



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Biomedicina, Neuroscienze e Diagnostica avanzata		
ACADEMIC YEAR	2023/2024		
MASTER'S DEGREE (MSC)	HEALTH PROFESSIONS REHABILITATION SCIENCES		
INTEGRATED COURSE	APPLIED COMPUTER SCIENCE AND EPIDEMIOLOGY FOR HEALTHCARE MANAGEMENT - INTEGRATED COURSE		
CODE	16970		
MODULES	Yes		
NUMBER OF MODULES	3		
SCIENTIFIC SECTOR(S)	MED/42, INF/01, ING-INF/05		
HEAD PROFESSOR(S)	IMMORDINO PALMIRA	Ricercatore a tempo determinato	Univ. di PALERMO
OTHER PROFESSOR(S)	PAVONE ARIANNA MARIA	Ricercatore a tempo determinato	Univ. di PALERMO
	IMMORDINO PALMIRA	Ricercatore a tempo determinato	Univ. di PALERMO
CREDITS	8		
PROPAEDEUTICAL SUBJECTS			
MUTUALIZATION			
YEAR	2		
TERM (SEMESTER)	2° semester		
ATTENDANCE	Mandatory		
EVALUATION	Out of 30		
TEACHER OFFICE HOURS	<p>IMMORDINO PALMIRA Thursday 14:00 16:00 studio del docente presso la sezione di Igiene del dipartimento promise via del vespro, 133 90127 Palermo (policlinico). Si prega di concordare l'appuntamento previa email al docente palmira.immordino@unipa.it</p> <p>PAVONE ARIANNA MARIA Tuesday 15:00 16:00 Studio del docente, dipartimento di matematica e informatica</p>		

PREREQUISITES	Knowledge of the biological agents. Characteristic of pathogenic and opportunistic microorganisms. Evaluation of the possible interactions between microorganisms and the environment.
LEARNING OUTCOMES	<p>Ability to apply knowledge and understanding</p> <p>Be able to perform basic diagnostic and technical procedures, know how to analyze and interpret the results, in order to define correctly the nature of a problem</p> <p>Know the appropriate use of human resources, diagnostic interventions, of therapeutic modalities and technologies dedicated to health care</p> <p>Be aware of the important role of health and health determinants disease and ability to know how to take adequate preventive and protective actions in</p> <p>against diseases, injuries and accidents, while maintaining and promoting health of the individual, of the family and of the community</p> <p>Be aware of the roles and responsibilities of other staff</p> <p>health care in providing health care</p> <p>Autonomy of judgment</p> <p>Be aware of the need for continuous professional improvement with the awareness of one's own limits, including those of one's own knowledge</p> <p>medical</p> <p>Respect colleagues and other health professionals, demonstrating excellent ability to establish collaborative relationships with them</p> <p>Communication skills</p> <p>Interact with other professionals involved in patient care through efficient teamwork</p> <p>Knowing how to create and maintain good medical records</p> <p>Learning skills</p> <p>Being able to collect, organize and interpret correctly health and biomedical information from the various resources and databases available</p> <p>Knowing how to use the technology associated with information and communications</p> <p>as a proper support to diagnostic, therapeutic and preventive practices</p>
ASSESSMENT METHODS	<p>Evaluation: Mark. Type of exam: Oral exam.</p> <p>The test aims at</p> <p>evaluate if the student has knowledge and understanding of the topics of the integrated teaching / course program, independent judgment, ability to apply the acquired knowledge, specific disciplinary language.</p> <p>Minimum number of questions: The student must answer a minimum of three questions, posed orally, which will focus on all the topics of the integrated teaching / course program, with reference to the texts recommended.</p> <p>Evaluation and its criteria: The evaluation is out of thirty, as reported in diagram below.</p> <p>Excellent</p> <p>30- 30 and praise excellent knowledge of the topics, excellent property of language, good analytical skills, the student is able to apply the knowledge to solve the proposed problems;</p> <p>very good</p> <p>26-29 - Good command of topics, full ownership of language, the student is able to apply the knowledge to solve i problems proposed.</p> <p>Good</p> <p>24-25 -Basic knowledge of the main topics, fair properties of language, with limited ability to autonomously apply knowledge to the solution of the proposed problems.</p> <p>Satisfactory</p> <p>21-23 - Does not have full command of the main teaching topics but he possesses the knowledge, satisfactory property of language, scarce ability to autonomously apply the acquired knowledge.</p> <p>Enough</p> <p>18-20 - Minimum basic knowledge of the main teaching topics e of technical language, very little or no ability to apply knowledge acquired.</p> <p>Insufficient</p> <p>He does not have an acceptable knowledge of the contents of the topics covered in teaching.</p>
TEACHING METHODS	Lectures

MODULE INFORMATION PROCESSING SYSTEMS

SUGGESTED BIBLIOGRAPHY

1) D. Sciuto, G. Buonanno, L. Mari; Introduzione ai sistemi informatici 5/ed, McGraw-Hill. ISBN: 978-8838668326
 2) P. Manghi, A. Brogi, V. Gervasi, A. Martinelli, G. Fiorentino, A. P. Pala; Le basi di Dati per Medicina e Farmacia, Collana IT4PS, McGraw-Hill.

Libri di consultazione:

1) J.G. Glenn; Informatica – Una panoramica generale, Pearson - Education Italia. ISBN: 978-8891901057
 2) A. Brogi, A. Martinelli, V. Gervasi, P. Manghi, A. Fabrizio, G. Pacini; Il foglio elettronico per Medicina e Farmacia, Collana IT4PS, McGraw-Hill.

Materiali didattici integrativi

Dispense integrative e slides proposte dal docente

AMBIT	20407-Scienze informatiche applicate alla gestione sanitaria
INDIVIDUAL STUDY (Hrs)	51
COURSE ACTIVITY (Hrs)	24

EDUCATIONAL OBJECTIVES OF THE MODULE

The course aims to provide knowledge of information and communication technologies, as a proper support to diagnostic, therapeutic and preventive practices in the medical field. The module proposes an introductory course on computer systems, taking the Personal Computer as a paradigm and analyzing the fundamental operating principles of the three supporting infrastructures: the hardware, software and network infrastructure. Subsequently, the use of two of the main software tools for the analysis and management of data in the healthcare sector will be introduced: the spreadsheet and databases. In particular, the databases constitute the fundamental element for the development of the electronic medical record. The introduction to access methods and search methodologies in online databases constitutes the final part of the course.

SYLLABUS

Hrs	Frontal teaching
2	Introduction to the Course. Data and Information. Codes.
2	Representation and processing of information. Binary coding of data.
2	Main characteristics of algorithms, programs and programming languages
3	The hardware infrastructure: notes on the architecture of a computer; central processing unit; memories; input / output devices.
2	The software infrastructure: basic software and application software; characteristics and tasks of an operating system; main components of an operating system.
2	The network infrastructure: transmission of data and information; computer networks; notes on the TCP / IP protocol; World Wide Web and e-mail.
5	Introduction to the spreadsheet; application examples in the healthcare sector.
5	Introduction to databases. The management systems of databases or DBMS. Application examples in the healthcare sector. Definition and management of an electronic medical record.
1	Use of Google and Pubmed search engines

MODULE COMPUTER SCIENCE

Prof.ssa ARIANNA MARIA PAVONE

SUGGESTED BIBLIOGRAPHY

Introduzione all'informatica e alla cultura digitale - per le scienze umanistiche. Simone Faro, interactive e-book, available on ClassBooks (www.theclassbooks.com, class code 54021)

Il testo di riferimento del corso è un testo interattivo in formato elettronico e consultabile online sulla piattaforma ClassBooks. Il testo contiene esercizi svolti, prove di verifica interattive e test finali di auto-valutazione.

Si ricorda che, ai sensi dell'art. 171 della legge 22 aprile 1941, n. 633 e successive disposizioni, fotocopiare libri in commercio, in misura superiore al 15% del volume o del fascicolo di rivista, è reato penale. Per ulteriori informazioni sui vincoli e sulle sanzioni all'uso illecito di fotocopie, è possibile consultare le Linee guida sulla gestione dei diritti d'autore nelle università (a cura della Associazione Italiana per i Diritti di Riproduzione delle opere dell'ingegno - AIDRO).

AMBIT	20391-Scienze propedeutiche
INDIVIDUAL STUDY (Hrs)	34
COURSE ACTIVITY (Hrs)	16

EDUCATIONAL OBJECTIVES OF THE MODULE

The course aims to provide a good basic theoretical preparation that allows students to use computer systems adequately thanks to the knowledge of the principles of their functioning and their organization, of Internet services, in particular of the Web, and information services that telematics offers. The course also aims to provide students with general IT knowledge skills, useful in their workplace.

SYLLABUS

Hrs	Frontal teaching
2	Informatics and Information
2	The digital representation of information
2	Computer
2	The operating system
2	Communication networks
2	The Internet and its services
2	World Wide Web
2	Find information on the web and computer security

**MODULE
GENERAL AND APPLIED HYGIENE**

Prof.ssa PALMIRA IMMORDINO

SUGGESTED BIBLIOGRAPHY

Igiene, medicina preventiva e salute globale. DATA PUBBLICAZIONE: Gennaio 2022; ISBN: 978-88-299-3245-0; AUTORI: Auxilia - Pontello

AMBIT	20394-Statistica ed epidemiologia
INDIVIDUAL STUDY (Hrs)	51
COURSE ACTIVITY (Hrs)	24

EDUCATIONAL OBJECTIVES OF THE MODULE

Basic knowledge of the principle of statistics and epidemiology (particularly the main types of epidemiological studies) Basic knowledge of primary, secondary and tertiary prevention. Basic knowledge of the infectious diseases primary prevention (Sicilian Regional Immunization schedule, vaccines available, safety, efficacy of vaccines and possible adverse events related to vaccinations) Basic knowledge of chronic degenerative disease prevention (primary, secondary - screening and tertiary - rehabilitation prevention strategies)

SYLLABUS

Hrs	Frontal teaching
2	Principles of statistics, demography and epidemiology
2	Epidemiological studies (observational, case control, cohort, randomized clinical trial, etc...)
2	Primary, secondary and tertiary prevention
2	Prevention, control, elimination and eradication of infectious diseases. Epidemiology, primary and secondary prevention of infectious diseases.
8	Sicilian Regional Immunization schedule. Vaccines available and offered to general population. Safety and efficacy of vaccines and possible adverse events related to vaccinations.
4	Primary and secondary prevention of chronic degenerative diseases (alcohol, smoking, nutrition, physical activity).
2	Secondary prevention of oncological diseases (screening)
2	Tertiary prevention and rehabilitation