

JROTC Cyber Curriculum Map Years 1-4

Class Hours	Topics	CAE Knowledge Units *Maps to NICE KSAs	CompTIA
Year 1 180 Total Class Hours	The course begins with fundamental JROTC Leadership Training. Cyber year one focuses on the foundational skills needed to begin a pathway into cybersecurity. It begins with an introduction to ethics and cybersecurity, moves on to global connectivity, and then transitions to understanding hardware, operating systems, networks, cryptography, and operating procedures. The course ends with a service learning oriented capstone project that encourages problem solving and team building. This course covers topics associated with CompTIA A+ certification.		
48 hours	JROTC Leadership Education Training <ul style="list-style-type: none"> • Foundations • Personal growth and behaviors • Ethics • Careers 	F.CSF.t17	
5 hours	Introduction to Cybersecurity <ul style="list-style-type: none"> • Need for cybersecurity • Confidentiality, Integrity, and Availability (CIA) triad • Common attack types and adversary types • Risk 	F.CSF.t10 F.CSF.t03 F.CSF.o01 F.CSF.t01 F.CSF.t04 F.ISC.o04	
10 hours	Global Connectivity <ul style="list-style-type: none"> • Network components • Internet overview • Packet transmission overview • Internet vulnerabilities 	F.ISC F.ISC.o03 F.ISC.o04 F.ISC.t17	
15 hours	Hardware <ul style="list-style-type: none"> • Hardware assembly (desktop and laptop) • Data storage • Connectivity • Peripherals and Internet of Things • Common hardware attack 	F.CSF.t02 F.ISC.o01 F.ISC.o04 F.ISC.t01a F.ISC.t02	A+ Core 1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8

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			3.9 3.10 3.11 5.1 5.2 5.3 5.4 5.5 5.6 5.7
5 hours	Virtualization and OS <ul style="list-style-type: none"> • Cloud computing • Hypervisors • Cloud computing vulnerabilities 	F.ISC.o04 F.ISC.o01 F.ISC.t03a F.ISC.t03b	A+ Core 1 4.1 4.2
32 hours	Operating Systems <ul style="list-style-type: none"> • Types of operating systems • Windows: installation, configuration, account management, updates and security, CMD line/Powershell, registry, and troubleshooting • Linux: installation, configuration, account management, updates and security, scripting, and troubleshooting • Common host-based attacks 	F.CSF.t02 F.CSF.t12 F.ISC.o02 F.ISC.o04 F.ISC.t01 F.ISC.t11 F.ISC.t12a	A+ Core 2 1.1 1.2 1.3 1.3 1.4 1.5 1.6 1.7 1.8 1.9 3.1 3.2 3.3 3.4 3.5
5 hours	Introduction to Cryptography <ul style="list-style-type: none"> • Need • Uses • Types • Converting numbers to scientific notation and modulo-2 addition 	F.ISC.o04	
30 hours	Networking <ul style="list-style-type: none"> • Networking Fundamentals • Building Local Area Networks • Secure Networking 	F.CSF.o02 F.CSF.t11 F.CSF.t14 F.ISC.o01	A+ Core 1 2.1 2.2 2.3

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	<ul style="list-style-type: none"> Common network based attacks 	F.ISC.o04 F.ISC.t05 F.ISC.t11	2.3 2.4 2.5 2.6 2.7 2.8
15 hours	Security <ul style="list-style-type: none"> Common security threats Physical security Incident response WiFi security standards Device hardening Data destruction 	F.CSF.o04 F.CSF.t13 F.ISC.o02 F.ISC.o04 F.ISC.t12 F.ISC.t13a F.ISC.t14 F.ISC.t15	A+ Core 2 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10
5 hours	Operating Procedures <ul style="list-style-type: none"> Documentation and change management Social engineering attacks Disaster prevention/recovery Incident response Communication Scripting 	F.CSF.o04 F.CSF.t15 F.ISC.o04 F.ISC.t02 F.ISC.t17	A+ Core 2 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9
10 hours	JROTC Leader Education Training & Capstone Project <ul style="list-style-type: none"> Orientation of service learning Preparing for service learning Work with a team to complete a service learning project 		