



Programme of Course "Reti di Calcolatori"

- Code: F0144
- Type of course unit: Compulsory (Bachelor Degree in Computer Science curriculum General)
- Level of course unit: Undergraduate Degrees
- Semester: 2

Number of ects credits: (Bachelor Degree in Computer Science) 6 (workload 150 hours)

Teachers: Alberto Petricola (alberto.petricola@univaq.it)

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| 1 | Course objectives | The course is designed to teach students fundamentals of analysis and design of computer networks. Introduction to the basic concepts of computer and communication networks, like flow control, congestion control, end-to-end reliability, routing, framing, error-recovery, multiple access and statistical multiplexing. In-depth presentation of the different networking layers, with emphasis on the Internet reference model. Protocols and architectures such as the TCP, IP, Ethernet, wireless networks etc. are described in order to illustrate important networking concepts. |
| 2 | Course content and learning outcomes (dublin descriptors) | <p>Topics of the module include:</p> <ul style="list-style-type: none"> • Computer Networks, the Internet and the World Wide Web • Application Layer and network applications • Transport Layer: TCP and UDP • Network Layer and Routing • Data Link Layer and Local Area Networks • Wireless Networking • Security • Network management |
| 3 | Course prerequisites | |
| 4 | Teaching methods and language | <p>Language: Italian</p> <p>Reference textbooks</p> <ul style="list-style-type: none"> • James F. Kurose, Keith W. Ross, Computer Networking: a top-down approach, featuring the Internet. Addison Wesley. 2007. http://www.aw.com/kurose-ross/ • Andrew S. Tanenbaum, Computer Networks. Prentice Hall. 2002. http://www.cs.vu.nl/~ast/ |
| 5 | Assessment methods | Students must pass the written test (whose weight is 70% of the overall evaluation) and an oral test. |