



## SCIENZE PROPEDEUTICHE

8 CFU - 1° Semester

### Teaching Staff

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### LEARNING OBJECTIVES

- **Information Technology**

The student will acquire the basic computer skills necessary for a correct use and aware of modern computer technologies. to the use of operating systems, elements of networking, applications for video spreadsheets

### COURSE STRUCTURE

- **Information Technology**

frontal lessons

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### DETAILED COURSE CONTENT

- **Information Technology**

Basic informatics - Definition of information - Definition of code - Information processing - Analog

and digital systems - Numeric system in base 2 and base 16 - Representation of characters and images - ASCII code - Information Technology (IT) - Types of computer processing capacity, speed, cost, and typical uses - Basic diagram of a personal computer - Central processing unit, input devices, output devices - Mass memory - Memory RAM and ROM - Memory capacity - Performance of computers - The meaning of the terms: system software and application software - The main functions of the Operating System - Graphical User Interface (GUI) - Phases of software development: analysis, programming, implementation, testing - Local Area Network (LAN) and Wide Area Network (WAN) - Public data network (switched Public Switched Data Network (PSDN), integrated services digital network (Integrated Service Digital Network, ISDN), satellite communications - Fax, telex, fax, modem, digital, analog; baud (measured in bps, bits per second) - Typical applications in the field of health, the "smart cards", etc... - What is the Information Society and its various implications? - Protocols more used: TCP/IP. Ergonomics: the problems arising from a work environment that isn't correct - The need to make backup copies of data on removable memory- What is a computer virus? As the viruses come in a processing system- The main measures of defense against viruses - The concept of copyright law in the case of the software and the legal implications to copy - The meaning of the terms: shareware, freeware, and license to use - The privacy issues associated with the use of personal computers and the measures to be taken - The privacy legislation in Italy. The implications in the use of personal data. Hints of network security

Excel

Definition of cell, sheet and file; the anchorages; use of special keys; the handle; References absolute and relative; formatting of the spreadsheet (date, currency, number, general, etc.); Edit a worksheet (copy only the format of a cell); Area of input and output; the bar of the formulas; Formulas (Sum, Average, Max, Min, Percentage etc.); the graphs (histograms, pie, etc.); Change of a graph and use Excel as Data Base; definition of Field and Record; sorting data; Function "=IF"; function "=Conta.Se"; filters; the passage of formulas and data from other spreadsheets; the passage of formulas and data from other File Macro, security statistics Formulas

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## TEXTBOOK INFORMATION

- **Information Technology**

Notes prepared by the teacher

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