Degree Course
"Sociology"
Teaching Unit
Computer Skills
Academic Year, Course Year, Semester, CFU
A. Y. 2023/2024, III° Year Course, 1° Semester, 4 CFU
Teacher
Prof. Giuseppe Agapito

Content	Computer Skills, degree course in Sociology. SSD: ING-INF/01 Computer Science
Teacher	Prof. Giuseppe Agapito Associate Professor, (S.C. 09/H1, S.S.D.: ING-INF/05 Sistemi di Elaborazione delle Informazioni), Department of Law, Economics, and Sociology, University "Magna Græcia" of Catanzaro. e-mail: agapito@unicz.it The timetable of the lectures is published on the website of the Department of Law, Economics, and Sociology. Office hours dates and times are available in the personal teacher web page. The teacher also receives by appointment before and after lessons.
Teaching Unit	The course provides the basic elements of computer science and in particular the principles, techniques, and basic tools for the automatic processing of information. Specifically, students will acquire the basic elements such as, the representation, manipulation, transmission, communication, and storage of information, using electronic computers, and computer networks, with greater emphasis in the field of social sciences.
Methods and Criteria for Learning Assessment	**Knowledge and understanding skills**: The course aims to provide essential computer knowledge and skills regarding the principles, techniques, and fundamental tools relating to the automatic processing of information, computer networks, and the internet. **Applying knowledge and understanding:** The student will be able to use the knowledge learned to automatically analyze information and computer networks to deal with all possible scenarios relating to the automatic processing of information. **Autonomy of judgment:** acquisition of individual critical-analytical skills through the critical comparison about the topics discussed in the course. **Communication skills:** The student will Acquire the ability to expose the topics covered with appropriate terminology**.** **Learning Abilities**: The student will have acquired the necessary theoretical and practical methodologies to independently address and solve new problems inherent to the automatic processing of information.
Program	**Information Representation**: models of information representation, Encoding of numbers and binary operations, binary and decimal numbering systems, text encoding, image encoding; **Computer Hardware Architecture:** main components and

	characteristics of a computer (Von Neumann's model); main memory (functions, characteristics, and organization), Central Processing Unit-CPU (functions, operating and control parts, instruction cycle), system bus (organization, advantages and disadvantages), input/output interfaces, mass memory. **Computer Software Architecture:** conventional architecture of an operating system (kernel, memory manager, input/output manager, file manager, command interpreter), utility programs. **Software**: use of computers and managing files, word processing, spreadsheets. **Computer Networks and Internet**: Introduction to computer networks; Main models of topological networks, TCP/IP protocol; Network applications and services; Internet Security.
Student workload	The amount of study required to prepare for an exam varies according to the personal abilities of the individual student. The indicated program requires approximately a personal study of 90 hours. TOPICS: Introduction to the course, information representation, computers hardware, CPU, Main Memory, mass memory, use of computers and managing files. [1] Chapters: 1, 2, 3, 4. (tot 60 pages) Lecture notes, provided by the teacher TOPICS: Conventional architecture of an operating system (kernel, memory manager, input/output manager, file manager, command interpreter, utility programs. [1] chapters: 5, 7. (tot 50 pages) Lecture notes, provided by the teacher TOPICS: Introduction to computer networks; Main models of topological networks, TCP/IP protocol; Network applications and services; Internet Security. [1] chapters 8, 9, 10, 14. (tot 60 pages) Lecture notes, provided by the teacher TOPICS: use of computers and managing files, word processing, spreadsheets. [1] chapters 6, 11, 12 (tot 50 pages) Lecture notes, provided by the teacher Total Number of pages **220** to study concerning 4 **CFU** (**min** number of pages **200**, **max** number of pages **240**)
Teaching Methods	Front lectures and exercises in classroom using blackboard, projector and computer; practical activities (guided exercises) at the Laboratory of Computer Science. The activities are directed primarily at the processing of electronic documents and

<table>
<tr><td></td><td>spreadsheets.</td></tr>
<tr><td>Textbooks and Further References</td><td>Suggested Textbooks:
[1] Dennis P. Curtin, Kim Foley, Kunal Sen, Cathleen Morin, Informatica di base 7ª edizione, McGraw-Hill.
Slides provided by the teacher and supplementary useful material will be made available for the students attending the course on the eLearning platform of university (https://elearning.unicz.it/).</td></tr>
<tr><td>Support Activities</td><td>In addition to the front lectures, students will be supported during laboratory exercises. Furthermore, distributed platforms (Dropbox, GoogleDrive, etc.) are used to share educational material (slides, examples, practices, and handouts).</td></tr>
<tr><td>Frequency Mode</td><td>It is desirable to attend lectures and exercises, read carefully the provided didactic material and meticulously follow the instructions provided by the teacher during the course. The slides do not replace the reference texts but offer precise detail on the program carried out.</td></tr>
<tr><td>Methods and Criteria for Learning Assessment</td><td>The course does not involve intermediate evaluation tests. The exam consists of an oral examination, the final mark is based on Fail/Pass. The oral exam evaluation considers the clarity, correctness, and completeness of the presentation of the topics covered by the oral exam. Passing the exam is proof of having acquired the knowledge and skills specified in the course's educational objectives. The final grade reflects what is reported in the following table.
<table>
<tr><th>Final Mark</th><th>Knowledge and understanding of the subjects</th><th>Competence in the analysis and synthesis</th><th>Use of references, primarily bibliographic</th></tr>
<tr><td>Fail</td><td>Major drawbacks. Relevant inaccuracy.</td><td>Irrelevant. Frequent generalization. Inability to synthesize</td><td>Improper</td></tr>
<tr><td>Pass</td><td>Good knowledge of the subject.</td><td>She/He has good analysis and synthesis skills. The arguments are expressed consistently.</td><td>Properly</td></tr>
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