INTRODUCTION TO CYBERSECURITY
PACING GUIDE
Spring 2022

Course Pacing Overview (Semester Schedule)

Duration (Weeks)	Quarter 3 – Unit/Topic	Standard
1	Course Overview Employability Skills	IT-ICS-1 Demonstrate employability skills required by business and industry
1-2	What is Cybersecurity Impact of Cybersecurity CIA Triad (Confidentiality, integrity, availability)	IT-ICS-2 Demonstrate an understanding of cybersecurity concepts and research. 2.1 Explain the importance of data security. 2.2 Explain the concepts of confidentiality, integrity, availability, authentication, and nonrepudiation. [NICE 63] 2.3 Research current events on breaches; focus on particular Information Assurance (IA) areas that were compromised. 2.4 Explain the importance of physical security.
1-2	Digital Footprint and Reputation Cyberbullying Internet Safety Privacy and Security Information Literacy Creative Credit and Copyright Hacking Ethics FBLA Spring Meeting Flyer	IT-ICS-1.6 Present a professional image through appearance, behavior and language. IT-ICS-2 Demonstrate an understanding of cybersecurity concepts and research. 2.1 Explain the importance of data security. IT-ICS-12.3 Explore the local, state, and national opportunities available to students through participation in related student organization (FBLA) including but not limited to conferences, competitions, community service, philanthropy, and other FBLA activities.
1	**Project:** Digital Citizenship and Hygiene PSA Project	IT-ICS-1.6 Present a professional image through appearance, behavior and language. IT-ICS-2 Demonstrate an understanding of cybersecurity concepts and research. 2.1 Explain the importance of data security. 2.3 Research current events on breaches; focus on particular Information Assurance (IA) areas that were compromised.

Duration (Weeks)	Quarter 4 – Unit/Topic	Standard
1-2 Weeks	Cryptography, Cryptology, Cryptanalysis History of Cryptography Why do we Need to Encrypt Data? Basic Cryptography Systems: Caesar Cipher Basic Cryptography Systems: Cracking the Caesar Cipher Basic Cryptography Systems: Vigenère Cipher	IT-ICS-11 Research and explore basic principles of cryptology
1	**Project:** Classic Cipher Newscast Apply Cryptography content	IT-ICS-11 Research and explore basic principles of cryptology
Ongoing	FBLA Integration	IT-ICS-12.3 Explore the local, state, and national opportunities available to students through participation in related student organization (FBLA) including but not limited to conferences, competitions, community service, philanthropy, and other FBLA activities.
Duration (Weeks)	Quarter 4 – Unit/Topic	Standard
1-2	**Security Administration** Operating Systems Software and Applications Application Security Browser Configuration System Administration Command Line Interface	IT-ICS-9 Demonstrate how to implement proper security administration.
1-2	**Software Security** Inside Web Applications Developer Tools The Value of Data ● SQL Overview ○ What is SQL? ○ Structuring Data in SQL ○ Basic Querying in SQL ○ Filtering Queries in SQL ● Clients, Servers, Databases ● Common Security Problems ● SQL Injection ○ SQLi Overview ○ Types of SQLi ○ Preventing SQLi	IT-ICS-8 Demonstrate how to employ host system and application security
1	**Project:** Security Assessment Report	IT-ICS-8 Demonstrate how to employ host system and application security
1-2	**Networking Fundamentals** Introduction to the Internet Notational Systems Data Representation Internet Hardware Internet Addresses	IT-ICS-3 Identify the fundamental principles of networking (wired and wireless), local area networks (elements, perimeter networks, IP addressing, access methods and topologies), client-server and peer-to-peer networking models, and wide area networks. IT-ICS-4 Identify the fundamental principles of the Open Systems Interconnection Model, Internet Protocol IPv4 and IPv6, and common networking

		services to include Name Resolution Techniques.
		IT-ICS-5 Demonstrate how to work with the basic and advanced command prompts
1-2	**IT Infrastructure**	IT-ICS-6 Explore and research network infrastructures and network security.
1	**Project:** Troubleshooting Project	IT-ICS-6 Explore and research network infrastructures and network security.
Ongoing	FBLA Integration	IT-ICS-12.3 Explore the local, state, and national opportunities available to students through participation in related student organization (FBLA) including but not limited to conferences, competitions, community service, philanthropy, and other FBLA activities.