

Man-in-the-middle attacks affect which part of the CIA triad?

What is a vulnerability of the Diffie-Hellman's key exchange?

Example activity:

How is a trapdoor function used in the Diffie-Hellman key exchange? How is this related to RSA encryption?

What is OpenPGP?

Digital Certificates

What are the different types of SSL certificates?

What is the maximum SSL Certificate duration of validity?

What is the chain of trust?

How can certificate pinning and stapling help prevent man-in-the-middle attacks?

What are the differences between an IDS and an IPS?
What devices can be used to block unwanted Internet traffic?

Example Activity:

What are the main functions of network administrators and how do they support each part of the CIA Triad?

Sketch and label a network diagram that fulfills the listed requirements. Include a short explanation of each device used in the network along with its main purpose.

Environmental Controls

What environmental controls are used in computer systems?

What is the potential danger of an environment in which the humidity is too low or too high?

What security measures are designed to assist with electrical issues?

Example activity:

What are the physical security measures that are implemented at your school? What do you think could be added?

You are tasked with designing the security system for a top-secret government building. Be sure to use a range of different security measures.

Protocols and Standards

What are the protocols used in sending and receiving emails?

What is the difference between TCP and UDP?

What are the different wireless standards?

Example activity:

What frequency band(s) can be used with the 801.11ax standard?

What is a MU-MIMO device and how does it help the range of the signal?

Private Networks

What is a NAT device used for?

How does MAC filtering work?

How is a DMZ utilized?

What protocols are used in the implementation of a VPN?

Example Activity

What are the behaviors of a cloud sa

Access Control

What is RADIUS?

What is the importance in securing authentication, authorization, and accounting management?

Example activity:

What are some advantages of using the RADIUS protocol on a network? How can it support overall network security?

Why is the AAA protocol important in network security?

	<p>What type of built-in malware protection does your operating system provide? View all of the running processes on your computer.</p> <p>Common Network Attacks What is DoS and DDoS? What is spoofing and why can it be dangerous? Example activity: What makes social engineering such an effective technique for hackers? Does the IoT make us more or less vulnerable to DDoS attacks?</p> <p>Additional Attacks What is a rainbow table? What is a zero-day attack? What is a botnet and how are they used? Example activity: Explore the United States Computer Emergency Readiness Team (US-CERT) web page and draw conclusions about the current environment of cyber threats.</p> <p>Cross-Site Scripting How does XSS attack a website? Who is the victim in an XSS attack? Example activity: Try some basic XSS on the Google's Tutorial for XSS site. What are some ways to detect XSS vulnerabilities on websites?</p> <p>Internal Threats What is the main function of UEFI? What can you do to prevent someone from booting an alternative operating system? What is data loss prevention? Example activity: Explore your computer's BIOS/UEFI! Which data breaches can be prevented by DLP tools?</p>
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Students complete a project that has them test a website for vulnerabilities and write a security assessment report based on their findings.

Browse the full content of this module at <https://codehs.com/library/course/7606/module/13078>

Objectives /Topics Covered	Project Security Assessment Report
Example Assignments /Labs	Project Security Assessment Report XSS Testing Create a Security Assessment Report Project Reflection

In this project, students will develop a training policy that informs employees on matters of network security and details the company policy on preventative measures employees should take.

Browse the full content of this module at <https://codehs.com/library/course/7606/module/13131>

Objectives / Topic content	

How do you calculate the SLE and ALE of a threat event?

How do you effectively and efficiently mitigate risk?

Example activity:

Read a sample assessment report. What types of methods did the assessors use to collect data? Do you feel this report provides you with sufficient information to determine priorities and next steps?

What role might chaos engineering play in risk assessment and response?

Penetration Testing

What are the stages of penetration testing?

What tools are used in passive reconnaissance?

What is an escalation of privilege?

Example activity:

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