JACOB
REATA ENGINEERING

ADVANCED MANUFACTURING
MACHINIST

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Jacob always had a knack for working with machines. He enjoys using his hands—and his creativity—to solve problems. Frustrated with routine classroom learning, he didn’t feel successful in school. Now, as an apprentice in CareerWise’s modern youth-apprenticeship program, Jacob sees his future more clearly as he gets trained in a fascinating field, reveals his curiosity and puts his talents to good use.

MOVING PROBLEMS FROM POINT A TO POINT B

As a senior at Cherokee Trail High School in Aurora, Jacob will graduate soon. Until this year, he was unsure what his post-high school future would look like. But meeting with his technology teacher, Jacob learned about CareerWise and found apprenticeship to be an option that could present multiple paths to a successful career.

“In school you sit for eight hours a day, do homework, then rinse and repeat the next day,” Jacob said. “It’s draining to spend the majority of your time on things you are not going to use.” He was excited about the chance to get trained by experts in a technology field and start a career path.

Reata Engineering hired Jacob as a machinist for computer numeric control tools, which are used for the prototyping and production of materials such as wood, plastics and aluminum. He saw engineering as a chance to apply his problem-solving skills on clearly defined tasks—a departure from what he’s experienced in math and English classes.

“Here, I’m told what is wrong, where we need to be, and how we need to fix it,” he said. “I can plot out the different options and take the problem from point A to point B.” Finding comfort in this field in which he has already learned so much, Jacob views manufacturing engineering as a sensible career option.
In Reata’s machinist shop, the process involves taking in a customer’s design, programming it into the computer, acquiring materials, building the product, conducting quality assurance, then mass producing it for the customer. Jacob enjoys playing a critical role in making these steps successful and creating solutions with his group.

“It gives me a new appreciation for getting the job done and done well. When someone else is waiting for a part, I need to make sure the system keeps running. Otherwise it brings the whole team down.”

Jacob has also discovered his own appreciation for organization and efficiency; in the machinist shop, tools and parts must be in order for maintaining a smooth operation. His self-organization has improved too: Splitting his days between school and work, followed by his job teaching martial arts three days per week, Jacob is managing his time more effectively.

Jacob has always enjoyed taking apart machines, such as computers, and seeing how the insides work. Now, he is able to see how things are made and play an active part in it. With clients representing industries ranging from medical device technology and aerospace engineering to cancer research, he finds the work immensely rewarding. “I’m actually the guy making the product. It’s cool to know I’m building something that could change someone’s life.”

For the first time, because of his apprenticeship, Jacob has a sense of his career options. “Nothing stood out before. This opportunity gives me new footing, and I can take this experience to other jobs and say, ‘I can do this stuff.’”

Already, Jacob is taking advantage of networking possibilities his apprenticeship provides—such as talking with visiting company representatives about his work. He is also eager to someday attend industry conferences to witness new, cutting-edge technologies.

Jacob’s parents have seen dramatic changes in the first year of his apprenticeship.

“The CareerWise opportunity has redirected Jacob on a much more successful path than he was experiencing as a full-time high school student,” said his mother, Stephanie Pedersen. “In years past, I struggled every day to get him out of bed in the morning. Since becoming an apprentice, Jacob has taken responsibility for himself completely. My husband and I are watching in awe as he is coming into his own person.”