SPOTLIGHT
Rachel Penner

DISCIPLINE
Engineering Physics

CLASSIFICATION
Freshman

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Student Series

Rachel Penner

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OVERVIEW The mission of the WIE Student Series is to inform and inspire current female students in the University of Oklahoma Gallogly/Mewbourne colleges through the elucidation of the diversity of opportunity related to positively impacting society through academic pursuits. This edition highlights Rachel Penner, a current OU Engineering student, and features her personal journey.

MOTIVATION Rachel has been fascinated with outer space since she was a small child. She says, “It blew my mind that there are hundreds of billions of galaxies out there, each with hundreds of billions of stars, all waiting to be explored. I loved science fiction books and tv shows like Star Trek, where characters explored the cosmos, discovering exciting new planets and having adventures. I devoutly followed the missions of Mars rovers Spirit and Opportunity, the Pluto flyby of New Horizons, and every other NASA mission on which I could find information. I wanted nothing more than to help create the fantastic Star Trek future I dreamed of as a child.”

DEVELOPMENT Throughout high school, Rachel took as many STEM classes as she possibly could and took physics, calculus, and chemistry as dual enrollment classes at her local community college. She volunteered at a local science museum giving STEM demonstrations to students. Through her work at the National Museum of Nuclear Science and History, she was invited to be a student presenter at the annual Einstein Gala, where she had the opportunity to meet Alan Stern, the PI of New Horizons. The summer between her junior and senior years of high school, she applied and was accepted to a prestigious NASA high school internship program, SEES (STEM Enhancement in Earth Science). She spent the summer on campus at UT’s Center for Space Research analyzing and visualizing data from NASA’s ICESat (Ice, Cloud, and Land Elevation Satellite). Since arriving at OU, Rachel has continued to take the most challenging STEM classes available and has become involved in several professional and social STEM organizations, such as Engineers’ Club, Society of Women Engineers, Alpha Sigma Kappa – Women in Technical Studies, and Society of Physics Students. Upon graduation, she would like to join NASA, Applied Physics Laboratory, SpaceX, or United Launch Alliance (a collaboration between Boeing and Lockheed Martin).

IMPACT Rachel says, “the exploration of space (manned and robotic) is truly the most important and the most exciting adventure that humanity will ever undertake. Every scrap of information that a satellite, probe, or any other kind of mission returns to Earth is incredibly valuable for understanding our place in the universe. But these are big dreams. Here at OU, I am working to make an impact by meeting people, making connections, and staying involved. I am also passionate about STEM education and want to make an impact on young people. Each young mind has the potential to change the world, and I want every kid, particularly every girl, to know how amazing science and engineering are.”

INSIGHT Rachel says, “be involved on campus. It’s easy to fall into a pattern of staying in your dorm room alone and watching Netflix, but it’s so much more helpful and valuable to form study groups, go to professors’ office hours, and join student organizations. Professors are not scary, I promise, and going to office hours is always worth it. Also, being involved on campus has allowed me to meet so many people and make so many connections that will be useful in my college career and beyond.”

“Be the change. It is up to our generation to create the future.”