

Undergraduate Education and Research Experiences in Welding Engineering

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Undergraduate education has offered me the opportunity to expand my knowledge through studying welding engineering at LeTourneau University. As a Senior level student, with a double-major in Welding and Mechanical Design Concentrations, I have also been Team Leader for the SAE Mini-Baja competition. I have also been able to apply what I have learned through participating in two undergraduate research projects while at LeTourneau University.

The first research project I participated in involved adhesive bonding. This project consisted of evaluation of structural adhesives for use in joining sheet metal products. The results of the project were a set of design guidelines to aid designers in implementing adhesives. This work was performed in cooperation with two large companies that were interested in using adhesives as part of their manufacturing process. The second research project that I've worked on dealt with evaluating the weldability of several new HPS 70W consumables. As part of this project, I programmed a welding robot to weld samples that were used to test the susceptibility for hydrogen induced cracking.

Through working on undergraduate research, I have learned how to approach problems that may or may not have a straight forward solution. I've also learned how to work individually, with a small amount of guidance from professors, as well as work as part of a team. Regardless of what I do after college, I am confident that the skills and experiences I have gained through an undergraduate education and research will aid me in applying welding engineering principles.