TEXAS CYBERSECURITY

EDUCATIONAL PROGRAMS
ECONOMIC SNAPSHOT

UNIVERSITY OF HOUSTON

The University of Houston is one of only a handful of universities in the nation designated as a Center for Academic Excellence in two National Security Agency focus areas: cyber defense education and research. UH is strengthening the cybersecurity workforce and developing the tools and technologies needed to face global security challenges.
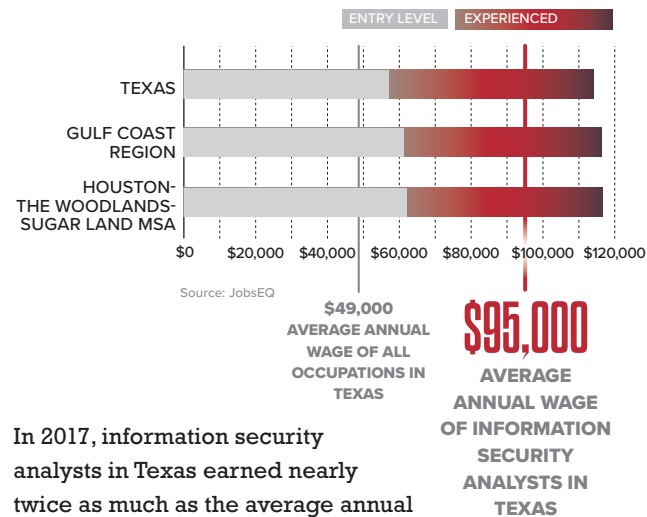
MORE THAN

95%

OF UNIVERSITY OF HOUSTON CYBERSECURITY GRADUATES ARE WORKING IN THE FIELD AFTER GRADUATION.

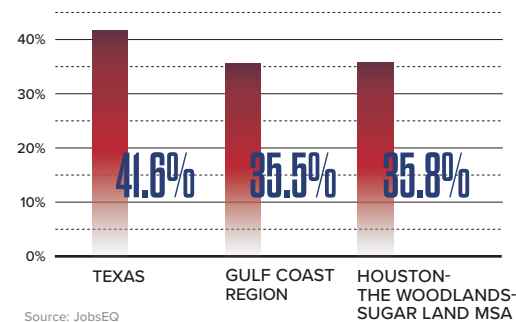UH's cybersecurity graduates are highly recruited and quickly employed, earning an average starting salary of $84,750.

ALL SYSTEMS: GROW!

ESTIMATED ANNUAL WAGES FOR INFORMATION SECURITY ANALYSTS, 2017

ENTRY LEVEL   EXPERIENCED

	ENTRY LEVEL	EXPERIENCED
TEXAS		
GULF COAST REGION		
HOUSTON-THE WOODLANDS-SUGAR LAND MSA		

$0 $20,000 $40,000 $60,000 $80,000 $100,000 $120,000

Source: JobsEQ

$49,000
AVERAGE ANNUAL WAGE OF ALL OCCUPATIONS IN TEXAS

$95,000
AVERAGE ANNUAL WAGE OF INFORMATION SECURITY ANALYSTS IN TEXAS

In 2017, information security analysts in Texas earned nearly twice as much as the average annual salary of all occupations in Texas.

10-YEAR FORECASTED GROWTH RATES FOR INFORMATION SECURITY ANALYST EMPLOYMENT BY TEXAS REGION, 2018

TEXAS	GULF COAST REGION	HOUSTON-THE WOODLANDS-SUGAR LAND MSA
41.6%	35.5%	35.8%

Source: JobsEQ

- In 2018, 1,798 information security analysts were employed in the Gulf Coast region, with 1,774 of them in the Houston-The Woodlands-Sugar Land Metropolitan Statistical Area (MSA).

- Forecasts predict the occupation will grow over the next 10 years by almost 36 percent in the region and the MSA, just slightly below the state forecasted growth rate of 41.6 percent.

UH'S COMMUNITY INVESTMENT AND ECONOMIC IMPACT

UH operates a university research center, **THE CENTER FOR INFORMATION SECURITY RESEARCH AND EDUCATION,** which serves as a focal point for the university's cybersecurity initiatives.

THE COLLEGE OF TECHNOLOGY

at UH is a national leader in cybersecurity for critical infrastructures through a professional master's degree program aimed at protecting these critical elements of our economy.

UH PROVIDES NATIONAL LEADERSHIP TO THE NSA CENTER OF ACADEMIC EXCELLENCE PROGRAM THROUGH **THE CAE NATIONAL RESOURCE CENTER FOR KNOWLEDGE UNITS AND ACADEMIC STANDARDS,** WHICH IT HAS HOSTED SINCE ITS INCEPTION.

PROGRAMMED FOR SUCCESS

The University of Houston enjoys a prime location within Texas' largest city. The majority of its alumni join the Houston workforce, with graduates of the university's cybersecurity programs going on to work for some of the world's largest consulting firms, banks, energy companies and software developers.

TO SEE INFORMATION ON CYBERSECURITY AND THE TEXAS ECONOMY:
https://comptroller.texas.gov/economy/economic-data/cybersecurity/

TEXAS CYBERSECURITY

EDUCATIONAL PROGRAMS
ECONOMIC SNAPSHOT

In 2017, Texas ranked third among states in its number of cybercrime victims and, at $115.7 million, second in financial losses.

Cybercrime — the use of computer technology or the internet to gain unauthorized access to information for exploitative or malicious purposes — poses a danger to both national and personal security.

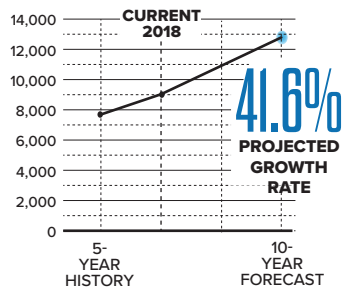**CYBERSECURITY INDUSTRY EMPLOYMENT IN TEXAS**
130,000

GROSS STATE PRODUCT
$35.5 BILLION

Source: Texas Comptroller of Public Accounts, JobsEQ

UNEMPLOYMENT

Cybersecurity has a **NEAR-ZERO UNEMPLOYMENT RATE** and an average annual wage of **$110,000** across its various occupations.

GROWTH RATES FOR INFORMATION SECURITY ANALYST EMPLOYMENT IN TEXAS, 2018

CURRENT 2018

41.6%
PROJECTED GROWTH RATE

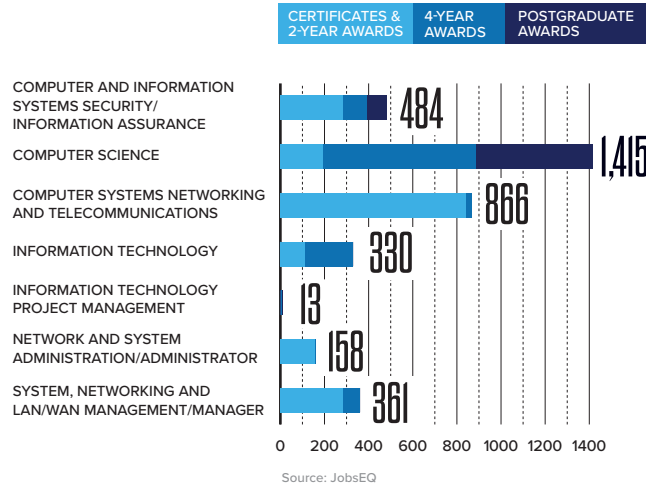5-YEAR HISTORY — 10-YEAR FORECAST

During the past five years, the state added 1,338 jobs in this occupation and is expected to add 3,757 more during the next 10 years, for a growth rate of 41.6 percent.

Source: JobsEQ

Glenn Hegar | Texas Comptroller of Public Accounts
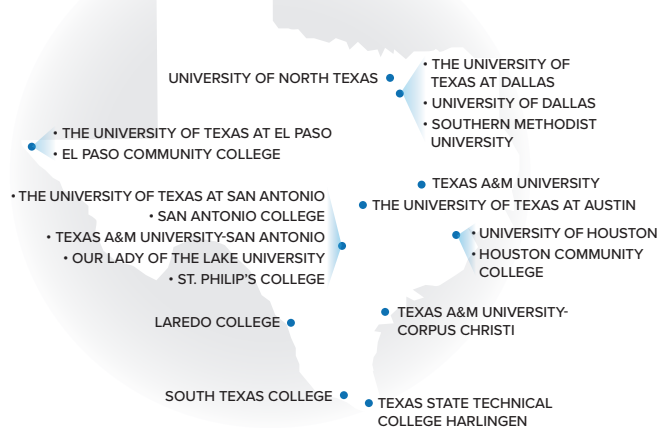

PROGRAMS AND AWARDS

The Comptroller's office has examined educational and employment statistics for the information security analyst occupation, defined by the federal Standard Occupational Classification system as workers who plan, implement, upgrade or monitor security measures for the protection of computer networks and information. These workers ensure appropriate security controls are in place and respond to computer security breaches and viruses.

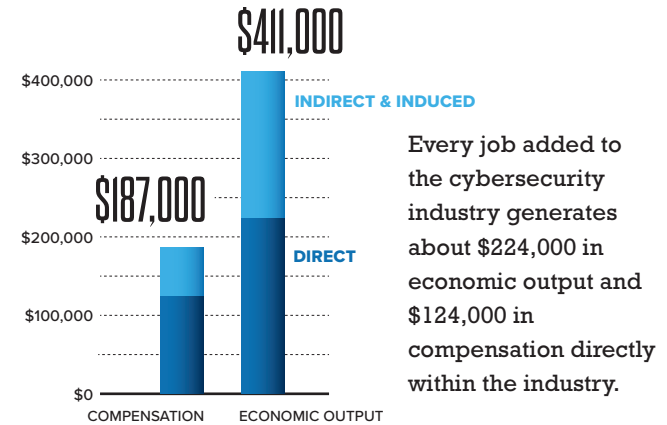**INFORMATION SECURITY ANALYST PROGRAM AWARDS IN TEXAS**

Category	Awards
CERTIFICATES & 2-YEAR AWARDS	
4-YEAR AWARDS	
POSTGRADUATE AWARDS	

Program	Awards
COMPUTER AND INFORMATION SYSTEMS SECURITY/INFORMATION ASSURANCE	484
COMPUTER SCIENCE	1,415
COMPUTER SYSTEMS NETWORKING AND TELECOMMUNICATIONS	866
INFORMATION TECHNOLOGY	330
INFORMATION TECHNOLOGY PROJECT MANAGEMENT	13
NETWORK AND SYSTEM ADMINISTRATION/ADMINISTRATOR	158
SYSTEM, NETWORKING AND LAN/WAN MANAGEMENT/MANAGER	361

Source: JobsEQ

NATIONAL SECURITY AGENCY DESIGNATED CENTERS FOR ACADEMIC EXCELLENCE IN TEXAS

- UNIVERSITY OF NORTH TEXAS
- THE UNIVERSITY OF TEXAS AT DALLAS
- UNIVERSITY OF DALLAS
- SOUTHERN METHODIST UNIVERSITY
- THE UNIVERSITY OF TEXAS AT EL PASO
- EL PASO COMMUNITY COLLEGE
- THE UNIVERSITY OF TEXAS AT SAN ANTONIO
- SAN ANTONIO COLLEGE
- TEXAS A&M UNIVERSITY-SAN ANTONIO
- OUR LADY OF THE LAKE UNIVERSITY
- ST. PHILIP'S COLLEGE
- TEXAS A&M UNIVERSITY
- THE UNIVERSITY OF TEXAS AT AUSTIN
- UNIVERSITY OF HOUSTON
- HOUSTON COMMUNITY COLLEGE
- LAREDO COLLEGE
- TEXAS A&M UNIVERSITY-CORPUS CHRISTI
- SOUTH TEXAS COLLEGE
- TEXAS STATE TECHNICAL COLLEGE HARLINGEN

ESTIMATED ANNUAL IMPACT OF CYBERSECURITY INDUSTRY PER JOB

$411,000
INDIRECT & INDUCED

$187,000
DIRECT

$400,000
$300,000
$200,000
$100,000
$0

COMPENSATION — ECONOMIC OUTPUT

Every job added to the cybersecurity industry generates about $224,000 in economic output and $124,000 in compensation directly within the industry.

Source: JobsEQ

CONCLUSION

Millions of businesses and individuals face financial and personal risk from compromised systems every day. Unfortunately, cybercriminals see Texas' large, ever-growing population simply as a large and ever-growing pool of potential targets. The state's colleges and universities have continued to develop nationally recognized programs that produce the highly skilled professionals needed to address these challenges while creating high-wage, high-demand jobs for Texans. During the 2017 academic year, these programs awarded more than 484 degrees for information security analysts as well as thousands of degrees for workers in other IT occupations.

Texas' cybersecurity educational programs train workers who enter almost every industry of the state economy. But they also contribute greatly to the cybersecurity industry itself — an industry so new it has yet to be defined by NAICS.