

Mechanical Engineer

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What does a Mechanical Engineer do?

As a mechanical engineer you can work in various roles, dealing with a range of industries such as mining, infrastructure, energy, new technologies, automotive, machinery, robotics, and many more. Specifically, mechanical engineers apply mathematics and design principles as well as project, people and time management skills to develop new technologies and complete projects on both large and small scales.

What do you work in and what is your specialty?

I work for a company that designs technologies and solutions for projects associated with the energy, infrastructure and mining and metals industries. I specialise as a piping engineer within the company, working with other piping engineers as well as various other engineering disciplines, IT professionals, financial advisers, lawyers, HR representatives and clerical staff. My role requires me to carry out data management, calculation of stress induced on pipes, heat transfer calculations, as well as less intensive work such as pipeline layout, procurement of resources and developing bids and proposals to determine project schedules, costs and impacts.

How did you become interested in this area and when did you first start?

I had early exposure to the mechanical industry through my family, however, it wasn't until I studied physics in year 11 and 12 that I really became interested in this field, although at the time I didn't actually know what engineers did. I graduated high school in 2011 and was at a crossroads as to what I wanted to do next, I couldn't choose between medicine and engineering. However, I attended an information session held by some New South Wales and Queensland universities and companies on engineering which sparked my passion to pursue it as a career.

What study path have you taken to get here?

After high school I accepted an offer from the Queensland University of Technology (QUT) to undertake a Bachelor of Engineering. While at QUT I undertook two work placement opportunities, one with a pump manufacturer in the Brisbane region in a design role, and another 3 month on-site position at a coal mine in western Queensland in an operations role. Both roles required me to be involved with the layout of pipelines and carrying out pump calculations, which ultimately led to my job in a Brisbane design office as a piping engineer.

What do you like most about your job?

As I am still classified as a graduate engineer, I was surprised at how much responsibility and respect my work mates have given me. While everyone is willing to lend their experience, I work in a very encouraging environment where people trust your judgement and are happy to let you work things out yourself if need be. This has led to me gaining experience on large and small scale projects, enabling me having direct contact with clients and making decisions on projects.

Do you have any particular career highlights?

I have only been in my role for about 9 months but in that time I have been involved with four different projects. One of these has been an ongoing and very complex design job on an Alumina refinery in the UAE where I have been involved with design, data management, calculation and procurement. The other three jobs, which were slightly smaller projects, have involved site work, liaising with clients and vendors, management of company

personnel and outsourcing work to our international offices, as well as conducting similar work to the Alumina project.

What advice would you give to someone interested in working in this area?

University is a key factor, but so is work experience. It is worth getting a number of opportunities for work experience in order to fully appreciate what kind of role you would most enjoy and be most suited to. This can help tailor further experience, resume, and job opportunities in the future. My other tip would be to network at any opportunity, whether it's at a formally organised event or on the bus ride home with someone you notice working for a company you might consider working with.