

CHIEF RISK OFFICER (CRO) CERTIFICATE PROGRAM

Designed for leaders in risk management to gain the latest skills and best practices impacting their domain.

This six-month program delivers what CROs need to flourish in their current positions and further develop in their risk management careers. These skill sets include cultivating strategies for effectively communicating risks to executive leadership professionals and identifying tools for analyzing and addressing enterprise risks.

The CRO Program imparts applicable training, including topical discussion on current risk challenges and mitigation practices. Learning objectives are met through a combination of expert faculty instruction, business case analyses, and active exchanges with thought leaders in the field. As part of this certificate program, you will develop or enhance an enterprise risk plan for an organization. This plan is designed for you to apply several of the methods, tools, and techniques taught during the modules of the program.

The CRO Program is developed and administered by Carnegie Mellon University's Heinz College of Information Systems and Public Policy, CMU's Risk and Regulatory Services Innovation Center, and the CERT Division of the Software Engineering Institute (SEI).



PROGRAM MODULES

Role of the CRO

Brian Schwartz | Partner and Primary Author of the Global Risk Study, Risk Assurance, PwC U.S. – PwC
Jonathan Schwartz | Chief Audit Executive – DXC Technology

Enterprise Risk Governance — Models and Frameworks

Brett Tucker | Technical Manager of Cyber Risk – CERT Division of SEI

Executive Presence — Leadership and Communications

Instructors: David Lassman | Distinguished Service Professor – CMU Heinz College

Enterprise Landscape of Risk — Part 1, Financial Risk

Enterprise Landscape of Risk — Part 2, Operational Risk

David Dunn | EVP and Assistant General Auditor, Information Technology – PNC

Enterprise Landscape of Risk — Part 3, Strategic Risk

James Lam | President – James Lam and Associates

Enterprise Landscape of Risk — Part 4, Cyber Risk

Shaun Khalfan | SVP, CISO – Discover Financial

Enterprise Landscape of Risk — Part 5, Compliance Risk

KC Turan | Senior Vice President, Chief Risk, Compliance, Ethics & Privacy Officer – UPMC Insurance Services

Cyber Risk Quantification

Jack Jones | Chairman – FAIR Institute

Risk Assessment and Appetite for Decision Making

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

Disruptive Risk and Scenario Analysis

James Lam | President – James Lam & Associates

CRO Organization Function and Operations — Build and Run

Spyro Karetsos | Chief Compliance Officer – Google

CRO Metrics and Reporting

Summer Fowler | CISO – Torc Robotics

BC/DR Best Practices and Building Organizational Resilience

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

Risk Response Techniques

Laurie Champion | Managing Director & Client Executive – Marsh & McLennan Companies

CRO Organization Function and Operations — Mature

Ryan Zanin | EVP and Chief Risk Officer – Fannie Mae

Role of Data and Analytics in Risk Management + Responsible AI

Denise Letcher | Executive Vice President, Chief Data Officer – PNC Financial Services Group, Inc.

For module descriptions, please visit

www.heinz.cmu.edu/cro

INSTRUCTOR TESTIMONIAL

“In my first book published in 2003, I made 10 predictions about the future of risk management. One was: CROs will become prevalent in risk-intensive businesses. A recent survey indicated that most large and public companies have appointed a CRO or equivalent. As organizations face the aftershock of the global pandemic, as well as elevated strategic, operational, cybersecurity, and financial risks, the role of the CRO has never been more important. Another one of my 10 predictions: Risk education will be part of corporate training and college programs. Carnegie Mellon’s CRO Program is exactly the kind of best-in-class curriculum that I had envisioned. This program is training the next generation of CROs by delivering content from industry leaders, practical experience through case exercises, and networking opportunities with peers and mentors.”

– **James Lam** | Widely noted as the first-ever CRO, globally recognized ERM expert, best-selling author, and keynote speaker



PRACTICUM

The CRO Practicum is the capstone activity demonstration by the student of their knowledge, skills, and abilities as a CRO. You must work in teams to conceive, develop and deliver an enterprise risk plan for an organization that is applicable in today's business environment.

- This unique capstone activity provides student teams a mechanism to demonstrate their knowledge, skills, and abilities in enterprise risk management.
- 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 develop, along with an experienced CRO coach, an enterprise risk management (ERM) 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 ERM plan to gain their acceptance.
- The CRO 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

“Risk, according to Elroy Dimson, a professor at the London Business School, simply “means more things can happen than will happen.” The simplicity of this statement obscures the complexity of understanding and managing risks.

As a risk practitioner, I was interested in a program that not only reinforced the fundamental elements of risk management but also offered real-world experiences and insights from current and former CROs and thought leaders. The final Practicum presentation, in front of an executive board, strengthens the soft and hard skills, a key attribute for influencing decision-makers. The program offers a collaborative learning environment, a thriving alumni network, and a diverse group of intellectually curious peers who not only challenge your thinking but also offer key insights.

The CRO Program at Carnegie Mellon University exceeded all my expectations and equipped me with the latest skills, best practices, and provided a tool kit that facilitates risk-informed decisioning across an enterprise—a key deliverable for an effective CRO.”

– **Yogesh Verma** | Director, Enterprise Risk Management – PenFed Credit Union



PROGRAM REQUIREMENTS

What are the steps to earning the CRO Program Certificate?

1. **Candidate Acceptance:** Each applicant must have at least 7 years relevant experience managing projects and/or people. 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. Please expect to spend 7-10 hours per week on average attending modules and working with your team.
3. **Practicum Project:** The CRO Practicum is the capstone activity demonstration by the student of their knowledge, skills, and abilities as a CRO. You must work in teams to conceive, develop and deliver an enterprise risk plan for an organization that is applicable in today's business environment.

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

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



PROGRAM LOGISTICS

Program Dates:

For program dates, please visit www.heinz.cmu.edu/cro

Program Fees:

Full Rate: \$16,500

Discounted Rate: \$13,750

Applies to CMU alumni, non-profit employees, CMU CyLab Partners, U.S. government employees, and veterans.

Application Deadline:

For application deadline, please visit www.heinz.cmu.edu/cro

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/cro-apply



Heinz College Executive Education

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Pittsburgh, PA 15213

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phone: 412-268-6730

heinz.cmu.edu/cro

CMU CRO Program Alumni Spotlight



Paul E. Zikmund

SVP Chief Risk, Compliance & Information Security Officer at Berkadia

Paul is responsible for managing the company's enterprise risk management process, compliance programs and controls, and internal audit function and directing strategy, operations, and the budget for the protection of the enterprise information assets.

1 Would you please describe the importance of a robust enterprise risk management function for your organization?

"In today's high risk environment, businesses must adopt resiliency strategies to enable achievement of strategic goals and objectives. Berkadia's ERM function enables our organization to identify, address, and manage those risks impacting our company. We face a variety of risks including operational, strategic, financial, regulatory, and technology risks. Our comprehensive ERM framework consolidates and improves risk reporting, so we are better able to identify key risks impacting our goals and objectives, quantify and manage them at the enterprise level, and implement the proper controls to mitigate the threats."

2 How did the CMU CRO Program assist you in supporting your organization?

"The CMU CRO program provided extreme value to me as a CRO. I gained tremendous knowledge that enabled real-time application in my role. We covered a variety of topics including knowledge of risk governance, risk quantification, risk models and frameworks, and risk assessments. We also focused on the role of the CRO and learned how we can provide greater value to our organizations. We also received excellent knowledge on becoming better leaders and more effective in our CRO role, which provided a very well-rounded personal growth experience. Berkadia's ERM program has been greatly improved as a result of the CMU CRO program. We adopted a significant amount of program content into our methodologies, framework, and reporting, which has significantly elevated our ERM program maturity levels."

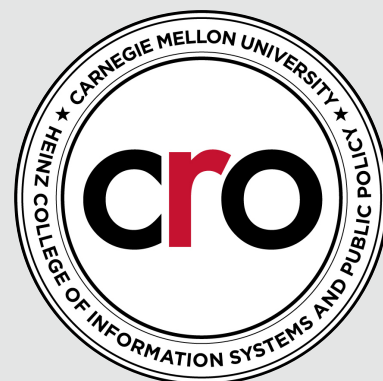
3 Overall, would you please describe your experience with the CMU CRO Program and how it helped your career?

"My experience was fantastic. I met so many experienced professionals and learned so much during the program. The lectures were all conducted by well-known and respected professionals. The CMU staff were incredible. You can tell you are involved in a CMU program from day 1. The program deliverables enabled my team to work together and act as CROs for a chosen organization. I was able to instantly apply the learnings in my current role and in fact used a significant amount of content in my own board reporting materials and team meetings. We also adopted the risk assessment methodologies and elevated our annual risk assessment program. I've grown tremendously as a CRO based on what I learned at CMU! I cannot say enough great things about this program."

CHIEF RISK OFFICER CERTIFICATE PROGRAM

To learn more about the
CMU CRO Program and to
apply, please visit:

www.heinz.cmu.edu/cro



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HeinzCollege

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FINANCE FAQs

How do I pay for my program costs?

Credit Card Installments (Default):

Students are automatically enrolled in a credit card plan of five equal monthly installments. Installment invoices can only be paid by credit card via the link that is emailed to the student.

Other Options:

On the application, students may instead elect to pay their total program cost upfront via credit card, check, or electronic fund transfer.

Payments by Employer:

If your employer will be paying for program costs on your behalf, on the application, please provide the name and email address for your appropriate billing contact when prompted. Invoices will be issued to this contact. As Carnegie Mellon University does not execute contracts with the employers of our Executive Education students, it is ultimately the responsibility of the student to ensure that their program costs have been paid.

Changing Payment Method:

If a student would like to make changes to their selected payment plan or information initially provided on their application, please email heinzexeced@cmu.edu.

How do I reserve my seat in the program?

The first billing installment (or 1/5 of the total program cost) is collected as a non-refundable, non-transferable deposit to reserve a student's seat in the program.

What if I need to cancel my registration or withdraw from the program?

Before Program Start Date:

If a student withdraws from the program after the deposit has been paid but prior to the program start date, the student may have 4/5 of the program costs either refunded to them or transferred to the following cohort of the program.

After Program Start Date:

After the program start date, no refunds will be issued. However, under extenuating circumstances and with program director approval, students may petition to postpone their attendance to a future cohort and have 4/5 of the program costs applied accordingly.

CONTACT

For questions, please contact heinzexeced@cmu.edu.