The Virginia Cyber Range is a Commonwealth of Virginia initiative designed to enhance cybersecurity education in our high schools, community colleges, and universities. The range provides a cloud-hosted environment for hands-on cybersecurity labs and exercises for Virginia students and will provide an extensive courseware repository for educators.

The Mission of the Virginia Cyber Range is to enhance cybersecurity education for students in the Commonwealth’s high schools and colleges and to boost Virginia’s cybersecurity industry through strategic educational investments. The Virginia Cyber Range seeks to increase the number, and the preparedness, of students entering the cybersecurity workforce in operations, development, and research.

Courseware Repository

The Virginia Cyber Range will contain a repository of cybersecurity courseware to support high school and college courses on various cybersecurity topics. Course materials will be offered in modular form to allow flexible adoption of offerings and customization of courses to meet individual institutional and faculty needs. Accessible only by faculty members at Virginia public high schools and colleges, the repository will be indexed and searchable and will contain course content such as syllabi, lesson plans, presentation slides, and representative homework exercises and exams.

Example Cybersecurity Topics

- Introduction to Cybersecurity
- Secure Network Configuration
- Network Defense
- Digital and Network Forensics
- Reverse Engineering
- Cryptography
- Incident Response
- Penetration Testing
- Security Data Analytics
- Mobile Devices and IoT
- SCADA and Industrial Control Systems
- Cyber Law and Policy

Labs and Exercises

A primary feature of the Virginia Cyber Range is a cloud-hosted, virtual environment where students practice what they have learned in immersive, hands-on laboratory exercises to complement their cybersecurity courses. Students log in to our portal and interact with cyber range VMs directly through their web browsers. Our cloud-based approach allows fast deployment and scalability, and it eases the burden on Virginia schools of providing infrastructure for cybersecurity labs. More large-scale exercises and a capture-the-flag environment is also available in the Virginia Cyber Range.

For More Information

To get access to Virginia Cyber Range resources, please contact:

contact@virginiacyberrange.org

More information on the Virginia Cyber Range is available here:

https://virginiacyberrange.org