

# FBI-Cyber STEM Pathway Program

## Arlington Public Schools Program of Studies



### Program Overview

Arlington County Public Schools (APS) has partnered with Federal Bureau of Investigation (FBI) to create a FBI-Cyber STEM Pathway Program. This program is designed for students who have a strong interest and desire in learning and pursuing careers in Cyber Security while discovering the richness and integration of the science, technology, engineering and mathematics across a wide spectrum of disciplines. Any Arlington Public Schools student who satisfies the Advanced Studies Diploma requirements and complete the specific Cyber STEM Pathway requirements will receive the FBI-Cyber STEM Certificate upon graduation.

### The Purpose

FBI-Cyber STEM Program focuses on recruiting high school aged STEM students with the goal to attract and develop the next generation of technically trained professionals. The goal is to introduce highly motivated students to the Cyber Security field and provide them with the skill sets needed to pipeline in to a career with the Federal Government.

### Benefits to the students

- 1) Students will be introduced to the sought-after skills and the hands-on experience needed to pursue an occupation in a high-demand Cyber Security field.
- 2) Students will understand the employment requirements for a career in the Federal Government.
- 3) Upon completion of the requirements students will obtain a certificate. The certificate provides a way to differentiate oneself from others and can be added to their resume as they apply for jobs.
- 4) Students will begin to develop a professional network within the intelligence community.

### FAQs

#### 1) What are the specific requirements of the FBI-Cyber STEM Pathway Program?

- Complete 5 Cyber focused course credits
- Pass 1 industry credentialing test
- Complete 1 Cyber Security Challenge Competition
- Participate in 2 FBI sponsored activities (assemblies, case studies, internships, etc.)

#### 2) When should students apply?

Arlington County will send out a message to students indicating the application window dates for each academic school year.

#### 3) Can I be grandfathered into the Program?

The FBI program is open to high school freshman to senior year students. The school will determine which students meet the criteria to be added to the program.

**4) Do I have to take the test at end of my AP course in order for my completion of an AP course to count towards the requirements of the Program?**

The FBI does not require students to take the AP/IB exam; however, the student must complete the course with a passing grade. The FBI would encourage students to take those type of exams for college credit.

**5) Can any of the FBI Cyber STEM Program be done online?** Yes, with prior approval from the FBI Cyber STEM Program Manager some of the FBI Cyber Program STEM course requirements can be done online. Reference the FBI Cyber STEM Canvas course for more information.

### Proposed FBI-Cyber STEM Pathway Program

The chart below outlines the specific requirements needed to achieve the FBI-Cyber STEM Pathway Certificate:

*The \* indicates subject areas that are unique to the program*

FBI-CYBER STEM PATHWAY PROGRAM REQUIREMENTS	CREDENTIALING REQUIREMENTS
Cyber – STEM Pathway CTE*	5 FBI-Cyber STEM Concentration Pathway Credits
Mathematics	4 Credits
Laboratory Science	4 Credits
English	4 Credits
History & Social Sciences	4 Credits
Foreign Languages	3 Credits
Health & Physical Education	2 Credits
Economics and Personal Finance	1 Credit
Industry Credentialing Test*	1 Pass
Cyber Security Challenge Competition*	1 Challenge
FBI Engagement Activities*	2 Activities
<b>Total</b>	<b>27 credits + 1 Challenge + 2 Activities</b>

Reference the FBI-Cyber STEM Course Offerings for a list of the applicable courses that satisfy the requirements.

## **FBI-Cyber STEM Course Offerings**

### **1) FBI-Cyber STEM Course Pathway: Earn a total of 5 credits (also satisfies the Fine Arts and Career & Technical Education (CTE) diploma requirement):**

#### **Cyber Security:**

26659/96659W Cybersecurity I: Cybersecurity Fundamentals

26654/96654W Cybersecurity I: Operating Systems

26655/96655W Cybersecurity I: Systems Administration

26662/96662W Cybersecurity II: Cybersecurity Software Operations

26663/96663W Cybersecurity II: Cybersecurity Software Operations Advanced

#### **Computer Science:**

16640 Investigating Computer Science (starts in Middle School at 7th & 8th grade)

26639 Computer Science

33185 Computer Science, AP

33186 Computer Science Principles, AP

36560/36570 IB Computer Science, HL Part I & Part II

#### **Business and Information Technology:**

23105 Foundation Technology

26116 Introduction to Information Technology

26614 Computer Information Systems

29800 Computer Networking and Internet App

26630 Design, Multimedia, and Web Technologies

96646W Design, Multimedia, and Web Technologies

26614 Computer Information Systems

96638W Computer Programming

96643W Computer Programming Advanced

## **Engineering:**

28491 Engineering I: Introduction to Engineering Design

28492 Engineering II: Principles of Engineering

28467 Biotechnology Techniques and Applications

28325 Forensic Technology with application in Biotechnology

28493 Engineering III: Computer Integrated Production Engineering Capstone Course

18421 Technology of Robotics Design (starts in Middle School at 8th grade)

### **2) Credentialing Test: Pass 1 industry credentialing test from the list below:**

Linux+ Examinations—Powered by Linux Professional Institute (LPI) (Must pass both exams)

Microsoft Technology Associate (MTA) Examinations (Pass any one exam)

Network Administration Certification Tests (Pass any one test)

Network Pro Certification Examination

Network+ Certification Examination

Security Pro Certification Assessment

Security+ Certification Examination

Software Development Certification Tests (Pass any one test)

Systems Administration Certification Tests (Pass any one test)

Technical Support Certification Tests (Pass any one test)

Web Administration Certification Tests (Pass any one test)

Web Design and Development Certification Tests (Pass any one test)

A+ Certification Examination

Cisco Certified Networking Associate (CCNA) Routing & Switching Examination

Cisco Certified Networking Associate (CCNA) Security Examination

Cisco Certified Networking Professional (CCNP) Routing and Switching Examination

Cisco Certified Networking Professional (CCNP) Security Examination

CompTIA IT Fundamentals Certification Examination

Computer Maintenance Technology Examination

Computer Networking Fundamentals Assessment

Computer Repair Technology Assessment

Computer Service Technician (CST) Examination

Computer Technology Assessment

Project Lead the Way (PLTW) Engineering (Pass any one exam)

AutoCAD Certifications (Pass any one exam)

AutoDesk Certifications (Pass any one exam)

### **3) Cyber Security Assessment/Camp/Competition: Participate in a total of 1 Cyber Security Challenge from the list below:**

The school will be notified of these opportunities to participate in FBI lead engagements at a later date as the program develops.

### **4) FBI Engagement Activities: Attend a total of 2 FBI engagement activities from the list below:**

The school will be notified of these opportunities to participate in FBI lead engagements at a later date as the program develops.