



**NYU**

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**Immediate Release:**

Wednesday, January 10, 2018

## **NYU Tandon Hacks Cybersecurity Education**

**City of New York’s Cyber Command and Elite Businesses Shape Unique, Affordable Master’s Degree Program to Provide Acutely Needed Technical Skills**

**Online NYU Cyber Fellows Program Wades into Lifetime Learning with 5 Years of Free Updates to Fast-Changing Coursework**

BROOKLYN, New York – New York University Tandon School of Engineering, in partnership with New York City Cyber Command (NYC3), today launched the New York Cyber Fellows, a unique, affordable online cybersecurity master’s degree program designed in conjunction with elite New York City employers to address the acute shortage of highly trained technical professionals in the city and nation.

It offers scholarships of as much as 75 percent of tuition to U.S. residents, bringing the total tuition for the rigorous, highly technical education to **\$15,000 for the entire program – the lowest of any cybersecurity master’s degree program in New York City.**

“Perhaps the most important element of the New York Cyber Fellows program is the way it will reflect our collaboration with influential New York employers, including the NYC Cyber Command to ensure students get the precise hands-on education they need,” said Professor Nasir Memon, founder of NYU

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Tandon's cybersecurity program and Associate Dean for Online Learning. "The NY Cyber Fellows will work on real-world problems and get unprecedented access to our city's job market."

"A more affordable degree in this field means more New Yorkers will develop the skills to defend our digital city and land a great job. We're proud to work in partnership with NYU's Tandon School to launch the program this fall and I encourage New Yorkers to apply now," said **Mayor Bill de Blasio**. "This is exactly the kind of program New York needs to attract companies in this fast-growing sector, and to help New Yorkers compete for those good jobs."

To shape the program, NYU Tandon elicited **curriculum recommendations** from NYC3 and leading sectors of the city's economy. Business partners include **Blackstone, Booz Allen Hamilton, Bridgewater, EY LLC, Goldman Sachs, IBM Security, Jefferies, Loki Labs, Morgan Stanley, Synack, and U.S. Bank.**

**NYC3, the agency that leads the City of New York's cyber defense efforts, will offer Cyber Fellows access to the NYC3 Cyber Range** — a virtual laboratory with realistic simulation for hands-on training and development.

"NYC3's Cyber Range will expose students to simulation, testing, and research into a wide range of security and technology concerns associated with securing one of the largest digital cities in the world," said **Geoff Brown, New York City Chief Information Security Officer and Head of NYC3**. "We're proud to support a program that opens up a career in cyber defense to more students, allowing the next generation of cyber professionals to better resemble the diversity of the society they will be charged to protect."

The NY Cyber Fellows program answers a call from New York Mayor Bill de Blasio's [New York Works](#) initiative to add 10,000 cybersecurity experts to the workforce within a decade. NYU Tandon decided to extend its reach nationally at the encouragement of national employers.

One of the program's most compelling benefits: A **free five-year subscription to audit the newest versions of the online courses** that graduates took as NY Cyber Fellows – important because coursework typically updates every semester, as new threats emerge.

"We want our Cyber Fellows to know we will be with them for the long term – and I have no doubt that their experiences in the field will enrich future scholars," Memon said.

Other novel elements of the NY Cyber Fellows program include:

- Exclusive access to speakers, events, and mentorships provided by business partners and NYC3. The advising institutions will also offer internship and employment opportunities, and capstone projects will link student research projects to these institutions.

- Year-round, around-the-clock access to the Capture the Flag (CTF) and other challenges developed for [Cyber Security Awareness Week \(CSAW\)](#), the giant worldwide cybersecurity games founded by NYU Tandon. Such games are widely used for education and by employers to find the most skilled applicants.
- Access to Synack’s crowd-sourced penetration testing challenges to build the offensive skills valued by employers – an element of the offensive security skills long recognized as a cornerstone of NYU Tandon’s cybersecurity education.

The NY Cyber Fellows program is structured as a part-time curriculum to accommodate working professionals. For those without an engineering baccalaureate degree, NYU Tandon will offer its groundbreaking [Bridge to Tandon](#) to qualified NY Cyber Fellows applicants. It provides the foundation they will need to apply to a master’s degree program in cybersecurity – within 26 weeks and for \$1,500.

“The New York Cyber Fellows program continues NYU Tandon’s long history of actively working with our community to solve its most pressing societal problems – and few problems are as pressing in the 21<sup>st</sup> century as digital security, especially for New York City as the financial and media capital of the world,” said **NYU Dean of Engineering Katepalli R. Sreenivasan**. “Over the years, we have helped the City engineer building codes, train firefighters to combat high-rise conflagrations, and develop and maintain our power grid. Today, NYU Tandon is proud to add our experience to securing our personal and collective digital futures as we continue to educate larger and larger community of experts in the field.”

“Growing our cybersecurity industry is critical to the de Blasio Administration’s plan to create 100,000 good-paying jobs over the next 10 years, a goal that cannot be accomplished without preparing New Yorkers with 21<sup>st</sup> century training and skills,” said **New York City Economic Development Corporation (NYCEDC) President and CEO James Patchett**. “NYU’s Cyber Fellows program will open the door for many New Yorkers looking to join a growing and high-paying industry, while building a talent pipeline that will keep New York City a leader in cybersecurity for years to come. NYCEDC has been making a big push to advance the cybersecurity industry through our CyberNYC initiative, and we thank both New York City Cyber Command and NYU Tandon for building on these important efforts.”

New York City reports it is already home to more than 6,000 cybersecurity jobs and that local businesses are eager to add more. If the demand for cybersecurity jobs keeps pace with the recent trends and growth of other major hubs of activity, New York City estimates it will need more than 10,000 additional cybersecurity professionals over the next ten years. Educating new experts – rather than hiring from outside the region – is key to solving the local shortage because the city competes for talent amidst a global drought: There are already some [200,000 unfilled jobs nationwide](#), and the shortfall is expected to climb to [1.8 million worldwide by 2022](#).

### Fast Facts – Cybersecurity Careers in NYC

- Current national shortage of cybersecurity experts: 200,000 \*
- Projected shortfall in NYC by 2027: 10,000 \*\*
- Projected shortfall worldwide by 2022: 1.8 million \*\*\*
- Median starting salary of Network Security Administrator in NYC: \$153,500 \*\*\*\*
- Median starting salary of Information Systems Security Manager in NYC: \$192,500 \*\*\*\*

\* [CyberSeek](#)

\*\* [New York Works](#)

\*\*\* [Frost & Sullivan](#)

\*\*\*\* [Robert Half](#)

### Cyber Fellows Partners Comment

**Anil Markose, a [Booz Allen Hamilton](#) Senior Vice President and leader in firm’s commercial business,** said: “The NYU Cyber Fellows program helps addresses a major talent shortfall in our industry; Booz Allen is excited to share our expertise in cyber with NYU to provide real-world opportunities right here in New York for the next generation of cyber experts.”

**Richard A. Falkenrath, Chief Security Officer, and Tom Ostebo, Deputy Chief Security Officer at [Bridgewater Associates LP](#),** said: “The Security Department at Bridgewater Associates is honored and excited to partner with the NYU Tandon School of Engineering on their Cyber Fellows Master’s Degree Program and support students in helping to advance their knowledge and careers in cybersecurity.”

**M.J. Vaidya, Principal at [EY](#),** said: “As someone who has focused on this area for several years including as an educator, I am very excited to see the launch of this program. As our government and businesses focus on digital enablement and implement solutions that result in increased collection of sensitive data and/or connected IoT products, security risk management becomes a fundamental requirement. To that end, the New York Cyber Fellows program is helping address a critical cyber talent shortage and at the same time providing growth opportunities for working professionals.”

**Bill McDonald, Director of HR, [IBM Security](#),** said: “Cybersecurity threats currently pose one of the greatest challenges to our businesses, personal data, and society at large, and it’s more important than ever to create a talent pipeline that can keep pace. It’s essential that the cybersecurity experts working in the field today join forces with educators to ensure that the next generation of cyber defenders is equipped for today’s rapidly evolving cybersecurity landscape. Partnerships like this are a great way to

connect training and curriculum with the real-world knowledge and skills needed for the modern security workforce.”

**Nick Hnatiw, CEO of [Loki Labs](#)**, said: "We are excited about NYU Tandon's response to Mayor de Blasio's New York Works initiative because it uniquely addresses the cybersecurity skills shortage facing the city by providing access to education and training that is both affordable and world-class. As a Brooklyn-based cybersecurity company, we look forward to partnering with NYU Tandon and supporting the Cyber Range, which will provide the next generation of much-needed cybersecurity professionals with world-class training. This virtual laboratory will give students access to leading technology and tools in a learning and research environment that is second to none globally."

**Jerry Brady, Global Chief Information Security Officer, [Morgan Stanley](#)**, said: “We are delighted to provide our expertise and support to the New York Cyber Fellows program to educate the next generation of cyber security leaders. In light of the rapid evolution of the cybersecurity landscape, it’s the joint responsibility of our industry to ensure we invest in world class talent to help safeguard our business, clients and assets.”

**Tom Brennan, Member of the Global Board of Directors of the [Open Web Application Security Project \(OWASP\)](#)**, said: “The OWASP Foundation supports the mission of raising visibility for software security and applauds the efforts of NYU locally and globally.”

**Jay Kaplan, CEO and Co-Founder of [Synack](#)**, said: “The epidemic of cybercrime is one of the most critical issues governments and businesses face today. I applaud NYU on their initiative to train our next generation of capable cybersecurity experts. Through our work with the largest government and corporate enterprises in the world on implementing crowdsourced security programs, we understand how imperative it is to augment formal education with real-world, hands-on hacking experience. We’re excited about taking on an advisory role with NYU Tandon for their Cyber Fellows program in support of the next generation of ethical hackers. Together we can make headway against the cyber attacks and concerns of today.”

**Jason Witty, Executive Vice President and Chief Information Security Officer of [U.S. Bank](#)**, said: “U.S. Bank looks forward to partnering with New York University on Cyber Fellows. This program makes a graduate degree from a highly respected institution accessible to a geographically diverse workforce, and we look forward to helping NYU empower these talented leaders and cyber professionals to hit the ground running and add substantively to the security of sensitive network operations.”

## **A Cybersecurity Innovator**

NYU Tandon, which introduced one of the earliest master’s cybersecurity degree programs, is an internationally recognized center for cybersecurity research, education, and policy. It has received all three Center of Excellence designations from the National Security Agency and the United States Cyber Command. NYU Tandon has joined with other NYU schools to form the [NYU Center for Cybersecurity](#)

to research new approaches to security and privacy by combining security technology, psychology, law, public policy, and business.

*U.S. News & World Report* scored NYU Tandon number two in the nation in its 2018 rankings of the "[Best Online Graduate Programs in Computer Information Technology](#)" and ranked Tandon number 13 among the "[Best Online Graduate Engineering Programs](#)," assigning it to the top tier for the sixth consecutive year. NYU Tandon's virtual cybersecurity program was previously named the nation's best online program by the Sloan Consortium (now the [Online Learning Consortium](#)). NYU Tandon Online received the Consortium's 2015 Ralph E. Gomory Award for Quality Online Education.

Fourteen years ago, NYU Tandon founded CSAW, which has grown into the world's largest student-led security games, staged across five international sites. NYU Tandon's cybersecurity students keep their network active throughout the year, staging weekly [Hack Nights](#) to educate one another and studying and researching in the [Offensive Security, Incident Response and Internet Security Laboratory \(OSIRIS Lab\)](#), founded with National Science Foundation (NSF) support. The NSF was also the original supporter of one of NYU Tandon's longest-running outreach programs for women, which educates high school girls each summer in computer science and cybersecurity.

NYU Tandon helps retain its reputation for connecting students to the wider security community and preparing them with current offensive and defensive skills they need in the wild through classes taught by industry and government professionals, particularly its [Hackers in Residence](#).

**To learn more about the NY Cyber Fellows**, visit

<http://engineering.nyu.edu/academics/online/masters/cybersecurity/fellowship>. Deadline to apply for the fall semester is May 1, 2018.

### **About the New York University Tandon School of Engineering**

The NYU Tandon School of Engineering dates to 1854, the founding date for both the New York University School of Civil Engineering and Architecture and the Brooklyn Collegiate and Polytechnic Institute (widely known as Brooklyn Poly). A January 2014 merger created a comprehensive school of education and research in engineering and applied sciences, rooted in a tradition of invention and entrepreneurship and dedicated to furthering technology in service to society. In addition to its main location in Brooklyn, NYU Tandon collaborates with other schools within NYU, the country's largest private research university, and is closely connected to engineering programs at NYU Abu Dhabi and NYU Shanghai. It operates Future Labs focused on start-up businesses in downtown Manhattan and Brooklyn and an award-winning online graduate program. For more information, visit <http://engineering.nyu.edu>.

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