

**Jazmine Darden** is sometimes asked whether she will pursue graduate school. No, she says, “my associate’s de-gree is the best thing that I’ve done. I’ve learned more applied work here than I did in my four-year school.”

# The Emerging Future of Manufacturing

By  
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*The State of Manufacturing® student focus groups introduced us to some exceptional young leaders. Here are three of them.*

## More Than Amusement

**With a childhood dream to build amusement park rides, Jazmine Darden entered Dunwoody already in possession of twin degrees in math and physics.**

Jazmine Darden took a rather nontraditional path to the degree in engineering drafting & design she will receive from the Dunwoody College of Technology in May.

She had already graduated from Augsburg College with twin degrees in physics and mathematics, fueled by a dream to build amusement park rides.

“That’s how I got into physics,” she says now. While friends chatted in line at Valleyfair and other amusement parks across the country, she would stare silently at the rides, trying to figure out how they work, what makes them go.

After graduation from Augsburg, Jazmine took a job as an associate educa-

tor with the Minneapolis Public Schools, where she mentored students, then mentored the mentors. She also wrote curriculum around a “bridge and tower” program that taught some 800 K-8 grade students the theory of engineering by building popsicle stick structures and, later, more sophisticated projects made of balsa wood.

Darden was working with inner city students in Minneapolis schools who she felt might benefit from thinking about a technical college education rather than a

four-year degree. So one day she “randomly” stopped into Dunwoody and asked for a tour.

“I honestly don’t know what brought me there that day. My main intent was that I work with these students. I’d heard a lot of good things about the school. I would drive by there twice every day, to and from work. I just stopped in there one day.”

After one tour and a meeting with E.J. Daigle, the school’s charismatic dean of robotics and manufacturing, she says, “I was like, oh, how do I sign up? This is where I need to be.”

Darden has spread the word to other potential students who she thinks could benefit from Dunwoody. Two of her former protégés are today top first-year students at Dunwoody. “I told them they should just tour (the school), she says. “I know you didn’t do well in high school because you weren’t challenged. Just check out Dunwoody.”

Aside from the instructional methods,

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Darden appreciates that Dunwoody holds students to high standards of excellence. “If tech schools have any chance of survival, it’ll be the ones that kind of follow closely in Dunwoody’s form of doing things where everything is properly certified; everything is incredibly strict. If you just want to laze about through things, just go to a normal college.”

Many of her colleagues who are currently in master’s programs ask her if she intends to pursue a graduate school education. No, she says, “my associate’s degree is the best thing that I’ve done. I’ve learned more applied work here than I did in my four-year school.”

As for the future, Darden intends to keep her options open.

“I don’t have anything lined up. I have ideas that I want to pursue. I have re-

sources right now to try to be creative and do my own thing, rather than jump right into the corporate business. I want to take time for myself to really figure out what I want to do.

She’s not nervous about her prospects. “Dunwoody has like a 98 percent placement,” she says. “I think pretty much I could pick where I want to work, especially have two Bachelor’s degrees already.”

What about the amusement parks? “It is still a dream of mine,” she says. “We’ll see where we end up.”

## **A force to be reckoned with**

**After a service-related injury, a subsequent “hobby” led to renewed purposes in life.**

Jacob Rylander’s left index finger was taken from its tip to the wrist in an industrial accident involving a Power Take-Off while he was in the Air Force. This miss-

ing limb ended up opening new doors.

“After my amputation, I was depressed by the inevitable life and career changes I would have to make. I was inspired by others around me in physical and mental therapies who were overcoming their new demons and challenges. I picked up ‘making’ as a new hobby and began to make it a point to work more with my hands as a means of therapy.”

The hands-on nature of this diversion (he started with minor woodworking and 3D printing), coupled with educational pursuits, has grown into what has become a passion for custom fabrication.

“I was led to utilizing my GI Bill benefits at Dunwoody because of its Yellow Ribbon status and its immediate immersion- and lab-based coursework over lecture- and theory-based curriculum. I love the hands-on interaction during my lab time as it provides me the opportunity to see the application of the order of operations and the significance it has in every manufacturing process.” Dunwoody’s facilitation of collaboration between its



**Jacob Rylander** is planning to create Reveille, a veteran-based industrial makerspace focused on incubating veteran-owned and operated small manufacturing ventures.



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## INNOVATIONS

students and several manufacturers is also something the school “does an amazing job at.”

He started in the welding program, will be transitioning to the Engineering Drafting & Design program this fall and, ultimately, will enroll in the Industrial Engineering program. “I hope the cumulative knowledge base will assist me in growing my future business ventures such as “Handsome Hippo Design,” a custom fabrication outlet, and “Reveille,” a veteran-based industrial makerspace focused on incubating veteran-owned and operated small manufacturing ventures.”

“Reveille” will not be Jacob’s first business undertaking. He already has a long-standing involvement with a local nonprofit, Minnesota Emergency Services Partners (MNESP), which manages a

**During lab time, everyone is on the same playing field and works together to complete the project. We share success strategies and warn each other of potential failure points.**

specialized training curriculum and facility for law enforcement, tactical teams, and other public safety agencies.

Though he left the military, he has found another setting where teamwork and dedication are keys to an individual’s success. “Something I’ve observed universally is that, during lab time, everyone is on the same playing field and works together to complete the project. We share success strategies and warn each other of potential failure points. While it’s technically all individual tasking, it’s the group/team environment that evens out the learning process and builds more than a project; it builds professional relationships and sets the performance standard.”

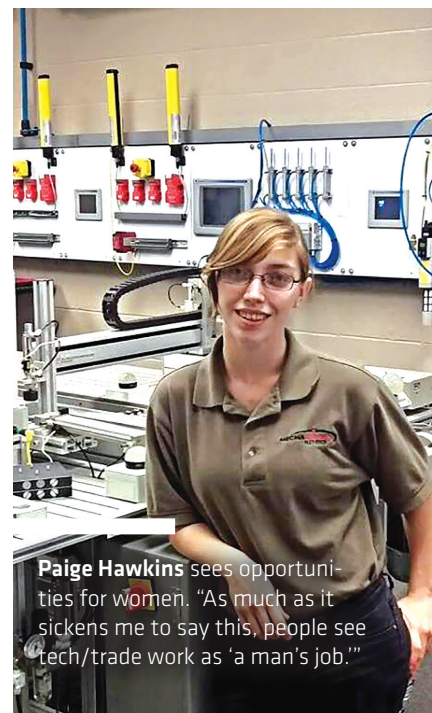
With his efforts in nonprofit administration and the future projects he has on the horizon, it’s easy to see that this former “Outstanding Airman of the Year” (2012) has not forgotten one of the three core values of a US Airman; “Excellence in all we do.”

## An optimal educational investment

**‘Best chance for a guaranteed job’ after graduation reroutes Ivy League dreams**

Like a lot of high school students, Alexandria’s Paige Hawkins struggled to answer, what next, or more specifically *where* next?

She had excelled in science and math since elementary school and devel-



**Paige Hawkins** sees opportunities for women. “As much as it sickens me to say this, people see tech/trade work as ‘a man’s job.’”

oped an early interest in the workings of machinery. High school aptitude tests suggested a career in engineering, aeromechanics, or design. There was never a question that she would attend a four-year university. “That was the assumption,” she recalls. “That’s what you always think when you finish up high school.”

Her dream school, MIT, demanded more extracurricular activities than she had posted at Minnewaska High School and the \$62,000 price tag far exceeded her budget. She considered North Dakota State, but opted eventually for Alexandria Community and Technical College, in part to stay close to home and help her single mom care for two younger siblings.

“Alexandria had good reviews and an interesting course curriculum,” she says. “Logically it was the most economical choice, and also had the best chance for a guaranteed job after graduation.”

The instruction at Alex Tech impressed Hawkins, especially for how teachers link general education curriculum to the specialties. Her physics teacher, for example, made sure to incorporate problems and themes that were directly relevant for Mechatron-

**Our teacher made sure to incorporate problems and themes that matched scenarios we might face in our field and tried to link his lectures to what we were learning in our core classes.**

ics, her specialty.

Hawkins’ love of the complexity in manufacturing fuels her enthusiasm for advancement in a career traditionally dominated by men. “As much as it sickens me to say this, people see tech/trade work as ‘a man’s job,’ while women are groomed to seek out women-dominated industries, adding that half of her female high school friends pursued careers in nursing.

“Working in this field is like getting the best parts of mechanics and engineering mixed into one industry,” she says. “An industry that makes the production of the entire world thrive.”

Hawkins says she skipped the usual internships because she needed a paycheck, and in March started working as an assembler at Brenton Engineering in Carlos, about nine miles northeast of Alexandria. She intends to stay there with the ambition of becoming a controls engineer.

“I do plan on further schooling. I’m not exactly sure where. I want to get some experience under my belt and—fingers crossed—hopefully get sponsorship from my company.”

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The diagram illustrates a product development lifecycle: **Discovery** (lightbulb icon) leads to **Scoping** (gears icon), which leads to **Business Case** (gears icon). From the Business Case, the process moves to **To Product Development** (assembly line icon). This stage includes **Test Planning & Validation** (key icon) and **Customer** (gears icon). The process then moves to **Design & Engineering** (gears icon) and **Manufacturing Collaboration** (gears icon). Finally, the process leads to **Product Launch** (box icon), which leads to a group of people (people icon) and finally to a dollar sign (money icon).

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