



Professional Development Cyber Security Education Workshop for Secondary Teachers

WHEN

June 8 – 24, 2021 on
Tuesdays & Thursdays

FORMAT

Online from 10:00 am – 12:00 pm (6/8,
6/10, 6/15, 6/17, 6/22 & 6/24) with
assignments in between sessions

COST

There is no cost to attend this professional
development. Registration is required.

STIPEND & PD HOURS

\$400 stipend upon completion of all
online sessions and corresponding
assignments (20 PD hours)

OVERVIEW

This workshop is for educators from middle or high school who wish to accomplish one of the following:

- Introduce security into existing classes;
- Get an introduction and become conversant with fundamental IT and security concepts and terms;
- Get a perspective on the diversity of careers in cyber security;
- Start a security program formally or informally but are not sure how to begin;
- Determine lab resources available for students and learn how to use those labs; and
- Inspire and mentor students who want to participate in cyber security contests such as the Air Force Association's CyberPatriot.

INSTRUCTORS

We are pleased to partner with Radford University on this project. All instructors are from the School of Computing and Information Sciences, Radford University:

- Dr. Prem Uppuluri, Professor and Director, Cybersecurity
- Dr. Joe Chase, Professor
- Dr. Art Carter, Director and Professor

WORKSHOP TOPICS

- a. Need for cyber security – understanding the security and privacy issues and threats to infrastructure;
- b. Diversity of careers – why cyber security expertise is not limited to only IT professionals: guest lectures from law enforcement, government and industry;
- c. Curriculum resources on cyber security education: How existing resources can be easily incorporated for students to self-study
 - Course material examples: Virginia Cyber Range
 - Lab resources available (Examples: Virginia Cyber Range, DETER lab)
- d. Setting up a lab to conduct cyber security experiments.
- e. Basics concepts of cyber security
 - i. Security goals
 - ii. Vulnerabilities, threats and exploits
 - iii. Anatomy of an attack (hacking)
 - iv. Security analysis
 - v. Security mechanisms: cryptography, application and network security
 - vi. Administering security
 - vii. Coaching for success in cyber defense

Application for Registration: <https://bit.ly/3msBEyW>

Space is limited. Registration will close May 27, 2021.

This opportunity is funded by a grant through the Virginia Provost's Initiative for Economic Development, *Teachers and Technologists for Tomorrow.*