

Building a Vibrant Ecosystem for the Cloud



Miami Dade College (MDC) and Amazon Web Services (AWS) have collaborated to develop a model for sustainable workforce development that is opening doors for students, meeting local workforce needs, and supporting economic vitality by building local talent.

The MDC and AWS collaboration is focused on students from the largely immigrant and lowincome communities in Miami, enabling them to access higher education and connecting them to cloud-computing careers with local businesses. In the MDC cloud computing certificate program, students go through industry-aligned training and are supported and mentored by faculty and cloud computing professionals. After completing the program, an MDC student is ready to walk into a position as a skilled entry-level cloud computing specialist. The program is working to change the recruiting and hiring practices of companies looking for cloud computing support by showing that years of experience and a bachelor's degree are not always necessary when a program is intentionally designed to meet industry needs. In the case of MDC's cloud computing programs, students are ready to enter the workforce when they graduate.



"Companies for the first time are saying, 'I hired someone who doesn't have a bachelor's degree and that person is productive for my team because they have the credentials and knowledge to really be productive in cloud computing."

— Antonio Delgado, MDC Vice President of Innovation and Technology Partnerships



"I feel I have something to offer this world, and I want to be able to do the things I think I can, and I want to do them within my career. [The program] has gotten me to dream very big. And not just to dream, but to achieve."

 Aimee Reyes, MDC Cloud Computing graduate and Software Security Intern at Intel

A Thriving Workforce Ecosystem

MDC and AWS have developed a sustainable and mutually reciprocal approach to workforce development, building an "ecosystem" for a thriving community. The program works to open doors for people in Miami who may be out of work or may want a career change; others may feel a traditional four-year college path is out of reach because they lack financial resources, are new immigrants, or may not have the time and flexibility that traditional college paths require. The program's community-based approach provides students with training at the local college and works with businesses to provide internship opportunities that can lead to employment, building the local IT workforce needed to sustain and grow the area economy.





"We worked side-by-side with MDC faculty to understand what they are teaching. We worked internally with our recruiters to understand the entry-level positions that students were qualified for. And we worked with students to develop their résumés based on the experiences and skills they learned in the program."

- Selenis Leguisamon, AWS Enterprise Account Manager

PROGRAM COMPONENTS

Industry-aligned Curriculum	 AWS supports faculty to get AWS-certified in cloud practitioner, solutions architect, DevOps, data analytics, and security. MDC faculty work with AWS to develop curriculum, certificates, and degrees.
Career-connected Learning	 AWS works with local employers to bring real-world problems for students to work on, coordinates events for students that bring industry employers to the college, and provides networking opportunities. MDC faculty work with AWS and local employers to connect students to internships and job opportunities. Students build foundational skills at MDC and are supported and mentored through their program by AWS employees.
Certification and Employment	 MDC and AWS prepare students for the AWS certifications. MDC and AWS support students with finding employment or further internships. Local businesses hire students with cloud computing experience and skills, helping to diversify their workforce with employees who have strong ties to the community.

Developing the Program

The strategic collaboration between MDC, AWS, and local businesses is a collaborative effort working to provide keys to opportunity and to high-growth careers. Three components form the foundation of the program: industry-aligned curriculum, career-connected learning, and certification and employment.

The first program component, development of industry-aligned curriculum, began with the faculty and AWS. AWS supported MDC faculty to earn AWS certifications. Faculty then worked with AWS to develop new courses, infuse existing courses with cloud computing skills, and develop new degrees and certificates. AWS worked closely with the faculty to make sure that the skills students learn will prepare them for the AWS certifications and are skills applicable to cloud computing jobs viewed as in-demand by AWS recruiters.

In the second component, career-connected learning, MDC faculty worked with AWS to design and run industry-related events for students such as Game Days where industry employers participate in problem-solving with faculty and students, résumé development workshops, and speaker presentations with employers and others connected to the cloud computing industry. MDC has created a cloud computing center that serves as a venue for these events, as a way of bringing the industry and business community to campus.

Through these events, students network with local employers and gain exposure to the real-world problems companies are facing in cloud-computing infrastructure and maintenance. The program connects students with people working in cloud computing in ways that are meaningful, providing opportunities for students to learn how to market their skills, talk to industry experts, pitch their ideas, and build their confidence before moving into the workforce.

An advisory committee that includes representatives from AWS and industry leaders from Microsoft, IBM, and local companies helps to guide MDC faculty in revising existing curriculum and developing new curriculum in cloud computing. The advisory committee is instrumental to supporting the certificate capstone courses in which students work on a real-world project that culminates the program. "AWS brings companies to the The program connects students with people working in cloud computing in ways that are meaningful, providing opportunities for students to learn how to market their skills, talk to industry experts, pitch their ideas, and build their confidence before moving into the workforce.

table to engage in the capstone course. This way, potential employers can connect directly with the students before they complete the program," says Delgado. In addition, AWS plans and organizes events like Game Days where students work in teams with industry experts and faculty to solve real-world problems. These events serve as an opportunity for companies to see what the students are capable of doing, functioning as a live demonstration for recruiters. Students have made connections at these events that have led to internships and employment.

As part of the third component, certification and employment, the program supports students to prepare for relevant certifications and covers the cost of the examination, which otherwise can be a barrier. Students finish the program with industry-aligned skills and concrete experience tackling problems that businesses are working to solve. The program is "collaborating to create this ecosystem within the community, helping each other and working together. This has added value for AWS, for our partners, and for our customers," notes Leguisamon.



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Working with local businesses has been key to bridging students to careers. Tia Dubuisson, President of Belle Fleur Technologies, is one of MDC's industry partners that has developed an internship program for MDC students. "This program gives us a way to differentiate ourselves and customers are benefiting," says Dubuisson. Belle Fleur Technologies supports MDC students to be successful in the internship by mentoring them on the job and working with local communitybased organizations (CBOs) to provide wraparound supports such as transportation and childcare to make sure students have the support they need to participate in the internship. And this relationship is reciprocal, Dubuisson notes: "We have also seen a lot of loyalty by investing in students that you don't always get when you go for senior-level talent because they have so many options, so there is a lot more return on this investment in talent."

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"The high points from the partnership are more than the program. We have the opportunity to change lives," states Delgado. This sustainable systems approach to workforce development is grounded in the values of community, working to empower underrepresented minority students from Miami to access jobs and careers in an exciting and growing field, while developing a local workforce that is highly trained and agile in their ability to help businesses build and maintain their cloud-based IT infrastructure securely and creatively.

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For more information, visit www.mdc.edu/cloudcomputingcenter or email cloudcenter@mdc.edu

