



# **Faculty Development Opportunities**

# About CSSIA

The Center for Systems Security and Information Assurance ([CSSIA](#)) is a National Science Foundation (NSF) Advanced Technological Education (ATE) National Resource Center

Since 2003, CSSIA has provided students and faculty with real-world learning experiences in information assurance and network security through several program improvement supportive initiatives

These initiatives include:

- Expanding and enhancing cybersecurity skills events and competitions
- Building a national infrastructure to deliver faculty workshops
- Establish mentoring programs for secondary and post-secondary teachers and faculty
- Developing national infrastructure models for skills and learning based on the creation of scalable and affordable remote virtual lab environments



**CSSIA**  
National Support Center for Systems  
Security and Information Assurance

# K12 Faculty Development & Resources

Faculty Development  
Opportunities available via  
[CSSIA Website](https://www.cssia.org/)

- Projects / Reports
- Training Calendar & Registration
- Competitions
- Additional Resources

Contact Us at 708.608.4241 | [cssia@morainevalley.edu](mailto:cssia@morainevalley.edu)

**CSSIA**  
National Support Center for Systems  
Security and Information Assurance

ABOUT ▾ CAE ▾ PROJECTS ▾ **TRAINING ▾** COMPETITIONS ▾ RESOURCES ▾ CONTACT 🔍

### Midwest ASTC



[Midwest Cisco Networking Academy Conference](#)

### Training & Events



[Training & Events Information](#)  
[Training & Event Calendar](#)

### Training & Events

#### Discover our New Events

CSSIA strives to bring the best and most current courses to you throughout the year. CSSIA works with the National Science Foundation (NSF) Advanced Technology Education (ATE) grant programs and industry partners to define and organize these efforts.

**Who is CSSIA?** The Center for Systems Security and Information Assurance ([About CSSIA](#)) is a National Science Foundation (NSF) Advanced Technological Education (ATE) National Resource Center. Since 2003, CSSIA has provided students with real-world learning experiences in information assurance and network security through several program improvement supportive initiatives.

These initiatives include:

- Expanding and enhancing cyber security skills events and competitions
- Building a national infrastructure to deliver faculty workshops

Visit <https://www.cssia.org/>

# Upcoming Workshops

- Grant-funded and free
- Listed on the CSSIA Website (under Training)
- Training Calendar

For advanced notification of upcoming CSSIA training and events, or to be added to the distribution list, contact Mike Gonzalez at [gonzalezm272@morainevalley.edu](mailto:gonzalezm272@morainevalley.edu) or 708.608.4464



## AVAILABLE WORKSHOPS

### **IOT EDUCATORS ACADEMY: BASIC ELECTRONICS FOR IOT** *Meets October 29th and 30th*

This workshop is intended to introduce instructors to basic electronics concepts related to IoT (Internet of Things) devices through a series of hands-on projects built around electrical concepts, components, and theories.

Register Here: [tinyurl.com/wxu6nydm](http://tinyurl.com/wxu6nydm)

### **SSCP - SYSTEMS SECURITY CERTIFIED PRACTITIONER** *Meets October 29th, November 5th, 12th, and 19th*

SSCP certification demonstrates you have the advanced technical skills and knowledge to implement, monitor and administer IT infrastructure using security best practices, policies and procedures established by the cybersecurity experts at (ISCP).

Register Here: [tinyurl.com/medzkmd3](http://tinyurl.com/medzkmd3)

### **IOT EDUCATORS ACADEMY: IOT FUNDAMENTALS** *Meets November 5th, 6th, 13th, and 20th*

This workshop is intended to introduce instructors to basic electronics concepts related to IoT (Internet of Things) devices through a series of hands-on projects built around electrical concepts, components, and theories.

Register Here: [tinyurl.com/4wbzn2jk](http://tinyurl.com/4wbzn2jk)

### **CERTIFIED ETHICAL HACKER (CEH)** *Meets December 3rd, 4th, 10th, and 11th*

This is an advanced workshop that covers many of the common attacks used by hackers to exploit systems, such as SQL injection, spear phishing and buffer overflows. This workshop will immerse you into the Hacker Mindset so that you will be able to defend against future attacks.

Register Here: [tinyurl.com/3pyjwhe9](http://tinyurl.com/3pyjwhe9)

## 2021 TRAINING OPPORTUNITIES FOR THE CAE IN CYBERSECURITY COMMUNITY

For registration and more information on these workshops,  
contact: [kostkas@morainevalley.edu](mailto:kostkas@morainevalley.edu)

### **RED HAT ACADEMY** *Meets December 17th*

This one-day Red Hat workshop will cover the Red Hat Certified System Administrator (RHCSA) exam (EX200) and the course materials that prepare the student for the exam. The curriculum consists of RH124 modules and RH134 modules which will be reviewed along with the accompanying labs.

Register Here: [tinyurl.com/7yvetff6](http://tinyurl.com/7yvetff6)

### **CISCO CYBERSECURITY ESSENTIALS** *Meets December 27th, 28th, and 29th*

This workshop presents the fundamental concepts of cybersecurity and information assurance. The workshop includes online content, student assessment, lab activities and an online grading system. The workshop is intended to be used in both k12 and community college programs.

Register Here: [tinyurl.com/9nntnye8](http://tinyurl.com/9nntnye8)

### **ISACA CISA: CERTIFIED INFORMATION SYSTEMS AUDITOR** *Meets January 4th, 5th, 6th, and 7th*

Validate your expertise and get the leverage you need to move up in your career. With ISACA's Certified Information Systems Auditor (CISA) certification, you can do just that. CISA is world-renowned as the standard of achievement for those who audit, control, monitor and assess an organization's information technology and business systems.

Register Here: [tinyurl.com/48nuepd8](http://tinyurl.com/48nuepd8)



# Cyber Competitions


[Home](#) / [Cyber Competitions](#)

## Cyber Competitions

There are plenty of opportunities for you to test your cyber security knowledge in capture-the-flag competitions. Teams will build and defend their mock production business infrastructure from professional “hackers” who are given the challenge to take each team’s production systems offline and breach their security.



Collegiate Cyber Defense Competitions (CCDC) are structured contests that allow students of higher education institutions to gain significant experience towards operational competency in managing the challenges inherent to protecting and configuring an enterprise network infrastructure and business information system. CCDC events provide opportunity for students to integrate and apply IT skills in an environment intended to simulate a commercial enterprise network.

 [LEARN MORE ABOUT MWCCDC](#)




U.S. Cyber Challenge (USCC) is a program of the Center for Internet Security, a 501(c)3 organization, and has the mission to significantly reduce the shortage in the cyber workforce by serving as the premier program to identify, attract, recruit and place the next generation of cybersecurity professionals. USCC’s goal is to find 10,000 of America’s best and brightest to fill the ranks of cybersecurity professionals where their skills can be of the greatest value to the nation.

 [LEARN MORE ABOUT USCC](#)



The National Cyber League (NCL) is a biannual cybersecurity competition for high school and college students. The competition consists of a series of challenges that allows students to demonstrate their ability to identify hackers from forensic data, break into vulnerable websites, recover from ransomware attacks, and more. Students compete in the NCL to build their skills, obtain scouting reports of their performance for hiring purposes, and to represent their school.

 [LEARN MORE ABOUT NCL](#)

# Additional Resources

- VM Image Sharing
- NDG NETLAB+ Supported Content List
  - [NETLAB+ Supported Labs](#) (listed on NDG's Website)
- CSSIA's Learning Video Channel

The screenshot shows the 'Interactives' website interface. At the top, the word 'Interactives' is displayed in a large, bold font, with a breadcrumb trail 'Home / Interactives' below it. A navigation menu includes 'All', 'Cybersecurity', 'Electronics', 'Mathematics', and 'Networking'. The main content area features a grid of eight interactive cards. Each card has a thumbnail image at the top, a title in bold blue text, a subtitle, and a 'View the Interactive' link. The cards are: 1. 'Access Control' (Cybersecurity), 2. 'Active Directory' (Cybersecurity, Networking), 3. 'Backups' (Cybersecurity), 4. 'Basic Programming Concepts' (Cybersecurity), 5. 'Business Logic Gate' (Mathematics), 6. 'Event' (Networking), 7. 'Logic Gate' (Mathematics), and 8. 'Introduction' (Cybersecurity). To the right of the grid is a grey sidebar with the heading 'About the Interactives' and a paragraph explaining their development and purpose. Below this is a section titled 'Using the Interactives? Have suggestions?' with a request for user feedback.

**Interactives**  
Home / Interactives

All Cybersecurity Electronics Mathematics Networking

**Access Control**  
Cybersecurity  
[View the Interactive](#)

**Active Directory**  
Cybersecurity, Networking  
[View the Interactive](#)

**Backups**  
Cybersecurity  
[View the Interactive](#)

**Basic Programming Concepts**  
Cybersecurity  
[View the Interactive](#)

**Business Logic Gate**

**Event**

**Logic Gate**

**Introduction**

**About the Interactives**

The interactives were developed under the leadership of Mike Quissaunee ([about](#)) at the Brookdale Cyber Center with funding from an NSF Grant (DUE 1601612). You are encouraged to use the interactives to help teach students and develop their skills in cybersecurity and networking.

**Using the Interactives? Have suggestions?**

If you have any suggestions for additional topics or would like to share how you are using these interactives please contact Mike Quissaunee.

# Internet of Things (IoT) Educators Academy

Faculty development for faculty interested in learning more about electronics and embedded systems who want to introduce IoT concepts into their curriculum

## Basic Electronics for IoT

For faculty who either do not have an electronics background or need a refresher.

## IoT Fundamentals

Same content as our credit course and offers faculty a student perspective as well as resources that will assist them to include concepts into their curriculum.

All material is freely shared with participants via Canvas.



# IoT Fundamentals Course

- Introductory course with no prerequisites
- **Multidisciplinary**: electronics & programming
- Project-based learning
- Focuses on designing **embedded systems**
- Maps to **Arduino Fundamentals Certificate**
- Future courses will focus on **IoT connectivity**



**Welcome to**  
**LAN 120:**  
*IoT*  
**Fundamentals**

**We're glad that you signed up for the course!**

You'll have a lot of fun this spring learning how to work with electronics, write programs for Arduino, build Arduino projects, and learn about the Internet of Things (IoT).

This first week will be busy getting everything set-up and working through two projects in the book. Do not feel overwhelmed, it's completely doable, the interactive chapters are relatively short and easy-to-read and we are here to help you. Please keep in contact with us and let us know how you are doing.

Course Orientation



# Arduino Certification Program

## ARDUINO PROJECTS BOOK



**CERTIFICATION  
PROGRAM**

The Arduino Education Team certifies that

**Name Surname**

Has successfully accomplished the official

**Arduino Fundamentals**

certification on **Electronics and Physical Computing**.

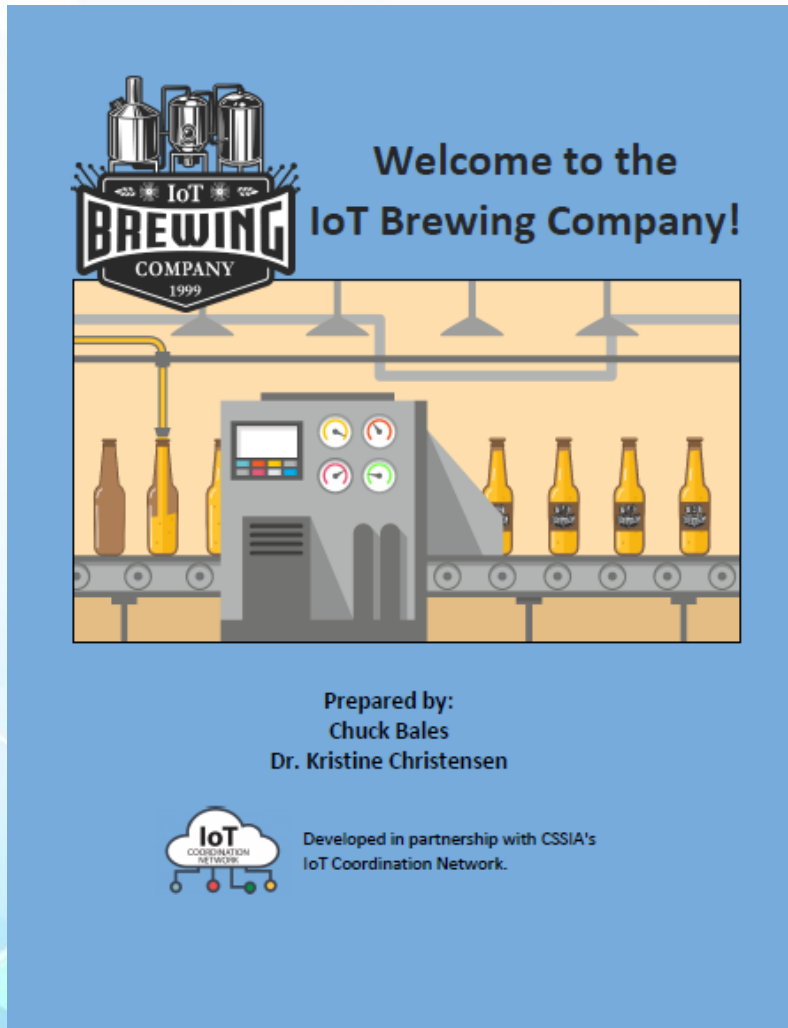
Exam Date: \_\_\_\_-\_\_\_\_-\_\_\_\_

DAVID CUARTIELLES  
Co-Founder &  
Arduino Education CTO

CERTIFICATE ID  
Scan to verify certificate authenticity  
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# IoT Brewery Workbook



- **IoT Workbook** that exposes students to real-world problems and solutions.
- Problem-based learning that uses scaffolding to expose students to a variety of **embedded systems utilizing sensors, actuators, and programming using Tinkercad**.
- **Tinkercad** is a **free** online tool used for electronics prototyping and to make exercises more accessible.
- **Multidisciplinary** workbook that can supplement course work in a variety of subject matters.



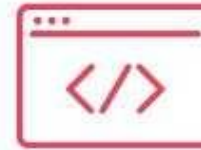
## INTRODUCE COMPONENTS

- Electronic Components
- Sensors
- Actuators



## DISCUSS CIRCUITRY

- Schematic Diagrams
- I/O Connections



## DISCUSS PROGRAMMING

- Format
- Syntax
- Structure
- Debugging

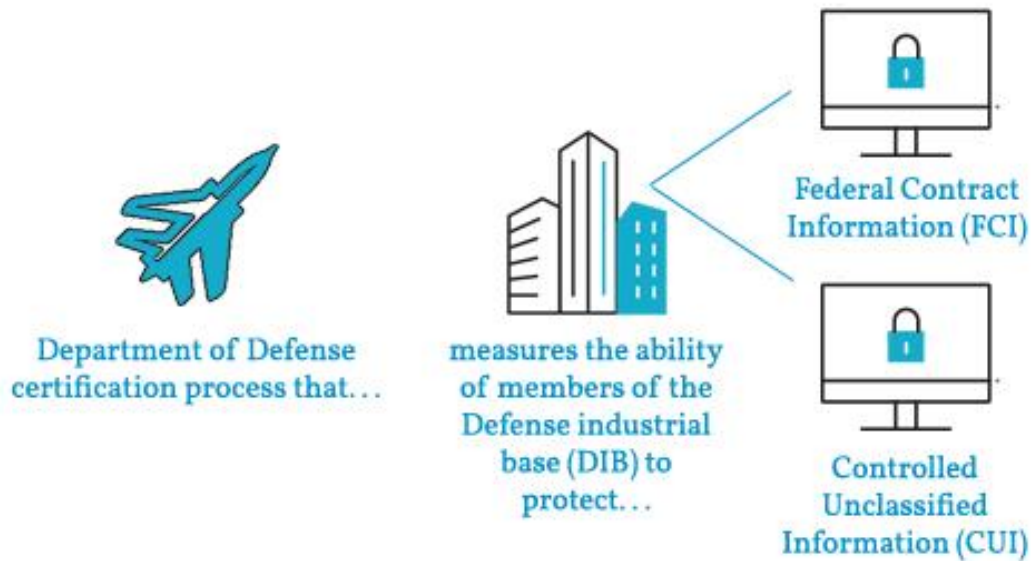


## TEST & DISCUSS IOT/ APPLICATION

- Test Embedded System
- Debug
- Collect Data
- Analyze

# Cybersecurity Maturity Model Certification (CMMC) Training

## What is CMMC?



Cybersecurity

- Home
- Announcements
- Modules
- Assignments
- Discussions
- Pages
- Files
- Quizzes

## Cybersecurity Maturity Model Certification (CMMC)

*This workshop was made possible by funding from the National Science Foundation.*



## CMMC Orientation Training



[Zoom Link](#)

[Module 1 - Introduction to CMMC](#)

[Module 2 - Assessment \(AC\)](#)

# Register for Workshops

Visit

<https://www.cssia.org/>

## Training Events



**SSCP: Systems  
Security Certified  
Practitioner**

October 29 - November 19



**IoT Educators  
Academy: IoT  
Fundamentals**

November 5 - November 20



**Certified Ethical  
Hacker**

December 3 - December 11



**Red Hat Academy**

December 17



**Cisco Cybersecurity  
Essentials**

December 27 - December 29



**ISACA CISA: Certified  
Information Systems  
Auditor**

January 4, 2022 - January 7, 2022