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>7EEA@F;F>7, Fundamentals of Information Security

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This module presents essential fundamentals of information security concepts including Confidentiality, Integrity, Availability, and non-repudiation. Various components of a typical information system will be presented including software, hardware, data, users, etc. The module will highlight the importance of humans as a central component of any system and how human errors are the typical cause of system compromises. The common saying that "humans are the weakest link of the security chain" will be expounded with several real-world examples. In such context, other cybersecurity concepts will be fully explained. The concept of Keep It Simple will be introduced as a technique that will help minimize human errors as participants will have a better understanding of the systems they need to defend. Additionally, when discussing various components of an information system, the concept of Defense in Depth will yield itself well. For example, the discussion will include an explanation of how various components can be viewed as different layers of security that attackers must then defeat to conduct a successful attack. Moreover, common attacker motivations will be discussed which will familiarize participants with adversary mindsets and introduce essential ethical aspects.

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Design/Build
Test/Defend
Compare/Contrast
Apply/Use
Explain/Discuss
Identify/Describe

1. Demonstrate an in-depth understanding of the GenCyber Cybersecurity Concepts.
2. Evaluate and analyze the availability of information systems while achieving defense in depth against Internet frauds.

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Lab Computers
Internet Access
Account on GenCyber Coins system
Lab handouts

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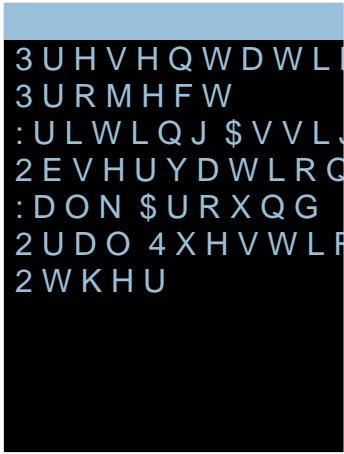
Basic Math and problem solving skills.

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