2008 NYSF Alumna Sarah Don Shares Her Life Lessons

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NYSF alumna Sarah Don shares her experiences following the NYSF 2008 Year 12 Program, and a few life lessons she learnt along the way!

"I owe my career as a nuclear engineer to the NYSF and the generosity of Rotary Club District 9640. I attended the NYSF 2008 Year 12 Program in the physics track. I didn't know much about physics at the time but my high school physics teacher let me talk his ear off before and after class about the cool things I read in Cosmos magazine. Physics was the most challenging subject for me at school, so I thought I would pursue it. I'm glad I did.

After the NYSF I was so incredibly fortunate to be able to attend the Research Science Institute at the Massachusetts Institute of Technology (MIT) in the US. It was a 6-week fully immersive research experience that cemented in my mind that I wanted to study science. I worked with Professor Michael Driscoll and some of his students in the Nuclear Science and Engineering department, using neutronics computer models to simulate nuclear fuel cycles. Just like at the NYSF, I saw how fun and rewarding being a scientist could be, and I felt like I truly belonged among a group of highly motivated, inspired, and nerdy science geeks.

I completed bachelors and masters degrees in Nuclear Science and Engineering at MIT, and a second masters degree in Medical Physics at the University of Massachusetts. Graduating from MIT was not easy - I struggled to catch up to my American peers at first but somehow managed to average 6-7 classes a semester. There were times when I didn't know if I could take it anymore. The workload was intense, the pressure crushing, and the feeling of "average-ness" being surrounded by the world's brightest was overwhelming. Knowing that over 400 Aussies had applied and I was the only one accepted my year, I felt I had a duty to do my absolute best... and I sure did. The most valuable thing I learned at MIT is how to think like an engineer. I can approach just about any problem now and eventually figure out a solution in any context, and this applies to all facets of my life. Another valuable skill MIT provided me was hands-on experience as a nuclear reactor operator.

I worked part-time as a reactor operator and shift supervisor at the MIT Nuclear Reactor Laboratory all through my studies at MIT. In 2015 I was asked to step up and manage the operation of the lab as the Superintendent. Suddenly I was in charge of the safety and regulatory compliance of a nuclear reactor and the safety, productivity, job satisfaction, and career growth of about 20 people who were all significantly older than me and some of whom had never had a female supervisor before. I love my job. I'm so thrilled to have the privilege to lead a team dedicated to maintaining a robust safety culture and a reliable, world-class experimental facility. I also serve on the executive committee for the Test, Research, and Training Reactors (TRTR) organization in the USA, and the Safety Assessment Committee for the Center for Neutron Research at the National Institute of Standards and Technology (NIST). While I set out in life to be an engineer, and there's something to be said for being focused and determined on a particular goal, I'm so glad I took this leadership opportunity detour when it opened up. I wake up everyday looking forward to the challenges of the day, but not before going to the rink...

In order to graduate from MIT I had to take a physical education class, so I took beginner skating since it was something I had always wanted to do as a kid. I thought I was "too old" to try figure skating, but noticing the application of basic physics concepts, along with practice and perseverance on the ice, allowed me to learn to do basic turns, jumps, and spins. I was hooked! Now, 6 years later, I train every morning before work and I compete at the national level for skaters over 21 years old. I've gotten to know some of the other skaters who started as adults, and at competitions when I'm standing on the ice in my starting pose waiting for my music to begin they yell "physics!" and "nerd power", and it makes me so, so happy. Skating was an experiment to see if I could learn something I never thought I could learn before, and it just goes to show that you really can learn anything at any age.

While grades, placements, degree program acceptance, career choices, etc. are all certainly important, they are not defining. You can always find a work-around or change your mind later. Life is not a race, and you don't have to take the most efficient route - I think detours can make us more well-rounded and help us understand better what we want in life. "Talent" is not everything and if you're determined and put in the effort you can succeed in anything you put your mind to. The saying "it's not what you know, but who you know" is so true. I am where I am because the people I met at each opportunity led me to the next, and I know so many other young scientists whose stories are similar. If you want to work somewhere or do something specific, you have to be proactive and do what you can to meet people and get your foot in the door. In school and university we are in constant competition with our peers and our success is measured comparatively, but what made the NYSF so formative and inspiring was the precious opportunity to take a break from being judged and ranked, and enjoy the learning and discovery process".