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## BC pilot program provides students with knowledge, skills to excel in careers after graduation

By Erin Auerbach Jun 11, 2018

Before accepting a full-time job in the Wonderful Leadership Program, Miguel Ceja gained practical experience interning with Aera Energy LLC and completing his senior project with the Nestle Ice Cream Facility in Bakersfield.

“What will help me the most in my new position is the leadership classes, project management classes, quality control classes, and the background into the technical instrumentation and equipment classes I took at Bakersfield College,” he said.

Ceja is one of seven students who were the first to graduate with a Bachelor of Science degree in industrial automation from Bakersfield College on May 11. This pilot program distinguishes BC as one of only 15 community colleges in California (out of 114 in the state) to offer a bachelor’s degree. More than half of the first class of graduating students from BC’s baccalaureate program already has a job in their chosen field.

Manny Fernandez has been teaching at Bakersfield College for 10 years and is the lead faculty member for the industrial automation program.

“We’ve always had a part of automation in our curriculum at BC, but never offered courses in robotics until the bachelor’s program gave us that opportunity,” said Fernandez, who also teaches courses in engineering, decision-making and operations management.

“The whole reason I’m a teacher is that I enjoy seeing the fruits of my labor,” he said. “Four of the seven graduating students already have jobs, either in management or in engineering/automation positions. A fifth is about to receive a job offer.”

This is because, in addition to the comprehensive curriculum, the program focuses on connecting students with industry partners and getting those businesses to open up their doors to BC students.

Richard Van Horne, another graduate of the bachelor's program at BC, has joined the engineering department for JG Boswell Tomato Co.'s processing division.

"My actual title will be electrical engineer trainee but my job duties are closely aligned with industrial automation engineering," Van Horne said. "I actually heard about JG Boswell because of BC. ... After working a summer internship in the utilities department in Corcoran for them, they moved me to interning in the engineering department last August."

For Van Horne, the best part about completing his degree at BC is that the school supplied him with every resource he needed to succeed, including scholarship and internship information.

"The most helpful skill I have learned, and the one that separates this degree from its lower-division counterpart, is the high-level theories of management that equipped me to not only be the one to fix a technical issue in the field but lead others in the same pursuit," Van Horne said. "I think that these management classes, as well as my senior project, which had me working with industry partner Tasteful Selections to implement change at their factory, are the difference-makers when it comes to my impact at my new engineering position."

All students who partake in the bachelor's program at BC have to complete a senior project. At the Nestle Ice Cream Facility, Ceja worked on modernizing equipment, taking an old human-machine interface program and upgrading it to work on a new PanelView Plus 1000 touch screen.

He also credits his summer internship with Aera Energy for building his qualifications. There, the most important skill he learned was to take on a project from start to finish and make sure every step along the way was properly completed.

"Working for Aera taught me a lot, a new level of professionalism," Ceja said.

He advises those considering a career in the industrial automation "to love what you do, study hard, and work with your professors. And in the end, to develop the confidence to step out of this program, with the skills and knowledge you have learned, to become leaders in the field of industrial automation."

At this point, the pilot programs that offer a bachelor's degree at California community colleges are set to "sunset" (end), in July 2023, but program evaluations in 2018 and 2022 may result in extension of the program, according to the Legislative Analyst's Office.

Liz Rozell, a former engineer and professor who assumed the position of interim vice president of instruction at BC in March, was heavily involved with the team effort to implement the baccalaureate degree pilot program for industrial automation.

She expressed the importance of having skilled professionals in automation that can collaborate productively with engineers at every level.

“I love teamwork,” she said. “I am all about collaboration and teamwork, and that’s what the baccalaureate degree at BC is all about.”