

Water Engineer

Alice Noviani



What does a Water Engineer do?

Water engineering is very broad as it ranges from designing diversion channels, assessing impact of an urban development on flood level and extent, and assessing water quality to meet the standards set by the government bodies. Water engineering includes every aspect that interacts with water such as river, dams and water treatment plants.

What do you work in and what is your speciality?

I work at WRM Water and Environment. We are a team of specialists who provide high-level expertise in water resource engineering and environmental water management. My role as a Project Engineer is to contribute towards the project assigned to me. As a graduate, I work under the supervision of a project manager. My day-to-day tasks vary depending on the project that I am involved in. I have contributed towards the completion of several projects where I need to assess the impact of an urban development, analyse the stormwater management plan and develop hydrology and hydraulic modelling. The scope of the projects that we are working on are related but not limited to flood and drainage study, hydrology and hydraulic modelling, water sensitive urban design, water quality and mine site water management.

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

I changed my mind a lot and was tossing up between different options when I was in high school. I wanted to be a teacher, pharmacist or an architect but what made me change my mind was the input that my career advisor gave me. I never knew what engineering was until he explained it. I gave it a try and after four years, I must admit that I did enjoy it and has become passionate especially regarding water engineering. It took a while to find out what I am interested in but now I am exactly where I want to be.

What study path have you taken to get here?

I went to study my undergraduate degree straight after high school. Every engineering student had to study the general first year subjects where we got exposed to the different types of engineering. This gave me the opportunity to think about which engineering discipline interested me. At the end of my first year, I decided to do civil engineering. I started off wanting to major in structural engineering which design infrastructures such as buildings and bridges. However, I realised that it wasn't for me. During that time, I grew a passion for water engineering and switched my subjects to include more water engineering related units.

What do you like most about your job?

The thing I like most about my job is that each day is different. I get to apply my knowledge and improve both my technical and soft skills. The things that get me excited is that there are challenges every day and sometimes you just won't know what you will face. Working in engineering, you will get the chance to experience the feeling when you find a solution to a problem or finally know what was wrong with the flood model you developed and why it wasn't working. That feeling is something I look forward to each day on the job.

Do you have any particular career highlights?

The highlight for me is that I obtained an offer from a company that specialise in a field I am passionate about. I am always learning something new on the job. As a graduate, I am still exploring. I was not familiar with the computer

modelling software before I started on the job. I am very fortunate to have my colleagues who are always willing to help and teach me the knowledge and skills required.

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

Don't be discouraged to take on engineering! When I told people what I was studying or what I do for a living now, they always have the impression that engineering is hard. If you put your mind to it and try hard, you will succeed.

Engineering is not all about math and physics, you need to have a good communication skills. It will come in handy when managing projects and liaising with clients.

There are many types of engineering that you can choose from and each type have different majors. For instance, civil engineering is not only about water engineering. You can study all sorts of things related to infrastructure such as construction, transport and structural to name a few.

If you are passionate about water engineering and wanting to do the sort of tasks I mentioned, familiarising yourself with the different computer modelling software used in the industry and joining the professional bodies such as Engineers Australia will be a good start. Remember you are in charge of your future, take control and pursue what you are passionate about!