



# The Journey of Innovation: From Concept to Reality at BSU's Cyber Range

BU Security Camp 2024

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# HI! I'M MICHELLE!

**Life-long learner, eternally  
curious, equity and justice  
advocate, mom.**





# CYBER CRIME BY THE NUMBERS

## \$10.5 Trillion

- Projected annual cost of cybercrime worldwide by 2025 according to Cybersecurity Ventures.
- **Source:** Cybersecurity Ventures, "2021 Official Annual Cybercrime Report."

## \$24.7 Billion

- Estimated global losses due to Business Email Compromise (BEC) scams from 2016 to 2021.
- **Source:** FBI Internet Crime Complaint Center (IC3), "2020 Internet Crime Report."

## 36 Billion

- Estimated number of records exposed in data breaches in the first half of 2021.
- **Source:** Risk Based Security, "2021 Mid-Year Data Breach QuickView Report."

## \$6.3 Million

- Average cost of a data breach in the United States in 2021.
- **Source:** IBM Security, "Cost of a Data Breach Report 2021."

## 79%

- Percentage increase in ransomware attacks from 2019 to 2020.
- **Source:** SonicWall, "2021 SonicWall Cyber Threat Report."

## 92%

- Percentage of malware delivered by email.
- **Source:** Verizon, "2021 Data Breach Investigations Report."

## \$1.1 Billion

- Losses from cryptocurrency theft and fraud in the first half of 2021.
- **Source:** CipherTrace, "2021 Cryptocurrency Crime and Anti-Money Laundering Report."

## 40%

- Percentage of global organizations that experienced a ransomware attack in 2020.
- **Source:** Sophos, "The State of Ransomware 2021."

## \$2.7 Million

- Median financial impact of insider threats in 2020.
- **Source:** Ponemon Institute, "2020 Cost of Insider Threats Global Report."






Welcome to the Cyber Range | Bridgewater State University



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# ABOUT THE RANGE

## A state-of-the-art facility at the forefront of cybersecurity training

- Cybersecurity training space, offering hands-on training through simulated cyberattacks, data breaches, and other cybercrimes.
- Much like a flight simulator, our Cyber Range emulates a highly advanced virtual environment tailored for training cybersecurity experts with unparalleled realism.
- 1,900 square foot facility features 24 work stations, a large video wall, and command center.
- Through simulated “stress-tests,” participants navigate cyberbreaches in real-time, forcing them to detect, respond, and remediate incidents





# VISION & OBJECTIVES

Educate | Simulate | Secure

## VISION

- To be a leading center in advancing cybersecurity education and workforce readiness, Bridgewater State University Cyber Range aspires to be at the forefront of training the next generation of cybersecurity professionals.
- This vision encompasses empowering individuals with cutting-edge skills and knowledge to safeguard digital assets and infrastructure in an increasingly interconnected world.

## OBJECTIVES

1. Provide comprehensive, state-of-the-art cybersecurity training for both students and professionals.
2. Support local municipalities, businesses, and organizations in developing robust cybersecurity capabilities.
3. Foster innovation and research in cybersecurity practices and technologies.
4. Enhance the cybersecurity workforce by equipping individuals with practical skills and experiences to address current and emerging threats.



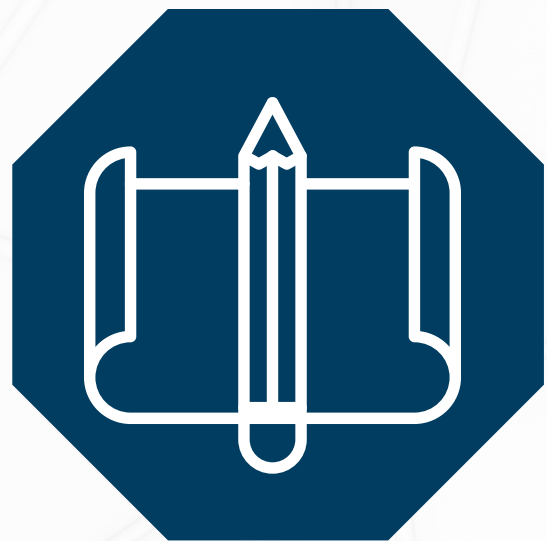
# CYBERTRUST OF MASSACHUSETTS





# DIVERSE TRAINING OPTIONS FOR A SECURE FUTURE

- In today's rapidly evolving cybersecurity landscape, it's imperative to stay ahead of threats through advanced and specialized training. Bridgewater State University's Cyber Range offers a suite of diverse training options designed to fortify individuals and organizations against digital vulnerabilities. Our programs, ranging from certification preparation to immersive team simulation exercises, are crafted to meet the unique needs of various sectors, ensuring a future secured by knowledgeable and skilled cybersecurity professionals.



**CERTIFICATION  
PREP**



**TEAM  
SIMULATIONS**



**LEADERSHIP  
DEVELOPMENT**



**INCIDENT  
RESPONSE PREP**



**WORKFORCE  
DEVELOPMENT**



**K-12  
PROGRAMMING**



# CERTIFICATION PREP



**NETWORK+**



**SECURITY+**



**CYSA+**



# IMMERSIVE LABS




- Upskilling and exercising teams from techs to execs – executive teams, crisis management teams, defensive cyber teams, SOC teams
- Cutting-edge hyper-realistic environments to facilitate comprehensive technical drills
- Immersive decision-making scenarios that bring risks to life
- Measure performance across teams to identify organizational strengths and gaps
- Run exercises using dedicated teams or combine into a unified solution from technical teams to executive leadership





## EARLY SUCCESSES

- Plymouth County Certifications
  - 1st Corporate Client
  - CASE K-12 Curriculum
  - MassHire Program
- 



# MASSHIRE PROGRAM

- Workforce development program for people ages 16–24
- 120 hours over 6 weeks
- Focus on core IT concepts, cyber and networking basics, career exploration
- “[The program helped] me to know what options are out there in cyber security and it started giving me skills like subnetting, cryptology, and ethical hacking that I can take into the cyber security field.”



The background is a dark blue grid with various digital and technical elements. In the top left, there's a large, stylized circular graphic resembling a radar or a complex circuit. In the top right, a line graph titled "frequency channels" shows data points across a range from 240 to 320. Below the graph are several rows of dots. On the left side, there's a vertical list of binary code (0s and 1s). In the bottom left, a semi-circular gauge shows a value of -19. In the bottom center, the BSU CYBER logo is displayed. In the bottom right, another semi-circular gauge shows a value of 74, and a large, complex circular graphic resembling a radar or a complex circuit is visible. The main text is centered in a white rounded rectangle.

# **WELCOME** **BROCKTON HIGH SCHOOL** **CYBERSECURITY SPECIALISTS**







# SUMMARY

Level Up Gaming has suffered a ransomware attack that has put our most anticipated game release, 'Galactic Guardians', at risk. As the newest cybersecurity specialists, your mission is to uncover how the breach occurred and secure our systems. Time is of the essence!

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## KEY TAKEAWAYS & LESSONS LEARNED

- Just start.
- Collaborate, collaborate, collaborate.
- Be excited and optimistic!





# Questions & Answers







# THANK YOU!

**Visit us online:**

<https://www.bridgew.edu/cyber-range>

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