



A university embraces innovation and the future of work

When students study homeland security at St. John's University, they don't rely on textbooks alone. They do a virtual reality simulation at the school's Homeland Security Lab, where they dissect cases such as that of the Unabomber, a former math professor turned American domestic terrorist.

St. John's University, founded in 1870, has made a major push in recent years to prepare students for the careers of the future through hands-on, experiential learning. This means considering emerging fields—homeland security, for one—and trends, such as technological change, automation, artificial intelligence, globalization and the gig economy. The approach extends throughout St. John's campuses and locations in Manhattan; Queens; Staten Island; and Hauppauge, Long Island; and overseas in Rome; Paris; and Limerick, Ireland.

There are powerful reasons for doing so.

By 2022, emerging professions will increase their share of all jobs from 16% to 27%, according to the World Economic Forum's Future of Jobs Report 2018. Meanwhile, science, technology, engineering and math jobs, such as data analyst, scientist, software and application developer, and e-commerce and social media specialists, will see increasing demand. The demand for information security analysts who work in homeland security, for example, will rise 37% by 2022, the U.S. Bureau of Labor Statistics projects.

A LAB-BASED APPROACH

One major investment within the College of Professional Studies has been the Innovation Lab, which opened a year ago in Queens. The lab provides students with the space to do virtual reality experimentation, 3D printing and mobile application testing. It is also home to student pitch competitions. Some of the activities that take place are the development of 3D printed prototypes for products and the annual Pitch Johnny Competition.

"We opened the lab because there is an academic program that supports it," said Katia Passerini, Ph.D., dean of the College of Professional Studies and professor in the division of computer science, mathematics and science at St. John's. "There is a minor in entrepreneurship, where we teach courses on innovation, creativity, digital entrepreneurship and new venture creation. There are also some foundational business courses, so students can get a minor that enables them, if they want to start a business, to know the basics."

"There is this notion of innovating either inside of a company or outside of it," Passerini continued. "For us, it's very important that students learn how to bring new ideas to whichever context they are working in."

The idea for the lab took shape after Steve Farella, chairman of the college's advisory board at the College of Professional Studies, chairman of MDC Media Partners and principal of VFL Investment & Advisory, provided initial funding to launch an "innovation garage," Passerini said. "From there, we got the idea for the Innovation Lab, which we just dedicated to him and his son David Farella."

St. John's commitment to real-life experience extends beyond the Innovation Lab to labs in the media, computer science, and arts and design.

"All of this is hands-on," Passerini said. "The key characteristic of all of these labs is we want the students to learn what they will do in the workplace. They are always experimenting, for instance by developing software applications."

In the Homeland Security Lab, the simulation program replicates an emergency management scenario.

"They [the students] see an explosion and have to dispatch police, firefighters and ambulances," Passerini said. "It looks like a video game. This type of large scale commercial simulation is rarely available in educational institutions."

In the Cyber Security Lab, students do network attacks and defense. "They learn how to find weakness in their applications and networks," Passerini explained.

All labs are integrated into coursework at the college, which offers 30 programs from cybersecurity to hospitality management. "The easiest way to get students' attention is not just by building the labs, but making sure what they do in those spaces is also part of their curriculum," Passerini said. "So, for example, the

courses in homeland security use the simulation as part of their coursework."



Katia Passerini, Ph.D.
Dean of the College of Professional Studies and professor in the division of computer science, mathematics and science

The College of Professional Studies develops programs by paying close attention to the jobs that will be in demand, and by how professionals in those fields will work with those in related specialties.

"We're always looking at what the next big area of growth is and trying to integrate it into our curriculum," Passerini said. "Disciplines are often related to each other. For instance, homeland security and cybersecurity are connected to each other. As a result, a lot of the spaces are interconnected. For example, the Innovation Lab is next to the Computer Science Lab."

MEETING INDUSTRIES WHERE THEY ARE

As part of its focus on the fields of the future, St. John's has continued to expand its hospitality management program; selected courses are taught in Manhattan—a major hub of the global hospitality industry.

"We invite a lot of guest speakers from hotel chains in the city," Passerini said. "We're encouraging them to use our spaces to come together. The conversations they're having with our students about innovation can create long-term change."

It's all part of a real-world approach that is helping St. John's students and graduates prepare for a fast-changing future. ■

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Katia Passerini, Ph.D.



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