



Empowering community colleges to train for the Future of Work

Miami Dade College's Antonio Delgado addresses how community colleges can anticipate opportunities, mitigate risk, and expand equitable pathways relating to emerging tech jobs of the future.

BLOG POST



Miami Dade College

By **Shalin Jyotishi**

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Community colleges across the nation are creating both degree-based **and non-degree** education opportunities for diverse learners to gain access to emerging STEM jobs in up-and-coming industries born out of **autonomous vehicles, electric vehicles, advanced manufacturing, artificial intelligence and machine learning**, and, yes, even **cryptocurrency**.

But training for jobs that are just beginning to come into existence is tough work.

On top of the usual challenges associated with creating **high-quality workforce programs**, community college leaders must work closely with employers, the local, state, and federal governments, tech-based economic development entities, universities, and across the college internally to:

- Avoid falling for hype traps around technological innovation;
- Respond to workforce needs without clear labor market data;
- Upskill faculty or recruit instructors to deliver cutting-edge training
- Support regional sector-based strategies to grow the emerging industries
- Recruit students into brand new occupations that may seem totally out-of-the-box;



To demystify how community colleges can effectively expand equitable pathways to the Future of Work, I'm interviewing leaders from the field who have launched community college-level programs that lead to emerging jobs. Today's spotlight is with **Miami Dade College**'s Vice President for Innovation and Technology Partnerships, **Antonio Delgado** (@**antoniodelgad9**). His responses have been edited for length and clarity.

Community Colleges and the Future of Work: Key Takeaways

- College presidents who seek to prioritize expanding workforce programs for emergent jobs should embed such ambitions in **strategic plans and designate a dedicated senior leader to bring the vision to fruition**. Through this operationalization, community colleges can play **a proactive, not only a reactive role**, in expanding pathways to the Future of Work.

- Community colleges can best support the innovation economy and Future of Work when engaged in broader **sectorial strategy**, involving strong leadership from **state and local government**.
- Colleges should prioritize working with faculty on **professional development and instructor recruitment** to ensure the college is prepared to educate for emergent work and skills.
- The value of **collaborative spaces** is well documented in the innovation ecosystem building field. Colleges should consider how to leverage physical and virtual spaces to bring the innovation ecosystem to students and faculty on campus.
- There is value in securing program-level collaborations with both **local employers and global leading tech companies** when it comes to training for emergent tech jobs.

You were recently promoted to be Miami Dade College's first Vice-President for Innovation and Technology Partnerships. Tell us about what you do.

My role was created to harness the growth of the Miami Tech ecosystem and strengthen the College's presence as a leader in tech talent development. I work with leading tech companies, local employers, government agencies, and college staff and faculty to prepare our students for the tech jobs of today and the future. These collaborations include integrating emerging technology opportunities into our curricula, upskilling faculty, and supporting the students' pipeline into the tech workforce. I also serve as Senior Advisor in Tech Talent Development for City of Miami Mayor Francis Suarez to ensure alignment with the region's needs.



MDC's Antonio Delgado (L) pictured with Miami Mayor Francis Suarez (R)

Source: Miami Dade College

Describe some of Miami Dade College's programs that lead to emerging jobs stemming from new technologies?

Our most popular emerging technologies programs are in cloud computing, data analytics, cybersecurity and electric vehicles. Our **data analytics degrees** are offered as a stackable credential pathway that allows students to earn a credit certificate, an associate's degree, and a bachelor's degree in eight months, two years and four years respectively. Our **cloud computing** and **cybersecurity programs** include associate's and bachelor's degrees in both areas, and non-credit continuing education courses that prepare students for relevant industry certifications. Our **electric vehicle program** is a non-degree program that leads into employment with **Tesla after only 16 weeks of training** as Tesla Service Technicians.



Miami Dade College is one of nine community colleges selected by Tesla as partners for its Tesla Start program

Source: Miami Dade College

How did Miami Dade College establish itself as a player in Miami's innovation economy? What advice do you have for community colleges wanting to establish themselves in their regions?

There are three main elements that have helped establish MDC as a player in the local innovation economy. First, the leadership of the college's president to create an institutional structure and strategic plan that are 100 percent connected with the local innovation ecosystem's needs.

Second, having faculty willing to get out of their comfort zone to reinvent themselves according to the latest skills that employers are demanding. We are very fortunate to have faculty who are constantly seeking professional development opportunities that prepare them to get our students certified on the latest technologies.

Finally, the development of physical and virtual spaces that connect our students and faculty with employers and members of the ecosystem. Examples include the **Idea Center for Entrepreneurship**, the **Cybersecurity Center**, the **Cloud Computing Center**, and the **Business Innovation & Technology Center**.



A student completing a course module in Miami Dade College's Cybersecurity Center.

Source: Miami Dade College

Who are some of your strategic partners when it comes to workforce development for emerging tech jobs?

Our emerging tech partners include **Amazon Web Services** (AWS), **Tesla**, **Microsoft**, **IBM**, **Google**, and Intel. The collaboration with AWS allowed our faculty to receive training in cloud computing, develop the first cloud degree in the state of Florida, certify over 300 students over the last 3 years, and get graduates on a pathway to high-paying jobs, including jobs at AWS itself.

We also have **strong collaborations** with Miami-Dade County and the City of Miami. As part of those strategic alliances, we received **\$7 million dollars** from local government with a matching of another \$7 million from a private foundation to expand the **tech programs at MDC**.

Finally, we partner with universities by creating articulation agreements including our 4+1 cybersecurity pathway with the **University of West Florida** and the 4+1 pathway in data analytics with **University of Miami**.



Daniella Levine Cava, Mayor of Miami-Dade County, with students at Miami Dade College during a Datathon.

Source: Miami Dade College

What are the risks associated with training for emerging jobs at a community college? How does MDC mitigate risk around training for emerging jobs that don't have established labor market

outcomes yet?

One of the risks of creating programs in emerging technologies is the lack of job opportunities or entry-level roles that might exist *locally*. Sometimes colleges have to *lead the way* in bringing new technology programs to the region for local companies to follow and create new roles.

For example, once MDC **created animation and gaming programs** it helped recruit and grow the industry in the area. With data analytics, it wasn't until **MDC's undergraduate program** was created that local employers realized they didn't need graduate degree holders to fill their labor needs. Other examples include our **National Science Foundation-funded certificate program in artificial intelligence** leading up to applied AI specialist roles.

The only way to be successful in those cases is by working very closely with local companies to make sure there is co-investment. At MDC, we mitigate the risk by creating an advisory committee with *local* and *national* leaders for every new program that we create. The *national* leading companies in the field provide content, equipment, software, and train the trainer opportunities that allow faculty to stay connected with the latest trends in tech. The *local* companies bring the regional reality to the table and are oftentimes direct employers of our graduates. The combined approach guarantees the relevancy of the program and the local job opportunities.

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