

## Topics

- Basic concepts: Data and information, Acquisition process
- Data protection and data security, Threats: Viruses, human factor
- Data loss and corruption
- User authentication methods, Passwords, encryption.
- Protection of privacy, destruction of data
- Network security knowledge: protocols, devices, network attacks
- Virtual private networks
- Ethical hacking
- Design and implement secure applications

## Schedule

Week #	Lecture	Labor
Week 1	Basic concepts	Labor usage, handouts requirements
Week 2	Security design principles	Design the security of Neptun system
Week 3	Introduction to Kali Linux	Basic commands
Week 4	Working with Kali Linux	Introduction to Python
Week 5	Python security tools	Writing Python code
Week 6	Bank Holiday	Bank Holiday
Week 7	Malicious code	Virus and malwae checking tools
Week 8	Hashing function	Kali password storing functions

## Textbooks

- Stallings, W., Brown, L. (2015): Computer security: principles and practice 3rd edition, Pearson Education, 978-0-13-377392-7
- Matt Bishop (2019): Computer Security Art and Science, Pearson Education 978-0-321-71233-2
- Alan G. Konheim: Computer Security and Cryptography (Wiley, 2007, ISBN: 978-0-471-94783-7)
- John R. Vacca: Computer and Information Security handbook (Morgan Kaufmann, 2009, 844 pages, ISBN 978-0-12-374354-1)
- Simon Singh: The code book ISBN 0385495323
- James M. Stewart, Mike Chapple, Darril Gibson - CISSP (ISC)2 Certified Information Systems Security Professional Official Study Guide, 2015, ISBN 1119042712
- Tony Hsiang-Chih Hsu - Practical Security Automation and Testing: Tools and techniques for automated security scanning and testing in DevSecOps, 2019, ISBN 1789802024
- Vijay Kumar Velu, Robert Beggs : Mastering Kali Linux for Advanced Penetration Testing: Secure your network with Kali Linux 2019.1 - the ultimate white hat hackers' toolkit, Packt Publishing Ltd, 2019. jan. 30
- Daniel Regalado, Shon Harris, Allen Harper, Chris Eagle, Jonathan Ness, Branko Spasojevic, Ryan Limm, and Stephen Sims: Gray Hat Hacking: The Ethical Hacker's Handbook
- Andrew S. Tanenbaum - David J. Wetherall: Computer networks, ISBN:978-0132126953
- Kevin Mitnick: The Art of Invisibility
- Chris Wysopal: Art of Software Security Testing, The Identifying Software Security Flaws, ISBN 0321304861

## Handouts

1. [Week 1](#)
2. [Week 2](#)
3. [Week 3](#)
4. [Week 4](#)
5. [Week 5](#)
6. [Week 6](#)
7. [Week 7](#)

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