

CHIEF INFORMATION SECURITY OFFICER (CISO) CERTIFICATE PROGRAM

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

Advanced Cyber Risk Management

Dr. Earl Crane | Owner, Risk Executive/Strategic Advisor – Earl Crane, LLC

Cyber Risk Quantification via FAIR

Jack Jones | Executive Advisor – Risk Management Insight

Operational Resilience and SCRM

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

Insider Threat

Randy Trzeciak | Director – CERT Insider Threat Center at SEI

Evolution of the Network Defender's Strategy and Toolset

Rick Howard | Chief Security Officer – N2K

CISO Org Structure and Operations

Omar Khawaja | CISO – Databricks

Security Metrics and Reporting

Summer Fowler | CISO – Torc Robotics

Executive Communications

Chris Labash | Associate Teaching Professor – CMU Heinz College

Business of Cyber

Brigadier General (ret.) Gregory J. Touhill | Director – CERT Division of SEI

Cybersecurity Architecture and Tooling

Dennis Allen | Director of Security Programs, Strategy & Risk – Stratascale

Cloud Security Strategy

Rich Friedberg | CISO – Live Oak Bank

CISO's Guide to Software and Product Security

Josh Corman | Adjunct Instructor – CMU Heinz College

Securing Cyber-Physical Systems

Mark Fabro | President and Chief Security Scientist – Lofty Perch, Inc.

Data-Driven Security

Bob Rudis | V.P. Data Science, Security Research, & Detection Engineering – GreyNoise Intelligence

Effective Incident Management

Greg Porter | Adjunct Instructor – CMU Heinz College; Founder – Allegheny Digital

Cyber Law

Matthew Meade | Chair, Cybersecurity, Data Protection & Privacy Group – Eckert Seamans

Crisis Communications

Larry Kamer | CEO – The Kamer Group Inc.

For module descriptions, please visit

www.heinz.cmu.edu/ciso

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 of SEI



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 road-map 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.”

– **Greg Crabb** | Strategic Advisor – CISA

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

Program Fees:

Full Rate: \$19,500

Discounted Rate: \$15,600

Applies to CMU alumni, U.S. government employees, veterans, and employees of non-profit organizations

Application Deadline:

For application deadline, please visit 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:

hinz.cm/ciso-apply



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heinz.cmu.edu/ciso