



Advanced Security (Information Security Management) - Session 0: Kick Off

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Learning Goals

Students

- Know the basics of the most important [security frameworks](#), particularly ISO 27001, NIST SP 800-53, and OWASP ASVS
- Know the basic [organization](#) and concepts for security in companies including [people, processes, and technology](#)
- Know some key approaches to enable [Product / Application Security](#), particularly [threat modelling](#) and aspects of secure software design / [secure software architectures](#) and can apply them on [cloud architectures](#)
- Know the tooling and can apply some basic [attacks](#) on web applications and networks, understand the key ideas on how to detect them and how to [defend](#) against them
- Understand fundamental concepts and tools along [DevSecOps](#)
- Understand aspects of [embedded security](#)
- Understand the application of [machine learning](#) in the security context
- Understand some advanced concepts of [cryptography](#)



Main Topics

- Introduction and Recapture
- Security Frameworks
- Security Organization and Processes in Companies
- Fundamental Web Application and Network Attacks
- Security Architectures and Cloud Security
- Tooling to Support Operational Security and enable DevSecOps
- Static and Dynamic Analyses for Security
- Embedded Security
- Machine Learning and Security
- Advanced Cryptography: ECC and (post-)quantum cryptography

Exam



Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law

Written Exam (Klausur) at the end – electronic, but in presence

You can earn bonus points during the course



Other Supporting Means

- Beginning of each session: A team briefly recaptures the last session, also prepares small Kahoot
- Small tests in between (just for training)
- Some interactive sessions in between (e.g. one group sets up a small enterprise architecture, the other assesses it w.r.t. security aspects, presentations)



Feedback for the plan

- What do you expect from the lecture?
- Any particular content you wish to focus at?
- Any content you are missing in the plan?
- Any content you wish to prioritise?
- Any content to down-prioritise?



Capture The Flag (CTF)



- CTF during conference
- <https://www.kuppingercole.com/events/cyberevolution2024>
- Conference: Dec 3-Dec 5, 2024
- CTF: Dec 4
- Team Size: 4
- College and professional teams
- No fees (travel expenses by HWR, accommodation by company)

If you wanna join, let me know