Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
INF334	Computer Networks	6	2	0	2	4	4

Prerequisites	INF256
Admission Requirements	INF256

Language of Instruction	French
Course Type	Compulsory
Course Level	Bachelor Degree
Objective	The objective of this course is to teach the principles of networking protocols and standards, to show the aspects of security in computer networks and other applications.
Content	1. The OSI and TCP/IP models 2. The classification and characteristics of networks 3. The layers and their functions 4. Data link layer and ethernet 5. Network layer 6. Transport Layer 7. UDP and introduction to socket programming 8. Mid-term exam 9. TCP, reliable data transmission 10. Retransmission methods, flow and congestion control 11. Server/client interaction on web, associated standards. 12. Network security: Security levels 13. Network security: Security levels 14. Socket programming examples
References	1. James F. Kurose and Keith W. Ross, “Computer Networking: A Top-Down Approach Featuring The Internet”, 2003, Addison Wesley, Pearson Education. 2. Russell Bradford, "The Art of Computer Networking", 2007, Prentice Hall, Pearson Education. 3. Andrew Tannenbaum, "Computer Networks," 1996, Prentice Hall, Inc. 4. D. Bertsekas and R. Gallager, "Data Networks," 2nd Ed., 1992, Prentice Hall, Inc. 5. T.S. Rappoport, "Wireless Communications," 1996, Prentice Hall, Inc.

Theory Topics

Week	Weekly Contents
1	The OSI and TCP/IP models
2	The classification and characteristics of networks
3	The layers and their functions
4	Data link layer and ethernet
5	Network layer
6	Transport layer
7	UDP and introduction to socket programming
8	Mid-term exam
9	TCP, reliable data transmission
10	Retransmission methods, flow and congestion control
11	Server/client interaction on web, associated standards.
12	Network security: Security levels
13	Network security: Security levels
14	Socket programming examples