

Information and Cybersecurity Awareness

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IT security as a career

'Small actions, big difference—welcome to the digital neighbourhood'

Information Technology (IT) Security, which is a specialist field within Information Technology, is concerned with the protection of computer systems and networks from information disclosure, theft of, or damage to their hardware, software or electronic data, as well as from the disruption or misdirection of the services they provide.

Introduction

Due to the increase in internet usage, dependency on computers and the escalation of malicious activities, this field has gained great significance. The most common threats posed by the increased use of technology are phishing, malware and spyware.

Mitigating these threats is very important to achieve the following main goals:

- **Confidentiality:** Preventing unauthorised access to sensitive information
- **Integrity:** Maintaining consistency, accuracy and trustworthiness of data through its life cycle
- **Availability:** Ensuring that information is consistently and readily accessible to authorised users

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<https://www.isc2.org/>

<https://www.isaca.org/credentialing>

Requirements for pursuing IT Security as a career

A formal qualification in Information Technology (eg a BSc Information Technology degree) and work experience in the field of information technology is recommended for anyone wishing to pursue a career in IT Security. To become an IT Security professional, you will need to be certified by one of the accredited certification bodies, such as the Council of E-Commerce Consultants (EC-Council), which will facilitate your entry into this field.

Recommended IT Security courses: Certificate

There are different accredited certification bodies. The following are well known and internationally recognised, and any of these can be considered by students who wish to prepare and upskill themselves:

- **EC-Council:** Certified Ethical Hacker (CEH), Certified SOC Analyst (CSA), Application Security Engineer .NET, Certified Cloud Security Engineer (CCSE), etc
- **ISACA:** Certified in Risk and Information Systems Control (CRISC), Certified in the Governance of Enterprise IT (CGEIT), etc
- **ISC2:** Certified Information Systems Security Professional (CISSP), Certified Secure Software Lifecycle Professional (CSSLP), etc
- **CompTIA:** Security+, PenTest+, Cyber security Analyst (CySA+), etc
- **Vendor Specific:** Cisco Certified Network Professional Security (Cisco), Network Security Expert (Fortinet), Palo Alto Networks Certified Security Engineer (Palo Alto), etc

Career path

Depending on the person's interest or experience, the following options are part of the career path in the field of IT Security:

- Network security
- Application security
- Cloud security
- IT risk and governance
- Penetration tester
- IT Security auditor