Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
INF471-A	Computer Security	7	2	0	2	3	4

Prerequisites	INF334
Admission Requirements	INF334

Language of Instruction	French
Course Type	Compulsory
Course Level	Bachelor Degree
Objective	The objective of this course is to convey the students the principles of the information security. The contents of the course includes both the technology of the security utilities and the application methods of the security concept in accordance with the human factor.
Content	Week 1. Introduction to the information security: Security principles: confidentiality, data integrity, persistence. Menaces, security holes, risk factors. Week 2. Administrative measures, risk management, security norms. Security policies and procedures. Audit. Week 3. Single key cryptography I: Examination of classical techniques. Week 4. Single key cryptography II: Examination of classical techniques (cont.). Week 5. Single key cryptography III: Examination of modern techniques. Week 6. Asymmetrical cryptography systems I: Design principles, number theory. Week 7. Asymmetrical cryptography systems I: Key management. Week 8. Mid-term exam Week 9. Asymmetrical cryptography systems II: Hash functions, digital signatures. Week 10. Asymmetrical cryptography systems III: Identity tests with digital signatures. Week 11. Network security: E-mail security, firewalls. Week 12. Network security: IP security. Week 13. Security of web applications. Week 14. Security in the systems of cloud computing
References	- Course notes - William Stallings, Cryptography and Network Security: Principles and Practice, 5/E Prentice Hall

Theory Topics

Week	Weekly Contents
1	IIS installation and management, Ftp server installation and management
2	IIS and Ftp server security policies
3	Network setup and ip management
4	DHCP server setup and management
5	Arp broadcast attacks and prevention methods
6	The way ICMP packages, ping and tracetoute programs work
7	DDOS attacks and prevention methods
8	Midterm exam

Week	Weekly Contents
9	DNS server setup and management
10	DNS server security policies
11	Email server installation and management
12	Security measures related to email server
13	RAID types, setup and management
14	Ethical rules and policies in network management