

Cyber Security - Application Security

Introduction

The Cybersecurity Certificate is designed to provide the knowledge and skills of protecting critical systems and sensitive information from digital attacks. Also known as information technology (IT) security. You will read about the Cybersecurity measures to combat threats against networked systems and applications, whether those threats originate from inside or outside of an organization, Application Security addresses the design and implementation of secure applications and the Concentration is on writing software programs that make it difficult for intruders to exploit security holes.

This certificate will give you an overview of the most important security concerns in web applications, and how to deal with them. You will learn how and why web apps are vulnerable. The curriculum covers the top 10 vulnerabilities, based on the Open Web Application Security Project and the best approach to counter the risk.

REQUIREMENTS:

- Intermediate/O/A-level
- Basic Computer Skills
- Basic Web Applications Knowledge

CURRICULUM:

Week	Lecture	Topics
1	1	Introduction to Application Security - OWASP
2	2	Security Misconfiguration
3	3	Using Components with Known Vulnerabilities
4	4	Broken Authentication Message Authentication Codes
5	5	Broken Access Control Hashes
6	6	MID-TERM PROJECT
7	7	Injectons: Command, HTML, XML, SQL PHP, etc. injections
8	8	Insecure Deserialization
9	9	Sensitive Data Exposure
10	10	Insufficient Logging and Monitoring
11	11	Secure Design Principles and Best Practices
12	12	FINAL TERM PROJECT

Outcomes:

- Understand the concepts and terminology used in web security
- Be aware of the global organizations and standards that focus on web application security
- Know what the most important vulnerabilities are, and what countermeasures to take
- Know what is required to implement a secure development approach
- Be aware of best practices and secure design principles for application development.

BENEFITS:

- Describe security threats faced in different application environments including software, web, database, cloud, and mobile.
- Incorporate measures to reduce the risk of an application security breach.
- Locate resources that are up to date to address emerging application security issues.

Affiliation & Collaboarations

