

# ADVANCED CYBERSECURITY

## PACING GUIDE

Spring 2022

### Course Pacing Overview (Semester Schedule)

Duration (Weeks)	Quarter 3 – Unit/Topic	Standard
1	Course Overview Employability Skills	IT-ACS-1 Demonstrate employability skills required by business and industry
1-2	Legal and Ethical Decisions Related to Cybersecurity  FBLA Competitive Events WebQuest	IT-ACS-2 Explore concepts of cybersecurity related to legal and ethical decisions.  IT-ACS-12.5 Explore the competitive events related to the content of this course and the required competencies, skills, and knowledge for each related event for individual, team, and chapter competitions
1-2	<b>Advanced Cryptography</b> Encryption Algorithms Public Key Encryption Hash Functions Asymmetric Encryption Digital Certificates	<b>IT-ACS-5</b> Apply advanced principles of cryptology.
1	<b>Project:</b> Steganography	IT-ACS-5 Apply advanced principles of cryptology.
1-2	<b>Advanced Networking</b> Advanced Devices Environmental Controls Protocols and Standards Private Networks Mobile Devices Access Control	IT-ACS-11 Demonstrate how to work with advanced methods of cybersecurity.
1-2	<b>Project: IT Professional</b>	IT-ACS- 1.1 Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities 1.3 Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations.
Ongoing	FBLA Integration	IT-ACS-12 Explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events.

Duration (Weeks)	Quarter 4 – Unit/Topic	Standard
1-4	<b>Cyber Defense</b> Network Attacks Malware Types and Prevention Common Network Attacks Additional Attacks Cross-Site Scripting Internal Threats	IT-ACS-3 Investigate concepts of malware threats.  IT-ACS-4 Demonstrate how to analyze and react to various threats and vulnerabilities.  IT-ACS-6 Apply advanced communications and wireless security techniques
1	<b>Project: Security Assessment Report</b>	IT-ACS- 1.1 Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities  IT-ACS-4 Demonstrate how to analyze and react to various threats and vulnerabilities.
1-2	<b>Project: Put it in Writing</b> User Training Incident Response Plans Data Policy and Privacy Change Management	IT-ACS-7 Implement organizational security techniques.  IT-ACS-8 Implement contingency planning (incident response and disaster recovery) techniques.
1-2	<b>Project: The Game of Risk</b> Identifying risks Assessing Risks Risk Response Penetration Testing	IT-ACS-10 Implement risk management techniques for personal computer and network systems.
Ongoing	FBLA Integration	IT-ACS-12 Explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events.