The challenges and demands facing information security leaders are becoming increasingly complex.

The reality is no longer “if” your company has been hacked or even “when.” The new reality is, “You’ve been hacked; you just don’t know it yet.” The industry is experiencing a growing need for individuals with a cross-section of business acumen, technical ability, and expertise in cybersecurity.

In the CISO Program, you will learn the skills you need to be an effective CISO through targeted interdisciplinary coursework and hands-on practical application, led by world-renowned faculty from Carnegie Mellon University’s Heinz College and Software Engineering Institute (SEI). As part of this certificate program, you will work within a team to assess and remedy a data breach and develop a security program for an organization. This is designed in a realistic setting, with a focus on application of several of the methods, tools, and techniques taught during the program.

This six-month program, co-administered by Heinz College and the CERT Division of the SEI, blends on-campus and synchronous distance learning and is designed to enhance the careers of cyber leaders.

#1 RANKED
Heinz College is #1 in Cybersecurity and Analytics and has been #1 in Information and Technology Management since 2001

RECOGNIZED BY TOP AGENCIES
CMU is a national asset in the security domain and is an NSA/DHS National Center of Academic Excellence in Cyber Defense
### PROGRAM MODULES

**Role of the CISO**  
*Alan Levine |* Board Chair – CMU CISO Executive Program

**Applied Cyber Risk Management**  
*Dr. Earl Crane | Cybersecurity Executive/Risk Advisor; Co-Founder – Emergynt*

**Cyber Risk Quantification with the FAIR Method**  
*Jack Jones | Chairman – FAIR Institute*

**SCRM and Operational Resilience**  
*Matt Butkovic | Technical Director of Cybersecurity Risk and Resilience – CERT Division of SEI*

**Insider Threat**  
*Randy Trzeciak | Director – CERT Insider Threat Center at SEI*

**Security Structure, Operations, and Alignment**  
*Omar Khawaja | VP and CISO – Highmark Health*

**Business of Cyber: Security Financial Management**  
*Brigadier General (ret.) Gregory J. Touhill | Director – CERT Division of SEI*

**Storytelling and CISO/Board Communications**  
*Chris Labash | Associate Teaching Professor – CMU Heinz College*

**Security Metrics**  
*Summer Fowler | CIO – Argo AI*

**Digital Transformation: Security Implications**  
*Ari Lightman | Distinguished Service Professor, Digital Media and Marketing – CMU Heinz College*

**Evolution of the Network Defender’s Strategy and Toolset**  
*Rick Howard | CSO, Senior Fellow, Chief Analyst – The Cyberwire*

**Cloud Security Strategy**  
*Rich Friedberg | CISO – Blackbaud*

*Josh Corman | Adjunct Instructor – CMU Heinz College*

**Securing Cyber-Physical Systems**  
*Mark Fabro | President and Chief Security Strategist – Lofty Perch, Inc.*

**Effective Incident Management**  
*Greg Porter | Adjunct Professor, CMU Heinz College; Founder, Allegheny Digital*

**Information Security Law**  
*Mathew Meade | Member, Data Security and Privacy Group, Eckert Seamans Cherin*

**Effective Crisis Communication Strategies**  
*Larry Kamer | CEO, Kamer Consulting Group*

For module descriptions, please visit [www.heinz.cmu.edu/ciso](http://www.heinz.cmu.edu/ciso)

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### INSTRUCTOR TESTIMONIAL

“The role of the CISO has never been more critical than in today’s technology-enabled environment. Organizations seeking to better posture themselves for growth, profitability, and sustainment need CISOs that understand and master the ability to fuse people, process, and technology into a well-orchestrated and executable cybersecurity strategy that enhances the organization. Carnegie Mellon University was the birthplace of cybersecurity and remains the leader in cybersecurity education. There is no program better than CMU’s CISO Program to prepare the next generation of cyber leaders.”

– **Gregory J. Touhill | Director – CERT Division, Software Engineering Institute, Carnegie Mellon University**
PRACTICUM

The CISO Practicum gives students the opportunity to demonstrate their knowledge, skills, and abilities as a CISO by working in teams to develop an information security program plan and deliver a formal presentation to an executive suite.

- This unique capstone activity provides student teams a mechanism to demonstrate their knowledge, skills, and abilities in dealing with a known security breach.

- In order to be successful, teams need to demonstrate command of the material through focusing on application of the methods, tools, and techniques taught in the modules and throughout the program.

- Practicum projects are designed for small teams of students to work, along with an experienced CISO coach, to architect a security improvement roadmap for a project company.

- Teams must also make an executive presentation to a simulated “C-suite”, thus communicating to their peers (and board) of the project company the benefits of the new information security plan to gain their acceptance.

- The CISO Program committee assembles teams to ensure that they consist of individuals from different industries/backgrounds to provide a unique learning experience for each student.

ALUMNUS TESTIMONIAL

“The CMU CISO Program helped me to step into my role as a Chief Information Security Officer. The program prepared me to address the many challenges facing a CISO—operational resilience, threat management, cyber risk management, insider threat.

The practicum allowed me to work with cyber experts from great organizations and guided us in framing the communications necessary to lead an organization through cybersecurity problems and communicate with our Boards.”

- Gregg Crabb | Chief Information Security Officer, Vice President – United States Postal Service

BOARD CHAIR TESTIMONIAL

“Heinz College’s CISO Program is the preeminent program for cyber security leadership, for several important reasons. It is authored by renown cyber security strategists and specialists. It is presented by esteemed faculty, including professors who specialize in teaching cyber security at the highest levels. It is grounded in real-world case study and discussion. Graduates of this program tell us time and again that what they’ve learned in this program has immediate, actionable value and that they prize their experience in the program as integral to success in their pivotal roles. This program is making a difference, in the way CISOs plan, the way they operate, and the way they think, educating today’s CISOs while preparing tomorrow’s cyber security leadership. It has been my pleasure to serve as the chairman of the program’s advisory board and to see the impact it has made over the years.”

- Alan Levine | Board Chair – CMU CISO Executive Program
PROGRAM REQUIREMENTS

What are the steps to earning the CISO Program Certificate?

1. **Candidate Acceptance**: Each applicant must have sufficient practical experience (five years) with increasing responsibility in a managerial capacity. An undergraduate or advanced degree in a relevant field is preferred.

2. **Participation**: Participants must complete all certificate modules and assignments and attend all coaching sessions.

3. **Practicum Project**: During the CISO Practicum, students are required to demonstrate their knowledge, skills, and abilities as a CISO by working in teams to develop an information security program plan and deliver a formal presentation to an executive suite.

Receive Your Certificate! The CISO Program Certificate includes the following benefits:

- Free entry to any future CISO Program modules (prior approval is required)
- Path to a Master’s Degree: Students who complete the CISO Program Certificate are eligible for tuition discount scholarship equal to the total amount paid to complete the CISO Program
- Official CISO Program logo for display

PROGRAM LOGISTICS

**Program Dates:**
For program dates, please visit [www.heinz.cmu.edu/ciso](http://www.heinz.cmu.edu/ciso)

**Program Fees:**
Full Rate: $18,750
Discounted Rate: $15,000
Applies to CMU alumni, non-profit employees, CMU CyLab Partners, U.S. government employees, and veterans.

**Enrollment:**
Maximum of 50 students per cohort.

**Application Deadline:**
For application deadline, please visit [www.heinz.cmu.edu/ciso](http://www.heinz.cmu.edu/ciso)

Please submit your application as soon as possible for consideration.

*If space remains in the cohort after the given deadline, we will continue to accept applications on a first-come, first-served basis.*

**To Apply:**
[hnz.cm/ciso-apply](http://hnz.cm/ciso-apply)

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Pittsburgh, PA 15213
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[heinz.cmu.edu/ciso](http://heinz.cmu.edu/ciso)