

# Masters 2025

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TRAINING COURSE SUMMARY

 CRESTRON

MASTERS

2025





# What is the Crestron Masters Training Event?

Crestron Masters is a continuing education program for Crestron certified programmers, designers, and sales professionals. At this exclusive training and networking event, certified professionals come together with their peers to learn the latest and greatest in tech. Attendees are given the opportunity to get ahead in the industry and learn technology and techniques before they are released to the public.

Crestron Masters started small in 2002, with 12 programmers who traveled to Rockleigh, NJ for three days of intensive programming classes. Fast forward two decades, Crestron Masters is now a globally recognized continuing education program with thousands of attendees.

**Crestron Masters Certified Programmers** hold the highest respect in the industry, owing to the rigorous training, extensive experience, and stringent testing throughout the certification process.

**Crestron Masters Technology Architects** have the skillset to design Crestron solutions properly. The CMTA program challenges you to know the products, gain a deeper understanding of the technology, and apply it to designing Crestron systems.

**Crestron Modern Workplace Certification** is a **NEW** introductory certification path from the Crestron Technical Institute (CTI) launching at Crestron Masters 2025. This education path focuses on technology solutions for designing a modern workplace and is a stepping stone toward further Crestron certifications.

[Learn more about Crestron Masters](#)

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# General Sessions

CMGS-100

## Welcome Keynote

Tuesday, 13 May

🕒 15:45–17:15

📎 Presentation

This keynote will explore the latest innovations in AI-driven automation, highlighting how Crestron's pioneering solutions are setting new standards in intelligent building management. Attendees will gain insight into:

- How seamless integration of Visual AI with Crestron's robust Automate VX platform enables speaker tracking and framing.
- Sustainability and efficiency: Explore how Crestron driven solutions are optimizing energy consumption and promoting sustainable practices in smart buildings.
- Security and privacy: Understand the critical role of AI in enhancing security measures while ensuring data privacy and compliance.

CMGS-200

## Crestron True Blue Night

Wednesday, 14 May

🕒 17:15–20:00

Dress up in all blue and join us on Tuesday night for dinner, drinks, and lots of True Blue fun! Join us in the Congress Reception.

\*Open to all attendees

CMGS-300

## Crestron Masters Dinner

Wednesday, 14 May

🕒 17:15–19:30

Join us for dinner onsite in the Italy-Germany Gallery.

\*Open to all attendees

CMGS-301

## Annual Crestron Masters Hackathon

Wednesday, 14 May

🕒 19:30–21:30

Participate in this year's challenging and thought-provoking Crestron Masters Hackathon and push your mental limits to new heights. Make the 10th Annual Hackathon the high point of your week!

\*Open to all attendees

CMGS-400

### Partner Session Showcase

Thursday, May 15

🕒 9:00–10:45

Start your final day at Crestron Masters with our Platinum sponsors! Learn how their solutions integrate with Crestron products to create an optimized user experience in the modern workplace.

CMGS-500

### Closing Session

Thursday, 15 May

🕒 15:30–16:15

📎 Presentation

A wrap-up session with information on up-and-coming products, updates, services, and more! Go beyond the next 90 days! We will then conclude this year's Crestron Masters by introducing our newly leveled-up Crestron Masters Certified Programmers and Crestron Masters Certified Technology Architects.

# Crestron Masters Certified Programmer

## VC-4 Introductory Courses

These sessions start your Crestron Masters experience off right with a full introduction to the Crestron Virtual Control programming environment we will be using throughout the week.

CMVC-511

### VC-4: Configuration

Tuesday, 13 May

🕒 9:00–10:30

🏠 Lab

This course introduces you to the flexibility of Crestron's server-based VC-4 processor technology. You will learn about the implementation requirements and hardware dependencies with an eye on implementing your own solutions, along with some configuration and troubleshooting strategies.

CMVC-611

### VC-4: Diagnostics

Tuesday, 13 May

🕒 9:00–10:30

🏠 Lab

This course will take your knowledge of Crestron VC-4 technology to the next level by exploring methods for keeping your implementations running at their maximum capabilities.

CMVC-711

### VC-4 Advanced Operation

Tuesday, 13 May

🕒 9:00–10:30

🏠 Lab

Go deeper with this behind-the-scenes view of Crestron's VC-4 processor software. Join us for an insightful yet in-depth look at this technology and how it behaves in the background.

## Crestron Construct Software Courses

In these exclusive sessions, programmers will gain firsthand practical experience in creating full programming solutions using Crestron's new Integrated Development Environment (IDE), Crestron Construct™ software.

CMCC-512

### Crestron Construct Software: SIMPL Programming (Multiple Sessions)

🕒 Interactive Presentation

Discover Crestron's implementation of the SIMPL and SIMPL+® programming language elements within Crestron Construct software. With one easy-to-use application, you can create both user interfaces and programming all in the same place. Our product managers will guide you through all the new features in this exciting release and work together to give you the full experience in this integrated development environment.

**Wednesday, 14 May** 9:00–10:30, 13:45–15:15  
**Thursday, 15 May** 11:00–12:30

CMCC-621

### Crestron Construct Software: Advanced UI Design (Multiple Sessions)

🕒 Lab

This hands-on workshop is designed to provide participants with a comprehensive understanding of Crestron Construct software, a powerful tool for generating advanced user interfaces (UIs) tailored for automation control systems. Through a series of interactive sessions, participants will learn how to leverage its features to create dynamic, efficient, and user-friendly UIs that enhance operational control and efficiency.

**Tuesday, May 13** 11:00–15:15  
**Wednesday, May 14** 9:00–12:30, 13:45–17:15

\*You must download and install the [required software](#) before Masters.

Please note: Due to the extensive content we plan to cover in class, there will be limited time available during the session to address any installation issues.

We will offer Open Lab hours on Monday, May 12, during event check-in, where instructors can assist with software installation issues and concerns.

Once the event ends, you must uninstall this software. This packaged version of Construct UI Plugin and CH5 controls are for Masters only and **cannot be used for production projects.**

## Programming Courses

CMPG-521

### Enhanced Programming in SIMPL

Wednesday, 14 May

🕒 13:45–17:15

🏠 Lab

Programming using Crestron's SIMPL doesn't limit your creativity.

In this interactive lab course, you will learn about extended programming methods in SIMPL and SIMPL+ programming language that you may not have already encountered, and some newly released functionality as well.

\*Download and install the latest versions of the following software, located in the [Crestron Resource Library](#):

- Crestron Database
- Device Database
- Crestron Toolbox™
- SIMPL Windows
- SIMPL+ Cross Compiler
- VisionTools Pro-e®
- Smart Graphics™

CMSS-621

### C# for Crestron System Programming

Tuesday, 13 May

🕒 11:00–15:15

🏠 Lab

This intermediate-level C# class will teach participants how to program a simple conference room automation system using Crestron hardware. The course focuses on interfacing with third-party equipment using TCP and UDP communication protocols, as well as managing communication between various devices (e.g., touch panels, hardware components) within the program. The goal is to provide practical experience in automating and controlling a conference room setup, including AV devices, lighting, and environmental controls.

\*Download [Microsoft Visual Studio](#) and the [.Net Framework 4.7 development tools](#) before event begins.

CMPG-612

### 4-Series Control Under the Hood (Multiple Sessions)

🏠 Presentation

Explore the inner workings of Crestron's 4-Series® control processors with this updated chapter in the "Under the Hood" series. You will learn all about 4-Series control systems architecture, as well as installation, security, configuration, programming, and troubleshooting. We will also talk about visualization, configuring redundancy, and remote logging.

**Wednesday, 14 May** 11:00–12:30, 15:45–17:15  
**Thursday, 15 May** 13:45–15:15

CMEP-621

### Programming with XiO Cloud Platform

Tuesday, 13 May

🕒 11:00–15:15

🏠 Lab

Whether you program in C# or in SIMPL, XiO Cloud® technology operations management platform offers powerful integration for monitoring and control. Learn how to use the program connector, as well as leverage drivers or modules to expose your third-party devices into XiO Cloud platform. We'll also show you how you can monitor devices in XiO Cloud platform that are not connected to a control system.

\*Students will need an XiO Cloud account for this class (free or Premium). Visit [XiO Account Registration](#) to sign up for a free account.

CMPG-721

## Advanced Programming Concepts

Wednesday, 14 May

🕒 9:00–12:30

🏠 Lab

Join us for an unparalleled learning experience in the world of Crestron programming with Toine and Yuri; two renowned experts in the field! Learn how to leverage exciting new features in .NET 8, artificial intelligence, and machine learning.

CMSS-521

## Getting Started with C#

Thursday, 15 May

🕒 11:00–15:15

🏠 Lab

If you haven't started working with C# yet or need some helpful tips and concepts to continue your path, this course will put you on the right track. Learn the methodology of Object-Oriented Programming (OOP) along with the specific syntax of the C# programming language required to create basic libraries and control system solutions, all from the perspective of an advanced SIMPL programmer.

\*Download [Microsoft Visual Studio](#) and the [.Net Framework 4.7 development tools](#) before event begins.

CPMA-621

## Third-Party App Integration

Thursday, 15 May

🕒 11:00–15:15

🏠 Lab

Integration with third-party devices and services is an essential part of modern AV projects. Learn how to leverage both Crestron and third-party APIs to add a new dimension to your projects. In this three-hour session, we will cover the use of the Microsoft® Graph API to add system usage information to calendar appointments so that clients can use reporting to drive their future AV requirements.

This course will discuss the methods and concepts used to create clean code and find a balance between high-quality work, the time required, and the cost. We will then cover debugging tools and techniques for C#.

\*Download [Microsoft Visual Studio](#) and the [.Net Framework 4.7 development tools](#), and [Postman](#) before event begins.



# Crestron Masters Technology Architect

## Crestron Intelligent Video Courses

CMIV-241

### Advanced Design for Automate VX Solution

Wednesday, 14 May

🕒 9:00–17:15

🏠 Lab

NOTE: Seating is limited

In this course, we will explore the capabilities of Crestron's 1 Beyond cameras and the Automate VX multi-camera speaker and presenter tracking solution, including the new face-oriented switching feature that maximizes the best camera angles. Learn how to make appropriate design decisions for camera selection and positioning, microphones, DSPs, and Automate VX server selection.

You will create your own .lbrd design configuration files and understand how to engage Crestron's professional services for the most successful outcomes. Bring more value to your organization with this exclusive opportunity to earn certification in person.

CMIV-311

### Crestron Masters Intelligent Video Engineer (IVC-E)

*(Multiple Sessions)*

🏠 Lab

NOTE: Seating is limited

In this exclusive lab course available only to Crestron IVC-E Certified Engineers, we will familiarize and level up participants with the most current Automate VX products and features, certification, including the new face-oriented switching feature that maximizes the best camera angles. Completion of this course grants the Crestron Masters Intelligent Video Engineer (CMIV-E).

**Tuesday, 13 May**      11:00–12:30, 13:45–15:15

**Thursday, 15 May**      11:00–12:30, 13:45–15:15

## System Design Courses

CMTA-411

### New Technology Roundup

Tuesday, 13 May

🕒 9:00–10:30

📄 Presentation

Introducing the most recent and upcoming Crestron products and enhancements. You will learn not only what they are and how they work, but also what problems they solve, how to implement, and how they improve the quality of life for the designers, implementers, and users.

CMEP-411

## Designing with Crestron for Secure Environments

Tuesday, 13 May

🕒 11:00–12:30

📎 Presentation

In 2025, security is no longer optional. This class focuses on designing secure AV systems for environments such as government facilities, corporate boardrooms, and military installations. Students will learn to select AV technology for high-security needs, solving for use cases like secure video conferencing, encrypted communication, and tamper-proof hardware.

CMEP-412

## Deploying Crestron in Secure Environments

Tuesday, 13 May

🕒 13:45–15:15

📎 Presentation

Continuing the conversation of delivering on security, this class will reveal the nuances, challenges, and realities of securely deploying Crestron solutions. Learn the considerations for multi-class conferencing, meeting TEMPEST specifications, DOD365 integration, and more. You will learn how these secure deployment requirements inform the design stage.

CMUS-411

## Global Interconnect: Advancing the Horizons of USB

Wednesday, 14 May

🕒 9:00–10:30

📎 Presentation

With heightened user convenience usually comes a host of underlying complexities. This course will reveal all the capabilities inherent to the USB-C® connector and how to recognize which capabilities are implemented where.

We will discuss common misconceptions, industry pitfalls, and how to design to fulfill the desired user experience and expectations — including managing expectations through education.

CMFX-411

## Advanced UC Design Scenarios

Wednesday, 14 May

🕒 11:00–12:30

📎 Presentation

Sink your teeth into large, odd, or downright challenging UC applications. We'll explore some off-the-beaten-path design requirements such as divisible spaces, large all-hands areas, multiple controllers, multiple cameras, government chambers, and how platform-specific features such as Zoom® Intelligent Director and Microsoft® IntelliTrace® software will influence your designs.

CMAU-411

## Comprehensive Audio-over-IP Design

Wednesday, 14 May

🕒 13:45–15:15  
📎 Live Presentation

Challenge conventional wisdom with this engaging look at modern networked audio and distributed digital signal processing. This session will briefly introduce Crestron's portfolio of networked sources and edge devices, how they work with each other, as well as familiar industry standards and innovative applications. Learn how to achieve Digital Signal Processing without the physical DSP.

CMNE-411

## Scaling Networks Into Enterprise Spaces

Wednesday, 14 May

🕒 15:45–17:15  
📎 Presentation

In this session, we're covering the when, why, and how to design sophisticated multi-switch networks at scale that incorporate advanced concepts like IGMP Plus™ multicast automation, and AV profiles across the network, including QoS and PTP. During this session, we'll collectively configure a 400-port, 3-tier AV project including 100Gb core, 25Gb aggregation, 10Gb, and 1Gb access across several VLANs. We'll also connect to the corporate IT network without the complicated Protocol Independent Multicast. Features special guest from NETGEAR.

CMDM-411

## On the Wire: The Direction of AVoIP

Thursday, 15 May

🕒 11:00–12:30  
📎 Round Table

Learn where Crestron is taking the industry with video, audio, USB, and control on the network. How do AI, 8K, and other technologies fit into the future landscape?

CMXC-411

## A Designer's Guide to the Crestron XiO Cloud Platform

Thursday, 15 May

🕒 13:45–15:15  
📎 Presentation

In today's fast-paced world, designers are tasked with creating smart spaces that are not only highly functional but also seamlessly connected and easy to manage.

This 90-minute course is specifically for designers, focusing on how Crestron XiO Cloud platform can simplify the management of AV systems, devices, and room configurations — all while enhancing the user experience. Participants will gain a clear understanding of the platform's capabilities, including device provisioning, remote monitoring, and system optimization.

# Crestron Modern Workplace Certification (MWC)

Modern Work at Crestron Masters empowers hybrid workplace teams, IT managers, AV/IT specialists, designers, consultants, and Crestron professionals to navigate today's dynamic modern work landscape. This two-day event is the exclusive launchpad for the new Crestron Modern Workplace Certification and serves as a stepping stone toward further Crestron certifications.

MWDM-111

## AV-over-IP Technology: Audio & Video Solutions

Tuesday, 13 May

🕒 9:00–10:30

🎤 Presentation

This session explores the principles of audio and video distribution in AVoIP systems, highlighting Crestron DM NAX® Audio-over-IP and DM NVX® AV-over-IP technology solutions. Attendees will gain insights into how network-based audio and video systems enable reliable and seamless audio experiences. The session will include detailed reviews of real-world use cases, showcasing the performance and flexibility of Crestron's solutions in delivering synchronized, high-quality audio and video. Participants will leave with a deeper understanding of how Crestron drives innovation in audio-over-IP technology.

MWDM-112

## AV-over-IP Technology: USB Integration

Tuesday, 13 May

🕒 11:00–12:30

🎤 Presentation

This session explores USB integration within DM NVX® AV-over-IP technology systems, emphasizing the expanding role of USB technologies in modern AVoIP environments. Attendees will gain insights into USB 2.0, 3.1, and 3.2 capabilities, with a focus on demystifying USB-C and understanding the key technical considerations for seamless device performance, such as the requirements for smooth camera operation. The session will also preview upcoming Crestron innovations leveraging USB connectivity, offering a forward-looking perspective on how these technologies enhance interactivity and flexibility in AVoIP installations.

MWFX-111

## Crestron Flex Conferencing and Collaboration

Tuesday, 13 May

🕒 13:45–15:15

🎤 Presentation

This course introduces Crestron Flex technology, equipping participants with knowledge of modern meeting room solutions that enable seamless video conferencing, audio collaboration, and room scheduling.

This session will emphasize how these components work together to create efficient, connected meeting spaces. By the end of this session, attendees will understand how Crestron Flex solutions meet the communication needs of various room configurations.



MWAM-111

## Crestron AirMedia Wireless Presentation Systems

Wednesday, 14 May

🕒 9:00–10:30

🎤 Presentation

This session highlights the transformative capabilities of Crestron AirMedia® wireless presentation systems, showcasing how they go beyond wireless presentation and BYOM conferencing to become comprehensive room solutions. Attendees will explore integrated features, including a customizable front-of-room interface with calendar integration, branding options, and connection instructions.

The session will also delve into low-code/no-code automation capabilities, enabling seamless integration with occupancy sensors, device drivers, and touch screen controllers.

MWIV-111

## Designing for Intelligent Video: Cameras

Wednesday, 14 May

🕒 11:00–12:30

🎤 Presentation

In the modern workplace, effective communication and collaboration are paramount. While the Automate VX solution is seen as the premier multi-camera speaker and presenter-tracking solution, you may not be aware that the Crestron 1 Beyond cameras are feature-packed, certified for Microsoft Teams® Rooms and Zoom Rooms® software, and have substantial use cases when used as standalone products. This is an introduction to Crestron 1 Beyond intelligent video camera technology. Learn about the latest advancements in intelligent video cameras, including features like auto framing, speaker tracking, and AI-driven enhancements.

MWIV-112

## Designing for Intelligent Video: Introduction to Automate VX

Wednesday, 14 May

🕒 13:45–15:15

🎤 Presentation

In the evolving landscape of video conferencing, the demand for intelligent and automated solutions is higher than ever. Crestron's Automate VX voice-activated, multi-camera switching solution is at the cutting edge of this innovation, offering sophisticated video camera automation that enhances the conferencing experience. This course introduces the Automate VX solution, focusing on its design, implementation, and benefits.

MWGS-111

## Modern Workplace Panel Discussion and Wrap-Up

Wednesday, 14 May

🕒 15:45–17:15

🗣️ Panel and Presentation

Artificial intelligence (AI) is rapidly transforming the modern workplace, but it's often shrouded in misconception and hype. This discussion aims to demystify AI, exploring its practical applications, benefits, and potential challenges in today's work environments.

We'll explore how AI and other technology advancements are revolutionizing the modern workplace to empower us to achieve greater efficiency and productivity through:

- AI-driven work environments: Envisioning AI-powered workplaces that adapt to user preferences and behaviors (smarter spaces)
- Enhanced collaboration: Exploring how advanced AV technologies and video conferencing solutions foster seamless collaboration.
- Intelligent automation: Discussing the role of AI in automating the tools we use and optimizing workplace efficiency.

By leveraging these technology advancements, we can create more efficient, productive, and engaging work environments. Join us as we delve into the exciting world of AI and explore how it is shaping the future of work.

As the Modern Work at Crestron Masters event ends, we recap key session highlights and outline how Crestron can help support you on the next steps of your journey to continued learning and innovation.

# Schedule at a Glance

**Tuesday, 13 May**

Pick one session per time slot

Course Tracks	Certified Programmer	Technology Architect	Modern Work	General Sessions	Meals & Breaks	
9:00	CMVC-511 VC-4: Configuration	CMVC-611 VC-4: Diagnostics	CMVC-711 VC-4: Advanced Operations	CMTA-711 New Technology Roundup	MWDM-111 AV-over-IP Technology: AV Solutions	
10:00	☕ Break					
11:00	CMSS-621 C# for Crestron System Programming	CMCC-621 Crestron Construct: Advanced UI Design	CMEP-621 Programming with XiO Cloud	CMEP-411 Designing with Crestron for Secure Environments	CMIV-311 Masters Intelligent Video Engineer	MWDM-112 AV-over-IP Technology: USB Integration
12:00						
13:00	🍴 Lunch					
14:00				CMEP-412 Deploying Crestron in Secure Environments	CMIV-311 Masters Intelligent Video Engineer	MWIV-112 Crestron Flex Conferencing and Collab.
15:00						
16:00	☕ Afternoon Break					
17:00	CMPG-612 Welcome Keynote					
18:00						
19:00	🍴 Dinner					
20:00						

# Wednesday, 14 May

Pick one session per time slot

Course Tracks	Certified Programmer	Technology Architect	Modern Work	General Sessions	Meals & Breaks	
9:00	CMCC-512 Crestron Construct: SIMPL Programming	CMCC-612 Crestron Construct: Advanced UI Design	CMPG-721 Advanced Programming Concepts (C#)	CMUS-411 Global Interconnect: Advancing the Horizons of USB	CMIV-241 Advanced Design for Automate VX	MWAM-111 Crestron AirMedia Wireless Presentation
10:00	☕ Break					
11:00	CMPG-612 4-Series: Under the Hood			CMFX-411 Advanced UC Design Scenarios		MWIV-111 Designing for Intelligent Video: Cameras
12:00						
13:00	🍴 Lunch					
14:00	CMCC-512 Crestron Construct: SIMPL Programming	CMCC-612 Crestron Construct: Advanced UI Design	CMPG-521 Enhanced Programming in SIMPL	CMAU-411 Comprehensive Audio-over-IP Design		MWIV-112 Designing for Intelligent Video: Intro to Automate VX
15:00	☕ Break					
16:00	CMPG-612 4-Series: Under the Hood			CMNE-411 Scaling Networks Into Enterprise Spaces		MWGS-111 Modern Workplace Panel and Wrap-Up
17:00						
18:00	🍴 Dinner					
19:00						
20:00	CMGS-301 Annual Crestron Masters Hackathon					
21:00						



# Thursday, 15 May

Pick one session per time slot

Course Tracks	Certified Programmer	Technology Architect	Modern Work	General Sessions	Meals & Breaks
9:00	CMGS-400 Partner Session Showcase				
10:00	☕ Break				
11:00	CMCC-512 Crestron Construct: SIMPL Programming	CMSS-512 Getting Started with C#	CMSS-512 Third-Party Application Integration	CMDM-411 On The Wire: The Direction of AVoIP	CMIV-311 Masters Intelligent Video Engineer
12:00					
13:00	🍴 Lunch				
14:00	CMPG-621 4-Series: Under the Hood			CMXC-411 A Designer's Guide to Crestron XiO Cloud Plfm.	CMIV-311 Masters Intelligent Video Engineer
15:00					
16:00	CMGS-500 Closing Session				
17:00					
18:00					