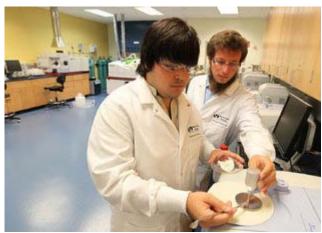


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Colleges offer more courses aimed at job market

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PETER ANDREW BOSCH / MIAMI HERALD STAFF

Gabriel Pacareu,left, and Benjamin Eisenman work with an infrared spectrometer in a lab at Miami Dade College's School of Science, where classes focus on skills students can use in the medical industry. With most students working part-time, working on equipment in the classroom makes it easier to land positions as lab techs and research

The glossy brochure promoting Miami Dade College's School of Science begins with the expected burst of lofty language about teaching students to question, investigate and formulate conclusions about the natural world.

But directly under the Mission heading, the new pamphlet gets down to business, laying out the paycheck prospects for graduates. Biological Technician: \$38,396. Horticulturist: \$34,511. Environmental Technician: \$40,227.

"That's what the students care about right now," Dean Heather Belmont said. "Before, students always felt that when they graduated, they could get a job."

High unemployment and battered household finances have colleges working harder to tie their classroom offerings to job offers. From creating courses to accommodate a new industry to customizing a curriculum to a specific employer's hiring criteria, schools are pushing to narrow the gap between academia and the real world.

It's a long-running trend that has accelerated during the recession and limp recovery, at a time when many employers refuse to hire candidates without the exact skills needed for a position.

"How do you become marketable with a degree in management?" asked Robert Sellani, an associate professor of operations management and accounting at Nova Southeastern University in Davie. "It's not easy."

Sellani presides over NSU's new supply-chain masters program, which is designed to train students on the nuts-and-bolts of moving goods for companies. He said the program came in part from looking around at businesses poised for growth in South Florida, despite the wobbly economy.

"It's very obvious with the deep dredging of the Port of Miami, more cargo is going to be ready to move north," Sellani said of the effort to prepare Miami docks for ships serving a deeper Panama Canal, which is also being dredged. With the cargo industry already growing, Sellani said supply management looked ripe for funneling students into jobs at some of South Florida's top employers.

"We've had interest from City Furniture. We've had interest from Office Depot," he said. "We've had interest from Royal Caribbean."

No field is too narrow. The University of Miami now offers a post-graduate course on real estate development, and Florida International University is rolling out a course of study on medical paperwork.

Sometimes, the push for marketability can go too far. NSU had hoped to focus its supplychain offerings even more with a masters in logistics. But Sellani said the school dropped that for lack of demand.

The shifting winds of the economy can be problematic, too. When gambling was Topic A last year in Tallahassee, Miami-Dade College administrators reached out to would-be casino developers in Miami about funding a training program for casino workers. Those talks were put on hold after a gambling bill died in the Legislature earlier in the year, said Provost Rolando Montoya.

Designing courses directly tied to the private sector needs also touches on a sensitive topic in Florida. Gov. Rick Scott raised the ire of some in academia last fall when he said in a radio interview that Florida doesn't "need a lot more anthropologists in the state."

"I want to spend our dollars giving people science, technology, engineering, math degrees," he continued. "So when they get out of school, they can get a job."

The downturn has put a bigger focus than ever on the role education plays in not just landing jobs for students but also improving their wages. With about 3.7 million job openings nationwide — the highest since 2008 — experts see a "skills gap" as a main reason for an unemployment rate topping 8 percent.

The Obama administration this year proposed \$8 billion to train 2 million people in community-college programs aimed at industries where skilled workers are lacking. Federal dollars funneled through the \$800 billion stimulus program has already funded training programs for so-called "green" jobs, including \$3 million for a solar-panel installation certification at Coconut Creek's Atlantic Technical Center.

With a tough job market, more students are opting to skip a paycheck and pursue their own business ideas. That's given an opening for the University of Miami's Launch Pad program, which pairs "venture coaches" with UM students and alumni who have an idea for their own businesses.

The program started in 2008, and has attracted national attention. Now UM is expanding it across the country, under the Launch Pad brand it owns. Two years ago, the charitable arm of the Blackstone equity fund partnered with Launch Pad to expand the program to universities and community colleges in Detroit, then the Cleveland area.

Blackstone paid UM licensing fees to set up the new programs, with UM serving as a headquarters overseeing the ventures under the new Blackstone Launch Pad label. Two more cities will be added this fall, said Amy Stursberg, director of the Blackstone Foundation.

"Two-thirds of all the jobs this current generation of college students are going to hold, they're going to have to create themselves," she said. "Entrepreneurship really is a viable career path."

When it comes to college-educated residents, Miami-Dade County ranked last in a list of 15 similar metro areas in a 2011 study used to craft the county's One Community One Goal economic blueprint. The poor showing helped explain why the long-range plan, commissioned by the Beacon Council, cited workforce education as a top need.

But which lessons to teach? School administrators say they've been pressing their business contacts, part-time faculty and various industry advisory councils for insight into the lessons that would be the most valuable — and marketable.

Broward College this summer launched its new manufacturing program at a time when the industry is experiencing a long-awaited comeback in South Florida. Manufacturing jobs have been growing since May 2011 in Broward, after four straight years of decline. Miami-Dade's manufacturing industry hasn't yet hit bottom, but the losses have been narrowing since early 2011.

Confident that Broward's cluster of medical manufacturers and other light-industry producers will continue needing workers, Broward College is investing \$100,000 on equipment simulators for a lab that will let students practice on an industrial compressor, a mock electrical system, various motors and other devices found along assembly lines.

"Obviously the economy isn't doing well. We need to get things going that are going to benefit our students," said Geraldine Klonarides, associates dean of the engineering program, which includes the new manufacturing classes. "Manufacturing is really kind of a no-brainer when you look at it. These are good jobs."

The manufacturing program follows the spring launch of a program at the Broward community college directly tied to a local employer. The Citrix Academy teaches students how to use the software and operating systems designed by the Fort Lauderdale-based company. Broward College President David Armstrong began pushing for the program shortly after taking the top job at the community college in 2007. He said Citrix was threatening to leave Broward in part because it has so much trouble filling tech positions.

"A trained workforce has always been a problem for" the company, Armstrong said. Citrix stayed, and now Broward expects to graduate about 400 students a year certified to operate the company's systems, which are used in businesses around the world. Derron Stewart, 32, works in the school's IT department but hopes to land a job at Citrix someday. He sees Citrix as a leader in cloud computing, and the Broward course as his best shot at landing a job there.

"It's one of the biggest companies in the IT industry," Stewart said. "To be able to take a course at the college that actually has a connection to them is very appealing."

Along with tech, schools are looking to capitalize on other growth sectors. South Florida's healthcare industry expanded throughout the recession — the medical industry in Miami-Dade saw its 144th month of job growth in July, according to statistics released Friday. Colleges are looking for new niches that could make their offerings more attractive for the already popular field of study.

Florida International University this month launched a master's program dedicated to managing medical paperwork. Called "Health Informatics," it has attracted about 25 doctors, nurses and office managers trying to get a leg up in digital records.

"This is very much a growing field," said Nancy Borkowski, director of healthcare management systems for the state school. "Once you have all of this data, how do you manage it?"

As the recession began in late 2007, Miami Dade College launched a bio-tech program within its biology department and has seen demand soar. What attracted about 45 students in the beginning now has nearly 200 students enrolled.

"My friends from pre-med, they say, 'Oh why are you taking bio-tech? It's just tech and research,' "said Katherine Leon, a 26-year-old working on a DNA analyzer inside a lab at MDC's north campus. "But pre-med is just theory."

A two-year degree, MDC's biotech program narrows the sort of biological training a student might receive in a broader healthcare track and focuses on skills needed for entry-level lab positions. "My students are truly being prepared to be scientists," said Belmont, the dean. "We're training them to be technicians. But we also give them the knowledge to move on."

"We've seen an improvement year after year with the students taking the biotech certificate," said Myra Diaz, a human resources executive at Noven Pharmaceuticals in Miami. "Someone with a biotech certificate definitely has a big plus."

At Miami Dade College, most students work at least part-time while attending classes. That makes vocational skills important even for students planning to spend two years at the community college and then transfer to a full university or MDC's own bachelor's program to complete their degrees.

As the largest community college in the country, Miami-Dade plays an outsized role in workforce training throughout the region. Florida Power & Light funds a program at MDC to train plant workers for its Turkey Point nuclear facility in Homestead. The Federal Aviation Administration runs an active internship program at MDC to replenish its ranks of air-traffic controllers at Miami International Airport, and both University of Miami and Baptist hospitals use MDC to accelerate nursing training to fill shortages.

One flight of stairs up from Leon's lab, Gabriel Pacreau and his two white-coated colleagues each gingerly handled flaky white clumps of what looked like bleached ashes. They were actually the remains of corn cobs, pulverized and treated in an effort to create a cheaper water-filtration material than the current favorite, charcoal.

Pacreau, 22, said he planned to use his MDC courses as a way to transfer to a four-year university and then pursue his studies in the post-graduate level. But he was happy to have options from his training.

"If you can't afford to get your phD," he said, "you can get a job as a lab technician."

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