD STAND OUT

Our connected global network brings deep technical capabilities, multi-disciplinary skills and industry insights to help our clients succeed. The value of our work can be seen in the social progress, sustainable development and economic growth we bring to the communities we touch.

For more information, visit www.ghd.com





"We believe everybody should have the opportunity to participate and express their ideas on how to create change."

Annie Xu

Civil Engineer | Digital Solutions Advisor

Diversity is fundamental to creating a more informed and engaged engineering sector. Our commitment toward diversity in the workplace is driven by a strong conviction that genuine inclusion will deliver greater productivity, creativity, and diversity from deeper pools of talent and through fairer processes for all.

GHD is committed to ensuring equality of opportunity for everyone, regardless of gender or background. We offer a professional, friendly and inclusive culture based on our core values of Safety, Teamwork, Respect and Integrity.

GHD is one of the world's leading professional services companies delivering imaginative engineering, architecture, environmental, construction, advisory and digital solutions that create lasting community benefit. Operating in the water, energy & resources, environment, property & buildings, and transportation markets, we bring local knowledge and a global perspective to every project.

Established in 1928 and privately owned by our people, GHD operates across five continents - Asia, Australia, Europe, North and South America - and the Pacific region. We employ more than 10,000 people in 200+ offices to deliver projects with high standards of safety, quality and ethics.

If you are interested in becoming a part of our GHD community we have the programs below to get involved:

GHD Intern Program

Through the summer period (November 2019 to February 2020), our Interns will be given the chance to work on a variety of projects within their nominated field. GHD will provide opportunities to gain hands-on experience in a diverse range of projects, networking sessions with peers and senior professionals, and the chance to be part of a dynamic and thriving consultancy business.

Applications open: Monday, 22 July 2019

Applications close: Sunday, 25 August 2019

GHD Graduate Development Program

The GHD Graduate Development Program is an integrated two-year, holistic approach to developing our future leaders and technical experts. The structured program provides the tools and opportunities needed to establish and build a successful career with us.

Applications open: March annually

Program commences: February the following year; next program commences February 2020

Our people are at the very heart of our success. That's why we are committed to developing and supporting talented, motivated individuals who are eager to launch their professional careers delivering to clients on varied and challenging projects.

Visit www.ghd.com/graduates for more information



OVERVIEW

Invetech is a global innovation and product realisation partner that has been creating breakthrough products and custom automation systems for more than thirty years. As a product development consultancy, we blend creativity, commercial know-how and technical acumen to help our clients create business success. Our experience in design, development and contract manufacturing spans a range of healthcare market sectors including laboratory diagnostics, Point of Care diagnostics, cell and advanced therapies, and life sciences.

The combination of our human-centred approach, agile product development processes, strategic program management and customisable modules are what set us apart from other product development companies. Working together with our clients, these processes, tools and principles enable us to deliver outstanding products, making Invetech the clear choice for those who demand the highest standards from their product realisation partner. We have a global reach with offices located in Melbourne, San Diego & Boxborough

CULTURE & VALUES

Collaborating with our clients to realise ground-breaking products through excellence in design, engineering and manufacturing is our mission. This is demonstrated through our core values which influence the way we work with each other and our clients.

INNOVATION

We're bold and imaginative, thriving on opportunities to solve complex problems and deliver breakthrough results.

INTEGRITY

We value openness and honesty in the way we communicate and operate.

ENTHUSIASM

Our people are passionate about what we do and committed to delivering the best outcomes.

COLLABORATION

We support and learn from each other to achieve the right outcomes for our clients and our company.

EXCELLENCE

We hire the best people, creating a challenging and people-first culture that promotes strategic thinking, service excellence and continuous improvement.

WHAT MAKES INVETECH STAND OUT

The combination of our human-centered approach, agile product development processes, strategic program management and proprietary modules are what set us apart from other product development companies.

Working together with our clients, these processes, tools and principles enable us to deliver outstanding products. The projects we work on at Invetech are truly groundbreaking, and due to our talented people, incredible ideas come to fruition through hard work, collaboration and dedication.

Invetech

OVERVIEW

Headquartered in Sydney, Australia, Lendlease has approximately 12,350 employees internationally with regional head offices located in New York, Singapore and London. We are a publicly listed company on the Australian Securities Exchange, with up to 700 active projects and managed assets around the world.

OUR GRADUATES

Building places that leave a lasting legacy starts by building great teams, and we are looking for people with the right combination of skills and values to drive our vision across our business. As a participant of the Lendlease two-year graduate program, you will become part of a diverse team-based environment and have access to structured professional experiences that ensure you develop and grow:

- A minimum of 2 rotations across projects or roles
- Learning programs to build upon your professional and technical skills
- Networking opportunities across business units with Graduates and Leaders
- Support Structure consisting of a Manager, Buddy, Mentor and Graduate Program Team

CULTURE & VALUES

Our core capabilities are Development, Construction and Investments. Lendlease's people and our delivery partners are the greatest contributors to our success and underpin our ability to deliver our vision: To create the best places.

Lendlease is a diverse, flexible and inclusive employer of choice. Our operating principles define how we do business.

HEALTH & SAFETY

Everyone has the right to go home safely to their families, friends and loved ones, every day. We remain committed to the health and safety of our people, our subcontractors, and all of those who interact with a Lendlease place.

SUSTAINABILITY

Lendlease has a proud history of giving emphasis to environmental, social and economic outcomes. It is essential we continue to evolve our approach, to keep pace with global trends and integrate this thinking into our business strategy.

DIVERSITY & INCLUSION

Lendlease is all about creating places where people feel comfortable in their environment, allowing us all to be the best we can be. A diverse and inclusive workplace not only means people feel valued, it helps build a better, stronger and more innovative Lendlease. Our global inclusion strategy is focused on embedding flexible work; achieving gender equity; and building an inclusive workplace.

CUSTOMER FOCUS

We are committed to better understanding customers' needs and improving their experience with Lendlease.



OVERVIEW

The Level Crossing Removal Project (LXRP) was established by the Victorian Government and oversees the largest rail infrastructure project in the state's history. LXRP is part of Victoria's Big Build which encompasses 119 major rail and road projects and employs more than 12,000 people. Central to the project is removing 75 level crossings across metropolitan Melbourne by 2025, in addition to upgrading or constructing 27 train stations, laying many kilometres of track and making associated rail improvements. As part of the Major Transport Infrastructure Authority (MTIA) graduate program, LXRP offers graduates a two-year career-defining experience.

The program includes learning driven discipline and business rotations, an assigned Mentor (includes the CEO!), an immersive Welcome Week and a bespoke Learning Series of 12 modules. Graduates can also work across a range of different projects and gain experience working in LXRP and with our Alliance partners.

CULTURE & VALUES

LXRP recognises the importance of diversity in the transport and infrastructure industry. LXRP initiated the first Victorian Government's 'Women in Transport' mentoring program, offering professional development and networking opportunities with the purpose of encouraging more women to enter and stay in the transport sector. At LXRP, we celebrate and recognise individuals and team achievements and pride ourselves on how well we work together. Our values guide how we interact with each other – we demonstrate them in our 'every day'. We are proud to be transforming Melbourne and creating a legacy that will last for generations.

WHAT MAKES LXRP STAND OUT

LXRP was the first Victorian Government organisation to adopt a Social Procurement Policy and engage social benefit suppliers. LXRP's commitment to the community means we not only source goods and services efficiently but generate positive social outcomes while we do.

LXRP is also a leader in diversity and inclusion, providing and promoting opportunities for all communities within our organisation and the wider transport sector.

LXRP's vision is 'Delivering great change, transforming the way Victorians live, work and travel', and is reflected in everything we do. Working for LXRP means you can make a difference for all Victorians – working in a committed team, to contribute to the expert delivery of major projects whilst gaining experience and capabilities to develop your career.



SCHNEIDER ELECTRIC

OVERVIEW

At Schneider, we believe access to energy and digital is a basic human right. We empower all to do more with less, ensuring Life Is On everywhere, for everyone, at every moment. We are leading the digital transformation of energy management and automation. We provide energy and automation digital solutions for efficiency and sustainability. We combine world-leading energy technologies, real-time automation, software and services into integrated solutions for Homes, Buildings, Data Centers, Infrastructure and Industries. We make it possible for IoT-enabled solutions to seamlessly connect, collect, analyze and act on data in real-time delivering enhanced safety, efficiency, reliability, and sustainability.



CULTURE & VALUES

We are committed to unleash the infinite possibilities of an open, global, innovative community that is passionate with our Meaningful Purpose, Inclusive and Empowered values. We are driven by our meaningful purpose to bring energy and efficiency to enable life, progress and sustainability for all. Together, we dare to disrupt and turn our bold ideas into reality.

Working at Schneider, we promise you this:

- You will find your work meaningful. Our mission is to bring energy and efficiency to enable life, progress and sustainability for all.
- You will be in an inclusive environment. We believe in equal opportunities for everyone, everywhere, so that every person feels uniquely valued and safe.
- You will be empowered. We empower our people to use their judgement, do the best for our customers, and make the most of their energy.

WHAT MAKES SCHNEIDER ELECTRIC STAND OUT

We are one of the world's most attractive employers for engineering and IT Students. We are recognized by Bloomberg as one of 104 companies that have made strong commitments to gender equality and we are celebrating our 4th year of being a HeForShe Impact Champion founded by the United Nations Women Solidarity Movement. Over 2.4 million households to date have benefited from our Access to Energy programs, over 70,000 people have been trained in energy technologies and over 400,000 have been trained online through our Energy University. No matter who you are or how you manage your unique life and work, you can always be at your best. The ability to transform one of the oldest energy companies in the world into a powerhouse of cutting-edge digital innovation would not be possible without our continuing efforts to build the best teams possible.

Life Is On

Schneider
Electric

STELARLAB | LOCKHEED MARTIN

OVERVIEW

Lockheed Martin Australia is an Australian company engaged in research, design, development, integration and sustainment of advanced technology systems, products and services. An industry leader in defence and technology, headquartered in Canberra, Lockheed Martin Australia employs more than 1,000 people who contribute to a global workforce of more than 100,000. In Australia we are working on next generation pilot training, combat systems integration, rotary wing systems and sustainment, 5th generation air combat capability and surveillance across air, sea, land and space domains.

STELaRLab Lockheed Martin's first multi-disciplinary R&D facility outside the United States, led by Dr Tony Lindsay, one of Australia's preeminent defence scientists. We're partnering with Australia's finest minds and academic institutions to solve some of the world's enduring and emerging challenges; exploring hypersonics, autonomy, robotics and command, control, communications, computing, intelligence, surveillance and reconnaissance (C4ISR).

CULTURE & VALUES

We know it takes a diverse, collaborative team to deliver our programs. Our teams are driven, ambitious team players who are as passionate as we are about building a better tomorrow - today. Lockheed Martin's values are also personal attributes that we look for in recruiting our future team members. These values are:

- Do What's Right
- Respect Others
- Perform With Excellence

WHAT MAKE STELARLAB STAND OUT

We're an industry leader in defence and technology bringing best practice and leading edge concepts and technology to Australia. Our commitment to research and development in Australia helps drive growth and prosperity and position Australia as a leading and dynamic 21st century economy. In support of this we are partnering with universities to support PhD projects via industry top ups to the Australian Post Graduate award program.



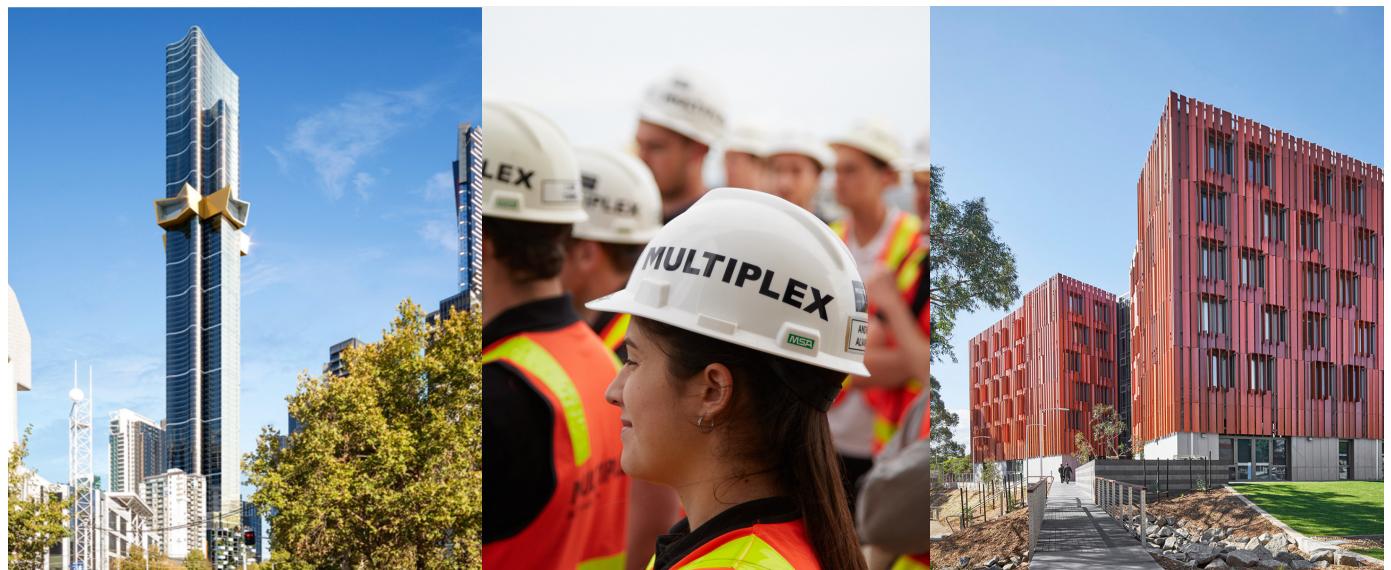
LOCKHEED MARTIN

MULTIPLEX

OVERVIEW

Multiplex is a premier, global construction company, shaping skylines and delivering iconic projects for over 55 years. Our work to date of current and completed projects comprises more than 1000 jobs with a combined value of more than \$80 billion.

In Australia, Multiplex operates predominantly in Melbourne, Sydney, Brisbane and Perth. In Melbourne alone, we have a wide range of projects varying in size and complexity, including but not limited to high rise residential apartments, commercial towers and student accommodation. Our Graduate and Cadet program has a long-standing reputation for being one of the construction industry's most comprehensive. Over the years we have recruited outstanding Graduates and Cadets from major universities across the country, including our own CEO, and we are proven to be successful at developing well rounded, broad thinking graduates and cadets who become leaders of our global business.



CULTURE & VALUES

Multiplex is committed to the pursuit of outperformance for people and places, utilising our powerful thinking, rewarding partnerships and culture of empowerment. Self-motivated to perform beyond expectations, our people enjoy a supportive environment and plenty of opportunity which enables everyone to flourish. Our values of Care, Collaboration, Outperformance and Integrity guide our behaviours every day.

WHAT MAKES MULTIPLEX STAND OUT

Multiplex is committed to having a workforce that reflects the diversity of the global communities in which it operates and a culture of respect and inclusion at all times. At Multiplex we want an inclusive and flexible workplace where all employees are valued, encouraged to express their ideas and opinions and are able to reach their full potential. We aim to leave a positive legacy in the communities in which we work by extending our culture to all interactions with customers and society. We have a number of initiatives in place to help support diversity and inclusion at Multiplex, including an industry-leading flexibility program.

MULTIPLEX

Built to outperform.

OVERVIEW

Viva Energy is one of Australia's leading energy companies. We have approximately 1,000 employees that are based at locations across Australia. Our head office is in Melbourne, our Refinery is in Geelong, we have offices in most capital cities within Australia, and a network of more than 28 fuel import terminals around the country. We have a diverse range of roles ranging from Engineers (many disciplines, predominately Chemical, Mechanical and Pipeline), Sales and Marketing, Property, Supply Chain and Logistics.

CULTURE & VALUES

Our purpose is to 'help people reach their destination' and we do this by making, importing and delivering the fuels, lubricants, chemicals and bitumen Australians need to get there. We describe our culture as driven by people. To us this means creating an enviable experience for the people who choose to work with us. A workplace where people have purposeful work, are challenged to grow, feel valued and connected to our company and inspired by the outcomes we deliver together.

We work in teams and respect each other because we're genuinely better together. We believe different perspectives and teamwork deliver the best results. We make sure we recognise and celebrate our successes, because we want our people to feel proud of the amazing outcomes they achieve together.

Viva Energy is founded on strong values and promotes a culture based on honesty, integrity and respect for each other and the communities in which we operate. We are committed to ensuring all employees have the capability and right to a fair, safe and productive environment where they can develop to their full potential and embrace diversity in all forms. And we also pride ourselves on our strong safety culture. At Viva Energy safety comes first, so we will always look out for one another.

WHAT MAKES VIVA ENERGY STAND OUT

It's important that Viva Energy remains current and competitive as technology changes and our industry faces disruption. We need people that have a growth mindset to evolve, grow and change to help us face these challenges.



OVERVIEW

Wood is a global leader in the delivery of project, engineering and technical services to energy and industrial markets. We operate in more than 60 countries, employing around 60,000 people, with revenues of over \$10 billion. We provide performance-driven solutions throughout the asset life cycle, from concept to decommissioning across a broad range of industrial markets, including upstream, midstream and downstream oil & gas, chemicals, environment and infrastructure, power & process, clean energy, mining, nuclear, and general industrial sectors. Wood's global headquarters are in Aberdeen, Scotland.

CULTURE & VALUES

Much of our success depends on our people feeling part of a team with others they can rely on. Our vision is to: Inspire with ingenuity, partner with agility, create new possibilities. Our vision takes inspiration from our new business and our sources of competitive advantage: partnership, ingenuity, range.

We have three values:

- Care: Working safely, with integrity, respecting and valuing each other and our communities
- Commitment: Consistently delivering to all our stakeholders
- Courage: Pushing the boundaries to create smarter, more sustainable solutions.

We also have six behaviours that we expect all Wood employees to exhibit:

1. Listen up: Listen for possibilities, seek and provide feedback in equal measure
2. Lift others up: Inspire others and lead by example with colleagues, customers and communities alike
3. Stand up: Make an active contribution, say what we do and do what we say
4. Team up: Work collectively to achieve our aims, embrace diversity and encourage contributions from all
5. Speak up: Look for ways to improve, identify and share best practices
6. Don't give up: Stay focussed on our goals and treat failure as a learning opportunity

WHAT MAKES WOOD STAND OUT

At Wood we recognise the role we play in ensuring the future sustainability of our world. Through living our values – Care, Commitment and Courage – sustainable action is something we do every day. Our sustainability framework supports our vision of a sustainable future. To keep it simple, we've built our strategy around people, planet and profit. We aspire to be a good citizen of the world; responding to the needs of our people and the communities where we operate, nurturing and supporting future generations. We aim to minimise our impact on the environment through conserving resources, reducing waste and emissions and preventing environmental pollution. Through growing our renewable energy services, in providing low and zero emission energy solutions, we can help our customers meet the challenges of tomorrow. We are not driven by the concept of 'Profit at any cost'.

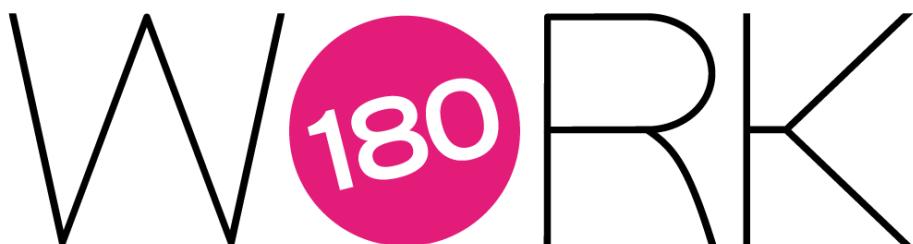
WORK 180

WORK180 is a global jobs network that operates at the forefront of a new workplace revolution. Our function is twofold. As an advocate for working women, we provide job applicants with a transparent directory of Endorsed Employers who support diversity, inclusion and equality.

We share information around pay equity, flexible working, paid parental leave, equal opportunities and a range of other important criteria. Before an employer comes on board, we put them through a pre-screening process and on average, about 80% of companies who apply to work with us, pass our criteria. The information we uncover isn't available anywhere else, but we make it public on our website so that candidates know exactly what to expect before applying for a job. Endorsed Employers include Lendlease and Downer and job seekers can find their available jobs along with over hundreds of employers on the WORK180 jobs board.

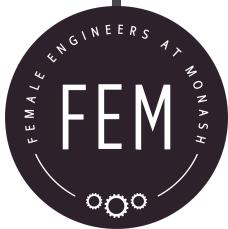
We also work with employers to improve and develop workforce participation. The majority of the companies who don't initially pass the criteria, return to us after improving. We share best practice, offer strategic advice and provide a highly active jobs board where businesses can connect with the talented people in our network. Although not all workplaces can match the standards set by the most progressive employers, these values can be emulated and there's always something that can be done to enrich workplace culture and invite a broader and more diverse knowledge base to an organisation.

There's a long way to go in the fight for better working conditions, but the change we're seeing is astounding. It really is an exciting time for workplace equality, and we're just getting started. Our mission (hopefully yours too) is to finally put an end to workplace discrimination, so that everyone is valued equally and businesses can enjoy the benefits of a truly diverse workforce. Join our workplace revolution and find out which workplaces you should apply for as you enter the workforce and leave university behind. Visit www.work180.co and set up your job alert today!



Endorsed Employers for Women

- 24 CREATING A CAREER PLAN
- 26 AUSTRALIA'S ENGINEERING
PROFESSION
- 28 PROFESSIONAL BODIES
- 30 ENGINEERS' STORIES AND
THEIR ADVICE



FEM

CAREER ADVICE

CREATING A CAREER PLAN

Studying a course in engineering opens up many potential career pathways- how do you know which pathway or organisation is right for you? One thing you can do is to develop a career plan. A career plan can help you in identifying your skills and interests, what job options might be right for you, and how you can reach your career goals.



SELF EVALUATION

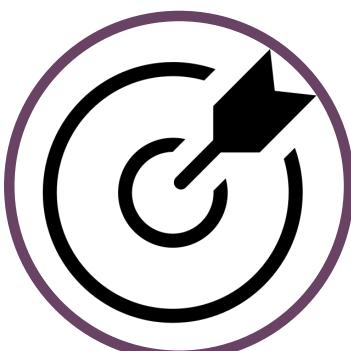
Think about your current skills and interests. What are you good at? (List some past achievements!) What are some values or visions you hold in your life? It can be helpful to ask people around you what they think are your strengths and attributes too!



RESEARCH CAREER INFORMATION

Before you select a career pathway, it helps to know what opportunities are actually out there and what the industry is looking for! Narrow down your career options by researching career information, reading up on companies, and talking to professionals working in the field. This industry guide is a great start!

SPECIFIC **MEASURABLE** **ATTAINABLE** **RELEVANT** **TIME BOUND**



SET GOALS

Develop a plan or a list of steps that will help you reach your career goals. They can be short term or long term, but make sure they SMART! Besides resume building and developing interview skills, other helpful actions can include developing an elevator pitch or contacting an industry mentor.

Remember, your career plan can be flexible and amended as you feel necessary.

Your interests and goals may change, and that's perfectly okay! :)

- Specific -- Identify your goal clearly and specifically.
- Measurable -- Include clear criteria to determine progress and accomplishment.
- Attainable -- The goal should have a 50 percent or greater chance of success.
- Relevant -- The goal is important and relevant to you.
- Time bound -- Commit to a specific timeframe.

RESUME WRITING

A well-structured resume is your stepping stone to a successful job offer. Generally, your resume should include the information below:-

- Contact details
- Education and Training background
- Employment history
- Volunteering and Community Involvement



While the above basic information is necessary to all your resumes, it is important for you to tailor your resume to different job applications so that it can meet different job requirements.



GETTING A MENTOR

Mentoring is a great way to find out how you can progress in your career goals and to expand your industry network. Through your mentor, you can receive insights and advice from their experiences and be empowered to achieve your goals.

First figure out what would you like your mentor to provide. If you want to learn how to succeed in your internship or graduate role, who can provide support in that area? Generally it is someone who has been through that experience before!

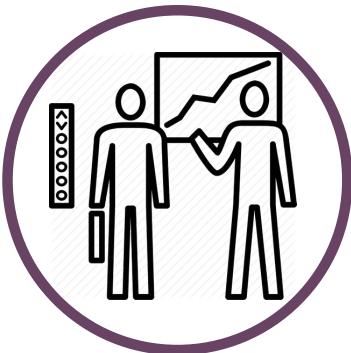
You don't have to wait until you're in the workplace to get a mentor!

DEVELOPING AN ELEVATOR PITCH

An elevator pitch is a concise, persuasive speech that you use to show who you are and what you do quickly to someone who you don't know. A good elevator pitch should last less than a normal elevator ride, as indicated by its name. For students, you can use it at career expos, networking events or job interviews etc.

To create an elevator pitch, you need to :

- Say who you are & what you do
- Explain background & context - why are you interested in talking to them?
- Engage and connect your audience - asking them some questions!
- Ask something they could help you in, maybe it's for them to be your mentor



AUSTRALIA'S ENGINEERING PROFESSION

Engineering might not be the most relaxed field of work, but it is certainly one of the most rewarding. It is indispensable in almost every aspect of what makes the Australian society function and prosper, whether you realise it or not.

Engineers enable ideas to be turned into realities and ensure that existing products and facilities are continually maintained and optimised. With rapid changes in new technologies, materials and processes, it means that the engineering industry and practice are constantly evolving over time too.

Those who want to become qualified engineers must first select an engineering discipline to concentrate on during academic studies. Further specialisation then take place in the professional workplace where continuous learning takes place on the job. However, the multifaceted nature of the problems encountered in engineering means that engineers will rarely work by themselves, but rather in multi-disciplinary teams consisting of various types of engineers and professionals.

Thus, the core abilities of successful engineers include analytical thinking, teamwork, clear communication skills and enthusiasm towards learning. These skills possessed by engineers are deeply valued and highly transferable. Subsequently, many people with an engineering background can also find themselves contributing to Australia's development through other fields of work.

University engineering graduates have one of the most positive employment outcomes:

83.4%

are in full-time employment within 4 months of graduation, compared to the average 73.3% for all study areas in 2017-2018.¹

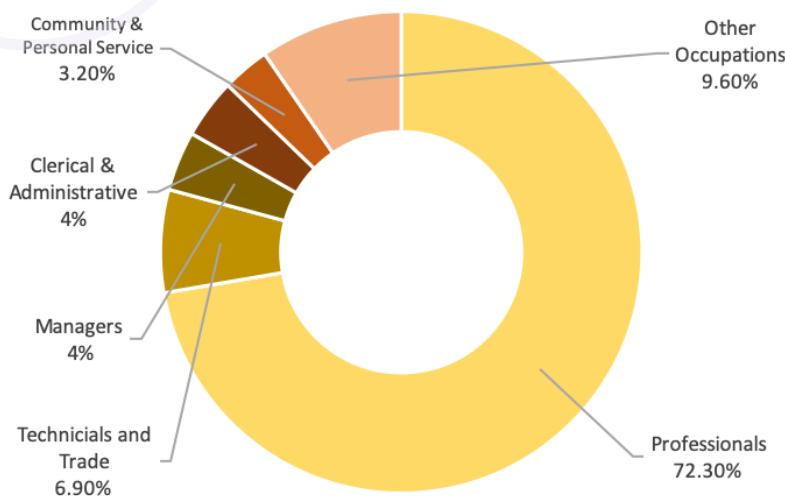
The 2018 Graduate Outcomes Survey (GOS) shows no salary gap in favour of men in engineering, with

\$65,000

as the median salaries for both men and women engineering graduates. This is also one of the areas with the highest graduate salaries.¹

WHERE DO ENGINEERS WORK?

1. IN 2018, ENGINEERING GRADUATES WERE EMPLOYED AS:¹



2. IN 2016
73.1%

OF QUALIFIED ENGINEERS WERE EMPLOYED IN CORE ENGINEERING INDUSTRIES.²

Qualified engineers predominantly work in a select number of industries, referred to as the "core engineering industries", which includes construction, information media mining, manufacturing and telecommunications.

TO BREAK IT DOWN FURTHER

TOP INDUSTRIES FOR QUALIFIED ENGINEERS IN AUSTRALIA:²

16.8%

Architectural,
Engineering &
Technical Services
(Commonly referred to
as "Engineering
Consulting")

7.2%

Computer System
Design and
Related Services

4.1%

Heavy and Civil
Engineering
Construction

3.4%

Telecommunication
Services

3.3%

Tertiary
Education

2.5%

Defence

2.8%

Metal Ore Mining

¹ Quality Indicators of Learning and Teaching (QILT), 2018 Graduate Outcomes Survey, January 2019.

² Engineers Australia, The Engineering Profession - A Statistical Overview, Fourteenth Edition, June 2019.

PROFESSIONAL BODIES

Engineers Australia

As the representative body for the engineering profession nationwide, Engineers Australia plays a paramount role in developing future and current generations of engineers. This is a resourceful platform to facilitate students' transition from academic to professional life. As a member, you will find opportunities to join seminars and panel sessions tailored to young engineers, as well as training and networking events with industry professionals.

Sign up as a student member for free to join the expansive network of nearly 100,000 engineers!

Also look out for:

Frontier

As a community for student and graduate members of Engineers Australia, this is your guide to getting ahead as a young Engineer. With Frontier, you can

- Stay up to date with member-exclusive resources for skills, knowledge and career pathways.
- Build your personal brand and professional network with future employers.
- Find support on your engineering voyage, through events and resources tailored to everything you need to know about university and professional life.

Find out more at frontier.engineersaustralia.org.au



World Engineers Convention (WEC) 2019

20 – 22 November 2019

Leading engineers and related professionals from around the globe will unite at the World Engineers Convention to identify sustainable development challenges, take action, and commit to change. The Convention program focuses on sustainable cities and climate change, innovation and disruption, and leadership and governance, while also addressing the need for a more diverse profession and the capabilities that are required for the engineers of our future.

WEC is an opportunity to celebrate but also to look ahead, to plan for a sustainable future and to create a better world. It will provide young engineers with the exclusive opportunity to contribute to global discussions and forge new connections with industry experts from various engineering disciplines and backgrounds.

Student Members of Engineers Australia receive an exclusive registration rate of \$295.00 AUD. Register at WEC2019.ORG.AU. To join Engineers Australia as a student member, visit frontier.engineersaustralia.org.au/membership. Membership is free! Happy Centenary to EA!



DISCIPLINE SPECIFIC

CIVIL ENGINEERING

Institution of Civil Engineers
(ICE)

Student membership benefits:

- Information and advice on becoming an incorporated engineer, a chartered engineer or an engineering technician
- Build industry contacts and learn from experienced civil engineers at ICE events
- Cost: FREE

ELECTRICAL ENGINEERING

Institute of Electrical and Electronics Engineers (IEEE)

Resources and opportunities needed to stay on top of technological advancements:

- Networking opportunities with other professionals in the local area or within a specific technical interest
- Discounted pricing on insurance and a variety of products and services
- Cost: \$27 per annum

ENVIRONMENTAL ENGINEERING

Association of Environmental Engineering & Science Professionals (AEESP)

Student membership benefits:

- Networking opportunities that foster a supportive environment for the professional development
- Information on developments in environmental engineering, science, and related fields
- Assistance in matters relating to the development of academic and research programs
- Cost: \$15 per annum

CHEMICAL ENGINEERING

Institution of Chemical Engineers (IChemE)

Student membership benefits:

- Digital subscription to The Chemical Engineer magazine
- Networking events and webinars via regional member groups and technical special interest groups
- Resources such as the Student Pocketbook, Job-Hunters' Survival Kit and Graduates' Guide
- Cost: \$60 per annum

MECHANICAL ENGINEERING

Institution of Mechanical Engineers (IMechE)

Student membership benefits:

- Career advice and tips on searching for jobs and internships, and preparing for interviews
- Networking opportunities at seminars and events
- Access to iMechE's Young Members network
- Cost: FREE

MATERIALS ENGINEERING

Materials Australia

Student membership benefits:

- Online access to Materials Australia member-only website
- Discounts at conferences, seminars and training courses
- Opportunities to join local committees and attend state branch meetings
- Cost: \$45 per annum

ENGINEERS' STORIES

DR. RICHA SHUKLA POTDAR



I am a Geotechnical Engineer and Project Manager by profession, and I have been working for GHD for the last 4 years. I migrated to Australia in 2007, from the inland city of Indore in India. I am the third child in my family, with three siblings, and am a mother myself to a 7 y/o amazing boy! I enjoy gardening, cooking and music, and yes, I am a strong advocate for progressing women in STEM.

WHAT PATH DID YOU TAKE TO GET TO WHERE YOU ARE TODAY?

I completed my Bachelors of Civil Engineering in India in 2005, and was awarded an internship at the Indian Institute of Technology, Mumbai during my third year which sparked my interest in research. After graduation, I worked for two years as a researcher at the Central Road Research Institute, Delhi, India.

My Australian journey started in 2007, when I joined Monash University as a PhD student at the Department of Civil Engineering to study Carbon Sequestration and Storage (CCS) in Saline Aquifers. CO2CRC sponsored my research, and I was able to publish several journal papers and a book chapter.

Soon after being awarded my doctorate, I became a proud mother of a beautiful baby boy, and took a maternity break for 18 months before resuming my job search. After spending over seven years on the research side, my aim was to gain work experience in industry, where I could exercise my gathered knowledge and skills. I got a breakthrough when I was invited by Bamford Rock Services (BRTS, a commercial rock testing laboratory in North Melbourne) to join them as a research associate and project manager in 2014. Through my work at BRTS, I got the opportunity to learn more about industry practices and establish valuable contacts in various consulting firms in my field which resulted in securing a position at GHD in 2015 where I have continued to work to date.

WHAT ARE YOUR FUTURE CAREER GOALS?

Over the last five years of working as a professional geotechnical engineer, I have explored and accumulated skills in field investigations, analysis, design and documentation, and I have realised that I enjoy planning, management and leadership responsibilities the most. My aim for the near future is to expand my skills in management and leadership, and continue my involvement with technical societies like AGS, and with social groups like FEM.

HAVE YOU EXPERIENCED ANY DIFFICULTY THROUGHOUT YOUR CAREER AND HOW DID YOU OVERCOME IT?

It wasn't easy to find employment after my maternity break. I found myself being trapped in the infamous scenario of being "over qualified and under experienced". After a few months of online job applications, I realised that I need to change my approach, and started contacting people directly through LinkedIn. After a few weeks of putting my profile forward through meeting people, I started securing interviews, and that's how and when I landed my first ever employment in Australia, at BRTS!

WOULD YOU DO ANYTHING DIFFERENTLY?

If I could go back in time. I would go back to 2008 or 2009, and advise myself to get involved with social and technical societies, where I could have come in contact with like-minded people, and make important contacts that could help in understanding the potential of knowledge that we earn during our course and how we apply it practically in engineering workforce. Finding a good mentor before finishing your course is another good idea.

DO YOU HAVE ANY ADVICE FOR CURRENT STUDENTS OR YOUR YOUNGER SELF?

For current graduate students, my advice would be to find work experience/ internship opportunities as soon as possible during your degree (during vacations). You can learn a lot and make valuable contacts that will help you sharpen your skills and make yourself more employable. I believe supporting your fellow students and juniors is essential too.

DR. JULIE KAREL



Dr Julie Karel is a Lecturer in Materials Science and Engineering at Monash University and conducts research to develop new materials for emerging low-energy nanoelectronic and magnetoelectronic devices.

WHAT PATH DID YOU TAKE TO GET TO WHERE YOU ARE TODAY?

During school, I always liked science, and I didn't really know what engineering was until my Mum suggested that I might be interested in it. I was originally interested in Chemical Engineering but didn't enjoy the classes so I ended up doing my undergrad in Materials Science and Engineering.

After finishing my undergrad I worked at Intel for two years, in the development of Thermal Interface Materials, which was a really great experience.

I learnt a lot about Industry but ultimately I think it wasn't technical enough for me and I really wanted to dig deep into problems so I decided to do a PhD, at the University of California, Berkeley. After that I did my postdoctoral research at the Max Planck Institute for Chemical Physics of Solids in Dresden, Germany. I was living in Germany, then I moved here, to Monash University about two and a half years ago into an academic position. I've been doing research for about ten years but this is my first foray into teaching so that's been really interesting and fun.

HOW DID INDUSTRY COMPARE TO ACADEMIA?

Industry moves really fast, they have product timelines, they have deliverables and they have to meet these strict deadlines. In academia the majority of your time is spent finding out why you have the results you have, whereas in Industry it was like 'this seems to work and we need to move on'. After Industry I started my PhD, and I wasn't really given a project but my thesis advisor said you should kind of work on these materials and maybe make these compositions to begin with. And I thought "Done, okay, I'll be done with this before Christmas" and I started in August, and that ended up being my entire PhD project.

As far as advice goes, I think it was really good to work in Industry because now I know what they do, I know how they think. I had a lot of PhD student colleagues that were unsure of whether they wanted to go into industry, or what it was like. And when I finished my PhD I knew I didn't want to go back to industry. So I think you don't necessarily have to do a PhD straight away, I'm kind of glad that I worked for a couple of years because I think that then the way you approach a PhD is more how you'd approach a job which is important as research is extremely self-motivated and you have to do it because you want to.

HOW HAVE YOU FOUND MOVING TO OTHER COUNTRIES AND THE CHANGE IN THE CULTURE OF WORK-LIFE BALANCE?

Personally, it was a challenge, moving to somewhere where I didn't speak the language, and I was alone and I had to figure out everything on my own as you can't ask someone to translate every letter that you receive. Travelling abroad is a good thing, I don't know anyone who has gone away and done a research internship and come back and said "That was the worst decision of my life." I did a research internship in Germany between my third and fourth year of undergrad and I realised I really liked doing research and it was a cool opportunity to be able to live abroad. It can be challenging and it can change you but I think it's a good thing.

Australia's work life balance is more similar to Europe than that of the US. I would say academics worked more than other people in Germany, but were probably slightly more relaxed than academics in America and I was somewhere in the middle. I started off working more as an American, and due to getting more used to the European culture I took my allocated vacations and I would say that I was more productive when I did that which was an important lesson to learn. Taking six weeks of holidays throughout the year is actually a good thing and you are likely to publish more papers when you do that because when you come back you're more creative, and ready to go.

I would say in Europe the work/life balance was much better than it is in America and although Americans are at work a lot, but I don't think they're very efficient because there's a lot more of a social aspect of having coffee and chatting. Whereas I think Germans are a little bit less social at work, but they come in, they're efficient, they do their job and then they leave. So it's probably good to have a balance of both.

WHAT ARE YOUR FUTURE CAREER GOALS?

I want to have a vibrant research group and I want to make important contributions to the field that I work in and I want to inspire young people to study, to stay in, or sustain science and in particular, women, but not exclusively. I like my discipline a lot and I think it is cool, and I like it when other people think it is cool. For myself, I think ultimately, I might like to have a leadership role either within the university or a professional society as I would like to help implement people's ideas of how to make things work differently.

WHAT IS YOUR ADVICE TO CURRENT STUDENTS?

My advice would be to get as much experience as you can. Either an internship or in Industry if you're interested in that, and if you're interested in research come talk to professors that have research groups that you want to work in as they're usually pretty open to having people do research with them or do a final year project with them and you'll get some real experience and you can see what it is like.

One thing I've learned along the way and seeing people that I've looked up to, everyone has moments where their confidence wavers or they're unsure about things and you shouldn't forget that. It's always good to keep in mind that just because your male colleagues are talking about how smart they are and how well they did, some of it is just talk and just keep doing your own thing and you'll be fine.

ZOE TONG



I'm a 5th year student studying a double degree in both Finance and Electrical and Computer Systems Engineering. My final year project involves using Reinforcement Learning to increase engagement in interactive art installations.

I'm currently working at the LEGO Education Centre as a STEM workshop facilitator; I love working with kids to show them the exciting directions the engineering world can take you. In my spare time, I'm an avid baker, play futsal and tend to my small jungle of succulents.

WHAT PATH DID YOU TAKE TO GET TO WHERE YOU ARE TODAY?

I never actually planned to go into engineering. My friend in year 11 convinced me to do physics and specialist maths. I had enjoyed maths and science up to year 10 but hadn't considered a pathway in STEM. I thought I would end up in nursing or teaching because none of my friends were considering a STEM degree - we were two of only three girls in both classes. But I ended up really enjoying physics, especially being able to do practicals and experiments. I didn't know any engineers, so it was only at uni open days that I began to consider that engineering was a potential career and pathway. My careers counsellor was fantastic and when results came out, she encouraged me to apply for Monash because of their reputation and the opportunities that they provide students.

I chose to study Electrical Engineering because I'd always been curious about everything technological and innovative. It's interesting how it is an integral part of our everyday lives, but most people don't know much about it. I think it's super cool to be able to look at life and have that greater understanding of how and why things work.

WHAT ARE YOUR FUTURE CAREER GOALS?

I currently really enjoy my degrees, but I haven't really figured out what I want to do after I graduate. I know that I really like working with other people and on challenging projects but I'm still trying to explore as many different avenues available to me through different engineering experiences and opportunities for students.

HAVE YOU EXPERIENCED ANY DIFFICULTY THROUGHOUT YOUR DEGREE AND HOW DID YOU OVERCOME IT?

One of the greatest challenges I faced throughout uni was trying to manage the imposter syndrome I began to feel at the beginning my degree. I've met so many amazing people during my time at Monash who are doing really incredible things and it's hard not to compare yourself to them and wonder whether you deserve to be here and if you're doing enough. Once I began to talk to my friends, I realised I wasn't the only one who was struggling, and that we were all suffering from imposter syndrome to some degree. For me, it was realising that it stemmed from a self-confidence issue; I've worked hard and deserved to be here as much as any other student and as long as I was doing my best, no one could say otherwise. So, I decided I wanted to be a role model for other students – in particular females - considering STEM. I believe that everyone is equally capable and should have the opportunity to study whatever they want. I want to show others that engineering isn't a 'super hard' or scary degree and to expose as many young people as possible to the idea of engineering being more than just designing buildings or coding.

I don't think I've completely overcome it, but I am more actively aware that often, the nagging feelings of self-doubt is just inside my head and I need to trust myself more.

WOULD YOU DO ANYTHING DIFFERENTLY?

I wish I'd joined a uni student team early in my degree to gain more technical knowledge and practical skills.

WHAT IS YOUR ADVICE TO CURRENT STUDENTS?

Academics may be important, but join social, sport or student clubs - they're the best part of uni and are a great way to socialise and maintain a work/life balance and for your mental health.

And lastly, put yourself out there and apply for all opportunities! There are so many fantastic things offered to students both in Australia and overseas and even if you're not successful, they're still learning opportunities to gain more experience and improve for next time!

FLAMES NETWORK



Over two decades ago, 8 women met while studying engineering at Monash University. They are now the driving force behind FLAMES - the Female Leaders Alumni Monash Engineering Scholarship which provides financial support and a mentoring network for a female engineering student. The first recipient of the scholarship is Marielle Salom, a 4th year civil engineering and commerce student. Some of the FLAMES network share their advice below.

AGNIESZKA SZCZEPANIK

Managing Director, Felix Financial Consulting Limited

Although overused, my advice is to be your authentic self. Don't be afraid to show who you are. It's always your personality and honesty that shines through. Having worked in different industries and across a broad range of roles, I think that is something everyone responds to is, enjoying and being comfortable in your own skin. It is something that sounds so obvious but sometimes it doesn't feel like it. Enjoy being you. You are individual and amazing. I hope the young women studying with you also feel the same way. Engineering is hard work and you are doing it. Good work.

NADIA ODORICO

Partner, BOSH IP

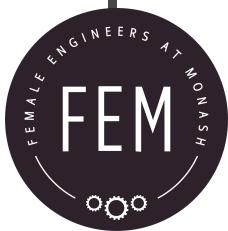
Be more involved by participating in University activities; in engineering opportunities, projects and exchanges but without compromising on study. This is because it's through involvement and passion in activities other than study that brings the most rewards and the best networking opportunities.

GABRIELLE L HENRY

Director, Industry Engagement and Development, Department of Environment, Land, Water and Planning

Back yourself and be your own best advocate. If someone has asked you to do a job or task, they believe you can do it so you should believe it, too. Take ownership of your work and don't be afraid of making mistakes as they can provide a great learning opportunity. Simply admit any errors you made without making excuses for them, find out how you can do better next time, and move on. Building genuine, respectful relationships will be your best asset in the workplace. Seeing things from others' points of view, making them feel valued and building rapport helps with teamwork, influencing and negotiation, calling in favours and most importantly of all, makes the workplace a nicer place to be both for you and the people you interact with.

- 38 GENERAL ENGINEERING CLUBS
- 39 STREAM SPECIFIC CLUBS
- 41 STUDENT TEAMS
- 44 CONTINUOUS PROFESSIONAL
DEVELOPMENT (CPD) GUIDE
- 46 FEM 2019 RECAP



FEM

EXTRA-CURRICULAR & CPD OPPORTUNITIES

GENERAL ENGINEERING CLUBS

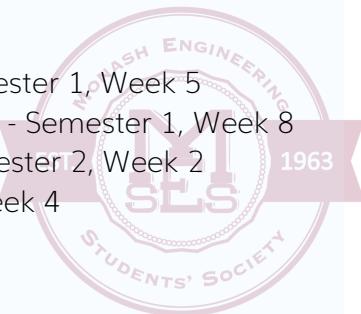
Monash Engineering Student Society (MESS)

MESS is the broadest Engineering club and we offer something for every Engineering student in one of our three portfolios: Social, Industry and Academic. Whether you want to meet fellow Engineering students at our Cocktail Night, or industry representatives at Beers with Engineers or Industry Night, we're sure to have something you're interested in.

Top Events

- Cocktail Night - Semester 1, Week 5
- Beers with Engineers - Semester 1, Week 8
- Industry Night - Semester 2, Week 2
- Ball - Semester 2, Week 4

Connect with us:
Instagram: @insta.mess
Facebook: Monash Engineering Student Society
Website: www.mess.org.au



Engineers Without Borders (EWB)



engineers
without borders
australia

Engineers Without Borders (EWB) is a member-based, community organisation that creates social value through engineering. The organisation was founded by local engineers and now has over 2,000 active members and 15,000 supporters across Australia.

Our Vision: Everyone has access to the engineering knowledge and resources required to lead a life of opportunity, free from poverty. Anyone is free to sign up and participate, and you also gain CPD hours!

Robogals

Robogals Monash is a not-for-profit, student-run organisation that aims to encourage more young women to pursue STEM career opportunities. As a team of current Monash students, we aim to achieve this by running robotics workshops for students at schools and local libraries across Melbourne.

Main events:-

VOLUNTEER: Weekly opportunities to be a demonstrator at robotics workshops.

NETWORK: Attend engineering industry events with our partner companies.

SOCIALISE: Get to know like-minded volunteers and make friends at Robogals social events!

Our volunteers are provided with extensive training and professional development opportunities linked to strengthening communication and leadership skills, and are supported in applying for committee, regional and global roles within the organisation. On top of all that, we run heaps of social events and activities including games night and our upcoming outreach camp!



Robogals
Monash Asia Pacific

STREAM SPECIFIC CLUBS

Association of Civil Engineering Students (ACES)

ACES is focused on connecting civil engineering students to industry as much as possible. We enable students to meet real engineers and representatives from the civil engineering and construction sector and give them a better insight into the different career paths and opportunities that are out there.

This is done through events such as careers fairs, dedicated company events, construction site tours, and providing useful information and resources to our members. In this way, ACES aims to enlighten civil engineering students about the profession and provide opportunities for vacation and graduate work.

Materials Engineering & Science Society (MatES)

The Materials Engineering and Science Society (MatES) is a close-packed club formed to bring together materials engineers of all year levels. We hold many events throughout the year, including academic events and FYP + vacation work information sessions.

We also hold revision sessions near exams in our very own cosy common room, which is open to all members all year. It is located in Building 36, near the Materials Engineering reception. Our social events include BBQs and end of term dinners. Join us to meet new mates, and form bonds stronger than 316L stainless steel!

Mechatronics Engineering Clayton Club (MECC)

MECC was formed to popularise and promote awareness of Mechatronics Engineering among students and companies. We endeavour to act as a platform for Mechatronics students and students of other engineering disciplines to share their ideas. MECC hosts a variety of events and programmes for students to get involved in which include the Mechanical Industry Night and weekly tutorials in CAD and programming.

We also host the robot building competition which will run for about 4 weeks from the start of semester 2, with a focus on basic electrical and mechanical engineering skills and knowledge. We hold an open event for first-year engineering students to get valuable insight from past and present mechatronics students.

Monash Aerospace & Mechanical Engineering Club (MAMEC)

MAMEC is the port of call for all mechanical and aerospace engineering students, both current and future. We're here to help you through every step of your journey through and beyond university and aim to connect you to not only other students but also get you in touch with top companies such as Boeing, Ford, Lockheed Martin and BAE Systems to kickstart your career.

Events we host throughout the year include: our flagship industry nights for both mechanical and aerospace engineering, a trivia night, and our famous Flight Day. In 2018, we launched our first ever Gliding Day, where we took our members to the skies in unpowered gliders! 2019 will see these events coming back even bigger and better.

Monash Engineering & Pharmaceutical Science Society (MEPSS)



MEPSS is an academic club catering primarily for students of the Chemical Engineering and Pharmaceutical Science double degree. MEPSS endeavours to provide a support network for all its members. This involves student mentorship, maintaining connections with Alumni (primarily at our annual Alumni night) and regular pizza lunches in order to foster inter-year level communication and relationships.

Monash Environmental Engineering Society (MEES)

The Monash Environmental Engineering Society seeks to enhance the skills and employability of its members and establish a network that begins with students and forges professional partnerships. MEES promotes interaction between its members and professionals, alumni and students within Monash and externally. MEES facilitates this engagement through a combination of social, academic and industry initiatives.

Our events include quarterly Industry nights, the annual MEES camp and Cocktail Night! This provides opportunities to engage with like-minded professionals and create connections with peers!



Resource Engineering Student Society (RESS)



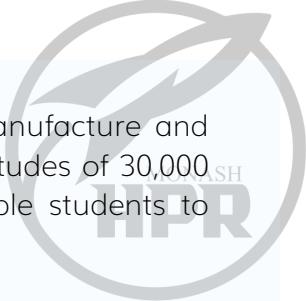
Resources Engineering Student Society is a small student run organisation that supports the new Resources Energy Engineering course. Focusing on Renewable energy and Mining, we aim to connect students with each other and with industry to provide them with the connections they need to support them through their degree and into the workplace. We host free BBQs every semester as well as industry nights and student activities.

This year we are running our first Renewables Industry Night and are sending students representatives to compete in the annual Mining Games.

STUDENT TEAMS

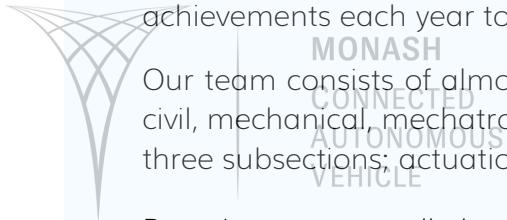
High Powered Rocketry (HPR)

HPR is a group of enthusiastic students working towards the design, manufacture and flight of Rockets. We build rockets to hit supersonic speeds and reach altitudes of 30,000 feet. We strive to push the boundaries of space technologies and enable students to become the space industry pioneers of the future.



Monash Connected Autonomous Vehicle (MCAV)

MCAV is a newly formed student team focusing on building autonomous vehicles that operate in a connected network. Our 2019 goal is to demonstrate autonomous parking with obstacle avoidance and connectivity capabilities. We aim to build on our achievements each year to develop more and more aspects of autonomous driving.



Our team consists of almost 50 students from a range of different disciplines including civil, mechanical, mechatronics, software and electrical engineering. We are broken into three subsections; actuation and hardware, software and interactions.

Recruitment generally happens twice a year, in November and March. You can keep up to date with our progress by following us on Facebook or checking out our website at monashcav.com.

Monash Human Power (MHP)

MHP is a student run engineering team that aims to build the fastest human powered vehicle in the world. Our current speed record is 78km/h, which was set in Ford's You Yangs Proving Grounds. Every component of the vehicle is designed and built in-house, mostly by our own student engineers!

Aside from mechanical and aerospace engineering, our student team comprises of students from a business background and a multitude of STEM fields, including industrial design, materials, structural, electrical, physiological and computer sciences.



Every component that we design is rider centric — a substantial challenge to incorporate the human element in the pursuit of speed. We are notably one of the most diverse student teams in terms of our team members' culture and background.

Monash Motorsport

Monash Motorsport is a student-run team who design, build, test and race our very own Formula SAE cars in Australia and internationally. Our team is comprised of nearly 130 Monash University students from a range of faculties, including engineering, commerce, science, design and law.

The team operates under the fundamental values of Learning, Professionalism, Camaraderie and Performance. Currently, Monash Motorsport is ranked 2nd in the world for the combustion class and 7th in the world for electric out of over 600 teams worldwide.

Monash Motorsport recruits students from second year onwards over the start of every year. We take in students from a wide range of disciplines and backgrounds and so we highly encourage anyone with a keen interest in engineering, design or business to apply.

Monash Young Medtech Innovators (MYMI)

MYMI is an interdisciplinary community of undergraduates, PhD and Early Career Researchers (ECRs) dedicated to achieving positive impact through biomedical innovation and medical technology. Since being founded in November 2018 we have grown to a team composed of 25 committee members and 200+ community members.

We run recruitment at the start of each calendar year, promoting available positions through our social media channels and faculty email. We look for students who have a passion for medtech and want to get their hands dirty, no previous experience is required!

We're the only organisation of our kind in Victoria, with representation across 1st-5th year undergrads, PhDs and PostDocs, moreover we span across 5 different faculties (Engineering, Design, Medicine/Biomedicine, Science and Arts). We also run Australia's largest student run medical technology Hackathon, MedHack. (medhack.com.au).

Nova Rover

Nova Rover are a multi-disciplinary student team building the next generation of Mars rovers. Established in 2017, we have competed twice in the University Rover Challenge at the Mars Desert Research Station in Utah, USA. We're the only team in the southern hemisphere to make this accomplishment - and we're just getting started. We are comprised of undergraduate and postgraduate students from nearly all disciplines of engineering, science, IT, business, design, arts, commerce and more.

Our team represents the emerging space industry within Australia and upskills and prepares our members for working on space projects around the world. We are always after passionate and dedicated individuals to join us on our journey and help build our Mars rover. We welcome everyone to apply when applications become live on our website and social media pages.

Precious Plastic Monash (PPM)

Our goal at PPM is to develop creative and innovative solutions to tackle plastic pollution. In 2018 we built our integration unit, which combined four open source machine designs into a single transportable and compact plastic recycling factory. Since then we have used the IU to create unique products (including an electric guitar), educate the public at events (such as the Royal Melbourne Show) and research new techniques for plastic recycling.

Although our team originated as a group of mechanical engineering students, we are seeking to diversify our team with perspectives from other specialisation and disciplines; particularly students experienced with design and/or electronics. We will be running a recruitment campaign towards the end of S2 2019.

Precious Plastic Monash is proud to contribute to tackling a topical and significant issue in plastic pollution!

Unmanned Aerial Systems (UAS)

Monash UAS are a group of enthusiastic students and supervisors who are working together to design, construct and fly a fully autonomous plane to undergo the Australian Challenge Medical Express. The team is made up of students from a wide range of engineering disciplines, as well as some other faculties, who have come together to make the team as competitive as possible. In 2018 the team was awarded first place in the Medical Express challenge, paying out the hard work and dedication the members of the team

If you're interested in getting involved our recruitment period is often open to all students in early October to November. Experience is not entirely necessary as we usually look for recruits who are passionate and want to learn and contribute to the team.

IF YOU ARE INTERESTED IN ANY OF THESE CLUBS AND STUDENT TEAMS, CONNECT WITH THEM ON SOCIAL MEDIA TO STAY UP TO DATE WITH THE EVENTS AND OPPORTUNITIES THEY OFFER.

CPD GUIDE

What is CPD (Continuous Professional Development)?

It is a compulsory requirement to be eligible to graduate from an undergraduate engineering degree at Monash. The purpose of CPD is to provide lessons that can only be taught through experience and on the job training. A minimum of 420 hours (for any student set to course complete in Semester 2 of 2020 or later) must be completed and reflected upon for satisfactory completion. There are three main steps to satisfy the CPD requirement

- 1. PARTICIPATE & COMPLETE CPD ACTIVITIES**
- 2. RECORD THESE ACTIVITIES & REFLECT ON THEM USING STUDENT FUTURES**
- 3. PROCEED TO MOODLE TO COMPLETE THE ASSESSMENT PIECE**

What counts as CPD hours?



1 ENGINEERING WORK EXPERIENCE	2 NON-ENGINEERING WORK EXPERIENCE	3 NON-ENGINEERING CURRICULUM
4 ENGINEERING CURRICULUM	5 ENGINEERING PROFESSIONAL DEVELOPMENT	6 NON-ENGINEERING PROFESSIONAL DEVELOPMENT

50% of the minimum hours can come from your combined Non-Engineering related categories (including Non-Engineering curriculum). In addition, up to 100% of the minimum hours can come from combined Engineering related categories (excluding engineering curriculum which has its own restrictions, see below). Furthermore, it is important to note that any number of hours can be reflected on however, there are maximum restrictions as to the number of hours that can be claimed towards CPD.

Engineering work experience - can be up to 100% of the minimum hour requirement. This can include but is not limited to engineering related or based work experience or volunteering at an Engineering firm, Industry based learning (IBL) (for software engineering students), Monash Engineering summer research program (Engineering), Monash Industry Team Initiative (MITI), participation with Engineers Without Borders (EWB).

Non-Engineering work experience - can be up to 50% of the minimum hour requirement. This can include but is not limited to activities such as casual part or full-time work at any business (eg. Coles, 7 eleven etc.), Non-Engineering based Monash summer or winter research programs, another faculty's Industry Based Learning (IBL) equivalent, work experience in an engineering related company that was isolated from all other employees (eg. a night office cleaner).

Engineering Professional development - can be up to 100% of the minimum hour requirement and can include but is not limited to being an active member or committee member of an Engineering based Monash Club or Society, organizing or attending any Engineering - based activities (e.g. industry nights, networking nights etc.), Monash Engineering Leadership Program, Engineering Work Ready Program events and Engineers Australia's "MyCPD" seminars.

Engineering curriculum - can be up to 70 hours of the minimum hour requirement by any student and includes any activities undertaken as part of your engineering units. This can include but is not limited to homework and assignment preparation, research, group assignment work, Final Year Projects (FYPs), Class presentations, Industry guest speakers at lecture on campus, On-site industry visits, Study abroad/exchange programs. Please note that passive listening to lectures and tutorials are NOT included as this is not actively developing professional development skills.

Reflecting on CPD using Student Futures

There are 9 skills that are required to be achieved over the course of CPD and a total of 19 skill reflections as a minimum given by,

- Communication (x3)
- Creativity and Innovation (x2)
- Initiative and Enterprise (x2)
- Intercultural Competence (x2)
- Planning and Organization (x2)
- Problem Identification and Solution (x2)
- Professionalism (x2)
- Teamwork (x2)
- Use of Tools and Technology (x2)

Tips and tricks for making CPD easy

1. Start early and reflect as you go.
2. Don't forget to include 70 hours of your engineering curriculum on Student Futures.
3. Include casual and part time non-engineering work!
4. Get involved in student clubs, teams and engineering-based work!
5. Don't stress! 1 full time summer internship of 40 hours x 12 weeks = 480 hours.
6. Use student futures as a tool to practice for your job interviews.

Non-Engineering Professional Development - can be up to 50% of the minimum hour requirement. This can include but is not limited to being an active member or committee member of a non-Engineering based Monash club or society by attending or organizing non engineering based activities, Leap Into Leadership Online, Volunteering to assist university staff at O-week, Open day, Enrolment sessions or becoming a mentor with the Engineering Mentor Scheme. Also included are any leadership role with a community organization, sporting club coach, training, scout leader etc., Monash Minds, Ancora Imparo Program, training and short courses.

Non-Engineering curriculum - can be up to 50% of the minimum hour requirement and is for any activities undertaken for units outside of the Engineering Faculty, this is particularly relevant for double degree students. This can include homework and assignment preparation, research, group assignment work, class presentations, another Faculty's Final Year Project (FYP) equivalent, study abroad/exchange programs. Please note that passive listening to lectures and tutorials are NOT included as this is not actively developing professional development skills.

Moodle based CPD assessment

This is an assessment piece that is made up of six questions, each aimed at addressing a specific Engineers Australia (EA) competency. Use Moodle to answer all six questions and then upload a PDF (in chronological order) of all supporting documentation you kept on hand to substantiate your activities. Add the CPD Completion certificate PDF from student futures, agree to the online cover sheet and upload the complete CPD submission which will then be checked by TurnItIn. After which an academic from your department will assess your submission and verify your claims with the contact details and documentation provided. If there is anything further that needs addressing, they will contact you for clarification and/or resubmission. Then your CPD submission will be given a pass and you'll have completed your CPD.

FEM 2019 RECAP

FEM has had an excellent year of events. This year we have run a number of inaugural events, including a pilot mentorship program and platinum sponsor events. This semester, we are hosting our first ever cocktail night and a workshop to teach our members how to operate basic power tools. Below is a snapshot of some of the events we have hosted so far this year:



FEM X WISE X SWITCH TRIVIA NIGHT

Our annual trivia night in collaboration with UniMelb's WISE and RMIT's SWITCH clubs was held in Semester 1. This was a night that brought together female engineering and IT students across different universities in Melbourne for some fun activities and prizes! Industry representatives also joined the event, providing students with informal networking opportunities.



FEM X ROBOGALS MOVIE AND BOARD GAMES NIGHT

This year, we held our very first movie and board games night! Held at the start of Semester 1, members enjoyed a screening of Hidden Figures as well as a range of board games that were provided. This allowed many of our members to get to know each other in a casual and relaxed setting. We will be holding a similar event in week 10 of Semester 2, so keep an eye out!



GHD X FEM PERSONAL BRANDING WORKSHOP

Another 'first' for FEM, we held a career development workshop with GHD representatives discussing about the topic of personal branding in the context of our careers and life as engineering consultants. This was a very insightful workshop that taught us how to build our personal brand and provided an opportunity to network with the employees of GHD.



FEM TUTORING SESSIONS

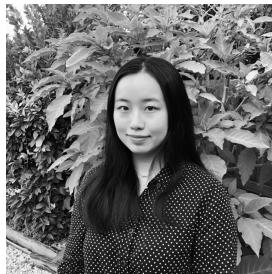
In conjunction with Vygo, FEM ran a number of tutoring sessions throughout Semester One. This included a mid-semester session for CHE2164/MEC2405 and exam revision sessions for ENG1005 and ENG1060, which allowed students extra practice and guidance with their units. These sessions are free as with all of our events, and of course, come with lunch and nibbles!

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NOTES

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Female Engineers at Monash 2019