

## EDUCATION



WESTERN CAROLINA UNIVERSITY

Students in Western Carolina University's emergency and disaster management program watch a demonstration on the use of canines in emergency work.

# Building Tomorrow's Leaders

Recruiting graduates who have the expertise to serve and protect

By Robin Roenker

**L**OOKING FOR A CAREER with the Department of Homeland Security (DHS)? The broad-reaching agency — which encompasses 14 operational and support components, including the U.S. Cybersecurity and Infrastructure Security Agency, the Federal Emergency Management Agency (FEMA) and the U.S. Secret Service — recruits employees with an array of interests and skill sets.

"The foremost trait in an ideal DHS employee is a motivation for public service and an understanding of the department's mission to safeguard the American people, our homeland and our values," says Sharon Wong, DHS executive director for strategic recruitment, diversity and inclusion. "DHS employees are resilient and possess the ability to solve problems, strategize and innovate

to achieve results," she adds.

## CYBER DEFENSE

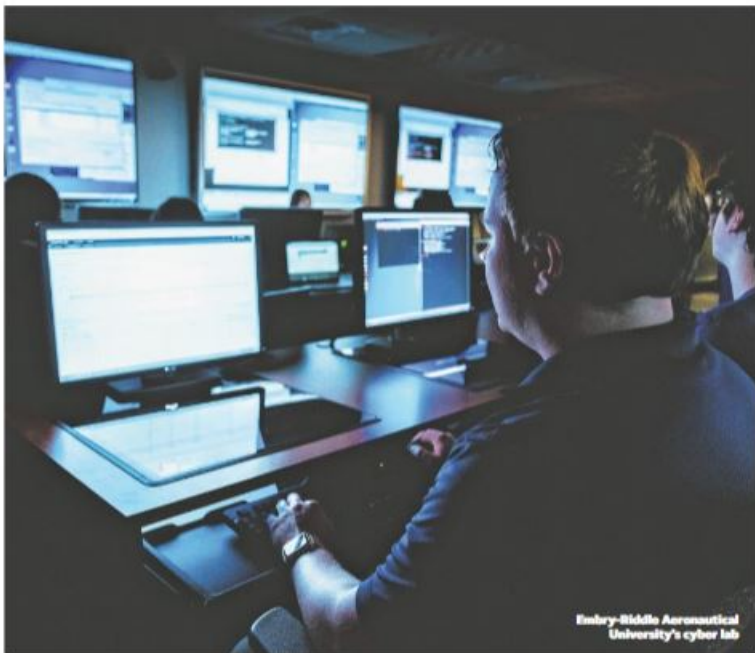
Degree programs in cybersecurity can lead to a career with DHS, which actively recruits employees with expertise in cyber risk and vulnerability detection, digital forensics and networks and systems engineering.

Students in Embry-Riddle Aeronautical University's cyber intelligence and security degree program in Prescott, Ariz., learn fundamentals like network security, ethical hacking and malware analysis — as well as how to identify potential attackers' typical techniques and procedures and get ahead of them.

"The degree program was started in 2013 with a goal of providing students with not only the capability to understand about the attacker — what

CONTINUED »

## EDUCATION



Embry-Riddle Aeronautical University's cyber lab

EMBRY-RIDDLE AERONAUTICAL UNIVERSITY

**“Every day, something is different in (cyber) security — every problem is a new problem, and that energizes our students.”**

— MICHAEL WHITMAN,  
Institute for Cybersecurity  
Workforce Development,  
Kennesaw State University

they're doing right now — but what they might be doing in the future, hence the intelligence part,” says Jon Haass, interim dean of the university's College of Security and Intelligence.

At Arizona State University's Center for Cybersecurity and Digital Forensics, students are trained to approach technical cybersecurity not just from a highly technical computer science angle, but from a “broad, cross-disciplinary view” that includes a nod to the legal, economic and psychological aspects of cyber defense, says Adam Doupe, the center's associate director. “The problems that we have to tackle in cybersecurity are not just technical problems,” Doupe explains.

Similarly, at Marquette University in Milwaukee, the Center for Cyber Security

Awareness and Cyber Defense works to dispel the myth that cybersecurity specialists end up “hidden in a back room doing code,” says Thomas Kaczmarek, the center's director. “There are lots of roles (in cybersecurity) that are important and involve a lot of interaction with business.”

Fully embracing the cybersecurity-business crossover, Idaho State University offers an MBA program with a specialization in cybersecurity topics — and students can receive tuition support through Scholarship for Service ([sfs.opm.gov](http://sfs.opm.gov)) in return for a commitment to work at least two years in a federal agency. “My students eat, sleep and breathe cybersecurity for two years, nonstop,”

## CYBERSECURITY

The following cybersecurity programs have been designated as National Centers of Academic Excellence by DHS and the National Security Agency:

**ARIZONA STATE UNIVERSITY**

Center for Cybersecurity and Digital Forensics degrees offered: Bachelor of Science in applied computing (cybersecurity concentration) or computer science (cybersecurity concentration) and Bachelor of Science in engineering in computer systems engineering (cybersecurity concentration)  
 ▶ [globalsecurity.asu.edu](http://globalsecurity.asu.edu)

**EMBRY-RIDDLE AERONAUTICAL UNIVERSITY**

College of Security and Intelligence degrees offered: Bachelor of Science in cyber intelligence and security; Bachelor of Science in global security and intelligence studies; Master of Science in security and intelligence studies; Master of Science in cyber intelligence and security  
 ▶ [prescott.erau.edu](http://prescott.erau.edu)

**IDAHO STATE UNIVERSITY**

Information Assurance Program degree offered: Master of Business Administration with a concentration in cybersecurity topics  
 ▶ [security.id.edu](http://security.id.edu)

**KENNESAW STATE UNIVERSITY**

Institute for Cybersecurity Workforce Development degrees offered: Bachelor of Science in cybersecurity; Master of Science in cybersecurity; Bachelor of Business Administration in information security and assurance  
 ▶ [cyberinstitute.kennesaw.edu](http://cyberinstitute.kennesaw.edu)

**MARQUETTE UNIVERSITY**

Center for Cyber Security Awareness and Cyber Defense degree offered: Master of Science in computing with a specialization in information assurance and cyber defense  
 ▶ [marquette.edu/cyber-security](http://marquette.edu/cyber-security)

CONTINUED »

## EDUCATION



Corey Schou, left, professor of informatics at Idaho State University, speaks to MBA students.

## EMERGENCY MANAGEMENT

For students interested in careers at FEMA, these programs offer agency-specific training:

**ARKANSAS STATE UNIVERSITY**  
Regional Center for Disaster Preparedness education degrees offered: Associate of Applied Science, Bachelor of Science and Master of Science degrees in disaster preparedness and emergency management  
▶ [astate.edu/dpem](http://astate.edu/dpem)

**WESTERN CAROLINA UNIVERSITY**  
Emergency and disaster management program degree offered: Bachelor of Science in emergency and disaster management  
▶ [wcu.edu/lecmf/programs/emergency-disaster-management](http://wcu.edu/lecmf/programs/emergency-disaster-management)

says Corey Schou, professor of informatics and director of Idaho State University's Informatics Research Institute and National Information Assurance Training and Education Center, whose graduates have gone on to placements at DHS, the National Security Agency and other government agencies.

### ONLINE OPTIONS

In part to help address the looming shortage of cybersecurity specialists — some estimates predict there will be 3.5 million unfilled cybersecurity positions globally by next year — Georgia's Kennesaw State University plans to launch an online master's degree program in cybersecurity this fall to accompany its longstanding online bachelor's degree option.

"Over half — 55 percent — of our applicants to the master's degree program are career changers with non-IT undergraduate degrees, 14 percent alone from criminal justice-related fields," says Michael Whitman, executive director of Kennesaw State's Institute for Cybersecurity Workforce Development.

The growth of online cybersecurity courses is making it easier for students from a wide array of educational backgrounds and life and work stages to pivot

to an exciting new career.

"Cybersecurity is a vast field within itself. It doesn't pigeonhole the student into one set of activities," Whitman says. "Every day, something is different in security — every problem is a new problem, and that energizes our students."

### REAL-WORLD TRAINING

For students interested in a career at FEMA, degree programs in emergency management and disaster preparedness often offer opportunities to learn directly from experts in the field.

At Western Carolina University's (WCU) emergency and disaster management program, classes are frequently led by FEMA staffers operating as adjuncts. "We try to hire instructors that are out there on the front lines of defense," says program director Lisa Briggs, who serves as a consultant to a DHS post-disaster reunification team, that helps to reconnect children with their families following disasters.

WCU's on-campus bachelor's degree program in emergency and disaster management launched in 2019, bolstering its already popular online degree option. Briggs and her colleagues have recently added 14 new courses to their interdisciplinary curriculum, including

**"We're seeing more ... students wanting to serve on that front line of defense. They want excitement and adventure — while knowing they're making a difference."**

— LISA BRIGGS,  
Emergency and Disaster  
Management program,  
Western Carolina University

topics such as drone use, geographic information system mapping and missing persons recovery.

At Arkansas State University, students can pursue degrees in disaster preparedness and emergency management either on campus or online, with coursework addressing issues such as disaster recovery, public health, public policy and the economic aspects of disaster.

"We have placed students with various federal agencies, including FEMA, as well as state and local emergency management agencies, the military and the private sector," says Joseph Richmond, chair of the university's Department of Disaster Preparedness and Emergency Management.

In the face of high-profile national disasters — including hurricanes, wildfires and floods — emergency management careers have become an appealing option for students seeking a way to serve their communities.

"We're in a period of growth," Briggs says of the WCU program. "We're seeing more and more students wanting to serve on that front line of defense. They want excitement and adventure — while knowing they're making a difference. It's just an awesome career."

IDAHO STATE UNIVERSITY