



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Biomedicina, Neuroscienze e Diagnostica avanzata		
ACADEMIC YEAR	2019/2020		
MASTER'S DEGREE (MSC)	MEDICINE AND SURGERY		
INTEGRATED COURSE	HYGIENE AND INDUSTRIAL MEDICINE - INTEGRATED COURSE		
CODE	13293		
MODULES	Yes		
NUMBER OF MODULES	3		
SCIENTIFIC SECTOR(S)	MED/44, MED/42, MED/01		
HEAD PROFESSOR(S)	VITALE FRANCESCO	Professore Ordinario	Univ. di PALERMO
	MAZZUCCO WALTER	Professore Ordinario	Univ. di PALERMO
	CASUCCIO ALESSANDRA	Professore Ordinario	Univ. di PALERMO
OTHER PROFESSOR(S)	CANNIZZARO EMANUELE	Professore Associato	Univ. di PALERMO
	VITALE FRANCESCO	Professore Ordinario	Univ. di PALERMO
	MATRANGA DOMENICA	Professore Ordinario	Univ. di PALERMO
	ENEA MARCO	Professore Associato	Univ. di PALERMO
	MAZZUCCO WALTER	Professore Ordinario	Univ. di PALERMO
	MANISCALCO LAURA	Ricercatore a tempo determinato	Univ. di PALERMO
	CASUCCIO ALESSANDRA	Professore Ordinario	Univ. di PALERMO
	LACCA GUIDO	Ricercatore	Univ. di PALERMO
CREDITS	11		
PROPAEDEUTICAL SUBJECTS			
MUTUALIZATION			
YEAR	5		
TERM (SEMESTER)	1° semester		
ATTENDANCE	Mandatory		
EVALUATION	Out of 30		
TEACHER OFFICE HOURS	<p>CANNIZZARO EMANUELE Monday 09:30 11:00 Medicina del Lavoro. Primo piano stanza docente</p> <p>CASUCCIO ALESSANDRA Tuesday 11:00 13:00 Si riceve previo appuntamento con il docente scrivendo alla email: alessandra.casuccio@unipa.it La sede dello studio è sita al primo piano del dipartimento di Promozione della Salute, Materno Infantile, di Medicina Interna e Specialistica di Eccellenza "G. D'Alessandro" (Policlinico), via del vespro, 133, 90127 Palermo</p> <p>Thursday 11:00 13:00 Si riceve previo appuntamento con il docente scrivendo alla email: alessandra.casuccio@unipa.it La sede dello studio è sita al primo piano del dipartimento di Promozione della Salute, Materno Infantile, di Medicina Interna e Specialistica di Eccellenza "G. D'Alessandro" (Policlinico), via del vespro, 133, 90127 Palermo</p> <p>ENEA MARCO Monday 15:00 17:00 Dipartimento PROMISE - Sezione di Igiene - Università degli Studi di Palermo - Via del Vespro, 133, Palermo. Stanza del Docente. Si consiglia di contattare il docente per un appuntamento.</p> <p>LACCA GUIDO Monday 11:00 13:00 Dipartimento Promise Istituto di Medicina del Lavoro</p>		

	MATRANGA DOMENICA			
	Friday	12:00	13:30	Stanza della docente, Dipartimento di Promozione della Salute, Materno-Infantile, Medicina interna e specialistica di eccellenza "G. D'Alessandro", Via del Vespro, 133, piano terra
	MAZZUCCO WALTER			
	Friday	10:00	12:00	Primo piano Edificio via del Vespro 133 presso ex Istituto di Igiene del Dipartimento PROSAMI
	VITALE FRANCESCO			
	Monday	13:00	14:00	studio sito al primo piano plesso Igiene e Microbiologia - Dipartimento PROMISE, via del Vespro, 133, 90127 Palermo

PREREQUISITES	Basic knowledge of the diseases which are prevalent in the general population and the associated risk factors . General Elements of epidemiology and health demographics , basic concepts on prevention and health system .
LEARNING OUTCOMES	<p>Knowledge and ability to understand: Knowing the determinants and major health risk factors and disease and the interaction between population and his physical and social environment. Knowing the etiology and natural history of acute and chronic diseases. Understand the epidemiology, health economics and the basics of health management</p> <p>Capacity to apply knowledge and understanding: Knowing how to properly evaluate health problems and know how to advise patients taking into account physical, psychological, social and cultural rights. Learn about the appropriate use of human resources, diagnostic issues , the therapeutic interventions and approach to technologies dedicated to health care. Know the main determinants of health and disease, such as lifestyle, genetic factors, demographic, environmental, socio-economic, psychological and cultural factors in the overall population; Being aware of the important role of the determinants of health and disease, and capacity to know how to take adequate preventive and protective measures against diseases, injuries and accidents, maintaining and promoting the health of the individual, the family and the community. Know the status of international health, global trends in morbidity and mortality of significant chronic illness from a social point of view, the impact of migration, trade, and environmental factors on health and the role of international health organizations. Gain an understanding of the need for a shared responsibility collective interventions in health promotion that requires close collaboration with the population, and a multidisciplinary approach, including health professionals and also intersectoral collaboration. Knowing the basic organization of health systems, including policies, organization, financing, restrictive measures on the costs and the principles of efficient management of the proper provision of health care. Demonstrate a good understanding of the mechanisms that underlie equity access to health care, effectiveness and quality of care. Knowing how to make proper use of local surveillance data, regional and national, demography and epidemiology in health decisions. Knowing the basics to be able to take correct decisions, when necessary, in the issues related to health care.</p> <p>Making judgments: Acquiring skills to integrate knowledge and handle complexity, as well as to make judgments based on incomplete or limited information, but that include reflecting on social and ethical responsibility linked to the application of their knowledge and judgments.</p> <p>Enable communication: Knowing how to clearly communicate the findings as well as the knowledge and rationale underpinning these, to specialist and non-specialists.</p> <p>Capacity Learning: Being able to collect, organize and interpret correctly the health and biomedical information from different resources and databases available; Knowing how to use the technology associated to information and communications as a right support to diagnostic procedures, therapeutic and preventive interventions and for surveillance and monitoring of the health status.</p>
ASSESSMENT METHODS	<p>written test and possible oral test chosen by the student. The written test consists of 9 multiple choice questions and an open written question of Hygiene, with a concise answer in about 10 lines; two open questions written with a concise answer in about 10 lines of topics in Occupational Medicine; 8 Health Statistics questions. The evaluation of the written test will be based on the scores obtained by the candidates in the multiple choice questions (max 9 points) and in the open questions (max 5 points for the Hygiene question and 4 points each for those in Occupational Medicine) and 1 point for each question of Health Statistics (max 8 points). A score between 18 and 26 points will be confirmed as the final score of the integrated exam or, at the student's choice, will result in an oral exam whose integrated assessment for the course modules will be evaluated as follows:</p> <p>Basic knowledge of the subject of the examination and sufficient synthesis and exposure capacity rating between 18 and 23 In-depth knowledge of the subject of the exam and good synthesis and exposure ratings between 24 and 27 Excellent knowledge of the subject of examination and appropriate correlation with other relevant topics and excellent synthesis and exposure ratings between 28 and 30 and praise</p>
TEACHING METHODS	frontal lessons

PREREQUISITES	Basic knowledge of the diseases which are prevalent in the general population and the associated risk factors. General Elements of epidemiology and health demographics, basic concepts on prevention and health system
LEARNING OUTCOMES	<p>Knowledge and ability to understand: Knowing the determinants and major health risk factors and disease and the interaction between population and his physical and social environment. Knowing the etiology and natural history of acute and chronic diseases. Understand the epidemiology, health economics and the basics of health management Capacity to apply knowledge and understanding: Knowing how to properly evaluate health problems and know how to advise patients taking into account physical, psychological, social and cultural rights. Learn about the appropriate use of human resources, diagnostic issues, the therapeutic interventions and approaches to technologies dedicated to health care. Know the main determinants of health and disease, such as lifestyle, genetic factors, demographic, environmental, socio-economic, psychological and cultural factors in the overall population; Being aware of the important role of the determinants of health and disease, and capacity to know how to take adequate preventive and protective measures against diseases, injuries and accidents, maintaining and promoting the health of the individual, the family and the community. Know the status of international health, global trends in morbidity and mortality of significant chronic illness from a social point of view, the impact of migration, trade, and environmental factors on health and the role of international health organizations. Gain an understanding of the need for shared responsibility for collective interventions in health promotion that requires close collaboration with the population, and a multidisciplinary approach, including health professionals and also intersectoral collaboration. Knowing the basic organization of health systems, including policies, organization, financing, restrictive measures on the costs and the principles of effective management of the proper provision of health care. Demonstrate a good understanding of the mechanisms that underlie equity access to health care, effectiveness, and quality of care. Knowing how to make proper use of local surveillance data, regional and national, demography and epidemiology in health decisions. Knowing the basics to be able to take correct decisions, when necessary, in the issues related to health care. Making judgments: Acquiring skills to integrate knowledge and handle complexity, as well as to make judgments based on incomplete or limited information, but that includes reflecting on social and ethical responsibility linked to the application of their knowledge and judgments. Enable communication: Knowing how to clearly communicate the findings as well as the knowledge and rationale underpinning these, to specialist and non-specialists. Capacity Learning: Being able to collect, organize and interpret correctly the health and biomedical information from different resources and databases available; Knowing how to use the technology associated to information and communications as right support to diagnostic procedures, therapeutic and preventive interventions and for surveillance and monitoring of the health status.</p>
ASSESSMENT METHODS	<p>Written test and possible oral examination of the student's choice. The written test consists of 15 multiple-choice questions and three open questions with a synthetic response in 10 lines about the arguments of the different modules. The written test will be based on the scores obtained from candidates in multiple-choice questions (max 15 points) and in open questions (each max 5 points). A score of 18 to 26 points will be confirmed as the final score of the integrated exam or, as a student choice, will result in an oral examination whose integrated assessment for the course modules will be evaluated as follows: Basic knowledge of the subject of the examination and sufficient synthesis and exposure capacity rating between 18 and 23 In-depth knowledge of the subject of the exam and good synthesis and exposure ratings between 24 and 27 Excellent knowledge of the subject of examination and appropriate correlation with other relevant topics and excellent synthesis and exposure ratings between 28 and 30 and praise</p>
TEACHING METHODS	Frontal lessons

MODULE OCCUPATIONAL MEDICINE

Prof. EMANUELE CANNIZZARO - Sede CHIRONE, - Sede CHIRONE

SUGGESTED BIBLIOGRAPHY

- F. Tomei et al: Manuale di Medicina del Lavoro. Piccin editore, 2018
- L. Ambrosi, V. Foa' - Trattato di Medicina del Lavoro seconda edizione (UTET Ed. 2003)
- G. Scansetti-P.G. Piolatto- G. Perrelli: "Medicina del Lavoro", Edizione Minerva medica, Torino, 2000
- D. Lgs 81/2008 e successive integrazioni e modifiche

AMBIT	50409-Medicina e sanità pubblica e degli ambienti di lavoro e scienze medico legali
INDIVIDUAL STUDY (Hrs)	45
COURSE ACTIVITY (Hrs)	30

EDUCATIONAL OBJECTIVES OF THE MODULE

The objectives are to present, analyze and discuss the technical and practical methods of prevention, describe the health surveillance and control activities for the improvement of workers' health. It also intends to provide training geared to support the evaluation and resolution of public health problems related to the occurrence of health events in the workplace.

SYLLABUS

Hrs	Frontal teaching
30	<ul style="list-style-type: none"> - Methodological approach in occupational health: 1 hour - Classification of risks in the workplace: 1 hour - Concepts of primary prevention, secondary and tertiary education in the workplace: 1 hour. - Clinical framework for the main occupational diseases caused by physical, chemical, biological: 15 hours. - Biological Monitoring: defining individual susceptibility: 2 hours. - Training in Occupational Medicine: 2 hours. - Legislation on prevention of occupational diseases and accidents at work: 2 hours. - Elements of insurance against accidents and occupational diseases: 2 hours. - Health effects of work activities with risks related to the organization of work (shift work, posture, MMC, stress): 2 hours. - Findings of suitability to the specific job: correlation between risk, clinical and instrumental data, environmental and legislative references: 2 hours.

MODULE OCCUPATIONAL MEDICINE

Prof. EMANUELE CANNIZZARO - Sede IPPOCRATE, - Sede IPPOCRATE

SUGGESTED BIBLIOGRAPHY

- F. Tomei et al: Manuale di Medicina del Lavoro. Piccin editore, 2018
- L. Ambrosi, V. Foa' - Trattato di Medicina del Lavoro seconda edizione (UTET Ed. 2003)
- G. Scansetti-P.G. Piolatto- G. Perrelli: "Medicina del Lavoro", Edizione Minerva medica, Torino, 2000
- D. Lgs 81/2008 e successive integrazioni e modifiche

AMBIT	50409-Medicina e sanità pubblica e degli ambienti di lavoro e scienze medico legali
INDIVIDUAL STUDY (Hrs)	45
COURSE ACTIVITY (Hrs)	30

EDUCATIONAL OBJECTIVES OF THE MODULE

The objectives are to present, analyze and discuss the technical and practical methods of prevention, describe the health surveillance and control activities for the improvement of workers' health. It also intends to provide training geared to support the evaluation and resolution of public health problems related to the occurrence of health events in the workplace.

SYLLABUS

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30	<ul style="list-style-type: none"> - Methodological approach in occupational health: 1 hour - Classification of risks in the workplace: 1 hour - Concepts of primary prevention, secondary and tertiary education in the workplace: 1 hour. - Clinical framework for the main occupational diseases caused by physical, chemical, biological: 15 hours. - Biological Monitoring: defining individual susceptibility: 2 hours. - Training in Occupational Medicine: 2 hours. - Legislation on prevention of occupational diseases and accidents at work: 2 hours. - Elements of insurance against accidents and occupational diseases: 2 hours. - Health effects of work activities with risks related to the organization of work (shift work, posture, MMC, stress): 2 hours. - Findings of suitability to the specific job: correlation between risk, clinical and instrumental data, environmental and legislative references: 2 hours.

MODULE GENERAL AND APPLIED HYGIENE

Prof. FRANCESCO VITALE - Sede CHIRONE, - Sede CHIRONE

SUGGESTED BIBLIOGRAPHY

Igiene, Epidemiologia ed Organizzazione Sanitaria orientate per problemi

F.Vitale, M.Zagra

Elsevier

Igiene Medicina Preventiva Sanita' Pubblica

W. Ricciardi

Monduzzi Editore, Bologna

Igiene edilizia ed Ambientale

C. Signorelli

Societa' Editrice Universo

Manuale di Programmazione e Organizzazione Sanitaria

Damiani-Ricciardi

Idelson-gnocchi

Manuale di Epidemiologia per la Sanita' Pubblica

Faggiano-Donato-Barbone

AMBIT	50406-Scienze umane, politiche della salute e management sanitario
INDIVIDUAL STUDY (Hrs)	75
COURSE ACTIVITY (Hrs)	50

EDUCATIONAL OBJECTIVES OF THE MODULE

To present , analyze and discuss the theoretical and practical methods of prevention , monitoring and control to improve the population's health status .

Induce a medical education oriented to the evaluation and resolution of problems of Public health related to the occurrence of events in the life and work environments also in relation to national and regional health care organization .

SYLLABUS

Hrs	Frontal teaching
5	- Definition and objectives of Hygiene and Public Health - Demographic parameters of interest for health and health indicators of a population
5	- Definition and general objectives of Primary, Secondary and Tertiary level of Prevention with related application methods
5	- Strategic objectives of prevention: control , elimination and eradication of diseases
4	- Disinfection practices , environmental vectors control and sterilization - Biological risk assessment in health care workers
5	- Epidemiology and primary and secondary prevention of infectious diseases - the concept of active and passive Immunoprophylaxis
6	- Vaccines : constitution, routes of administration , application strategies in different Public Health contexts, evaluating the effectiveness of vaccines . Required and recommended immunizations , current immunization schedule in Italy and in Sicily - Immunoglobulins : types , modalities ' of administration , effectiveness.
5	- Epidemiology and prevention of chronic diseases : primary prevention techniques , secondary and tertiary applications and strategies .
5	- Food hygiene and safety: food storage, HACCP , food poisoning
5	- Environmental Hygiene : environmental matrices , air pollution , water and the water cycle , waste management and reflexes to human health
5	Health Organization in Italy : the National Health Plan , Health Authorities , Essential Health Care Levels - Clinical Governance and its instruments for the control and reduction of clinical- risk, HTA

**MODULE
OCCUPATIONAL MEDICINE**

Prof. GUIDO LACCA - Sede HYPATIA, - Sede HYPATIA

SUGGESTED BIBLIOGRAPHY

COMPENDIO DI MEDICINA DEL LAVORO (G. Lacca, A. Miceli, S. Bastone) - Edizioni Minerva Medica (in press)
Lorenzo Alessio, Pietro Apostoli "Manuale di medicina del lavoro e igiene industriale" - Piccin-Nuova Libreria

AMBIT	50409-Medicina e sanità pubblica e degli ambienti di lavoro e scienze medico legali
INDIVIDUAL STUDY (Hrs)	45
COURSE ACTIVITY (Hrs)	30

EDUCATIONAL OBJECTIVES OF THE MODULE

Identification of issues related to environmental conditions of work, preventive interventions for resolution. Knowledge of the rules that protect workers' health.

SYLLABUS

Hrs	Frontal teaching
3	Hygienic principles
3	Risk assessment
3	Accidents at work and occupational disease. Other forms of insurance
3	The physical hazards (ionizing and non-ionizing radiation, noise, vibration, electricity, ROA)
3	The chemical risks (chemicals, carcinogenic, mutagenic)
3	The biological risks (occupational infections)
3	The organizational risks (manual handling of loads, VDU, awkward postures)
3	Stress indices and thermal comfort
3	The evaluation of work-related stress
3	Organ pathology

MODULE GENERAL AND APPLIED HYGIENE

Prof. WALTER MAZZUCCO - Sede HYPATIA, - Sede HYPATIA

SUGGESTED BIBLIOGRAPHY

- Vitale F, Zagra M. Igiene, epidemiologia ed organizzazione sanitaria orientate per problemi. Elsevier, 2012.
- Ricciardi W. Igiene, Medicina Preventiva e Sanita' Pubblica. Idelson Gnocchi, 2012.

AMBIT	50406-Scienze umane, politiche della salute e management sanitario
INDIVIDUAL STUDY (Hrs)	75
COURSE ACTIVITY (Hrs)	50

EDUCATIONAL OBJECTIVES OF THE MODULE

The Integrated Course of Hygiene and Occupational Medicine aim to provide students with knowledge and skills about disease prevention and promotion of community and individual's health, with a focus on occupational setting. It also includes an introduction on Italian National Health System, highlighting its structural, organizational and management aspects.

The student will then be introduced to the concepts of determinants of health/disease and health surveillance systems; will be conduct to understand the mechanisms of outbreak and spread of occupational and non-occupational diseases and their impact on community; will learn principles of preventive medicine and health promotion strategies; and will be able to interpreted the main laws on healthcare organization and primary health care.

By the end of this course, students will be also able to have a critical approach in the analysing and interpreting epidemiological data and specific risk indicators, in defining the nature of a health problems and to design and implement strategy to deal with them, both at an individual and collective level.

Module 1: HYGIENE

SPECIFIC AIMS

The major specific aims of this course are to provide scientific and professional knowledge in the fields of preventive medicine, health education and health promotion, planning, organization and evaluation of health technologies and health services, food safety, safety in the living and working environment, epidemiological studies and use of health information systems, health legislation and the evidence of efficacy for the prevention and health care.

SYLLABUS

Hrs	Frontal teaching
2	Definition and aims of Hygiene, Epidemiology, Preventive Medicine and Public Health.
3	Demographic parameters of interest for health and population health indicators.
5	Epidemiological methodology: observational and experimental studies. Measures of association and risk. Causal criteria. Bias and confounding.
2	Definition and general aim of Primary, Secondary and Tertiary Prevention.
3	Epidemiology and prevention of infectious diseases: control, elimination and eradication.
4	Epidemiology of major diseases preventable by vaccination and vaccines available. Vaccination schedule.
2	Care-associated infections.
3	Food Safety: self-control and foodborne illness.
4	Environment hygiene: environmental matrices, air pollution, water and its cycle, waste management and connection to human health.
2	Biohazard
3	Disinfection and sterilization.
3	Epidemiology of chronic degenerative diseases and prevalence of the associated risk factors.
2	Epidemiology of cancer.
3	Cancer screening.
3	Health organization and management in Italy: National Health Plan, Health Authorities, Essential Levels of Care, Accreditation and Hospital discharge records (SDO)
2	Principles of Pharmaco-economy
2	Clinical risk management.
Hrs	Practice
2	Use of health databases and research tools (Medline, Pubmed).

MODULE MEDICAL STATISTICS

Prof.ssa DOMENICA MATRANGA - Sede CHIRONE, - Sede CHIRONE

SUGGESTED BIBLIOGRAPHY

Libro di testo

Triola MM Triola MF, Fondamenti di statistica per le discipline biomediche, 2017 Pearson Italia

Altri Libri consigliati

1. Daniel W.W., Biostatistica, Edizione EdiSES

2. Peat, J, Barton B. Medical statistics A Guide to Data Analysis and Critical Appraisal. Blackwell Publishing Ltd 2005

3. Bacchieri A., Della Cioppa G. Fondamenti di ricerca clinica, Springer

AMBIT	50405-Inglese scientifico e abilità linguistiche, informatiche e relazionali, pedagogia medica, tecnologie avanzate e a distanza di informazione e comunicazione
INDIVIDUAL STUDY (Hrs)	45
COURSE ACTIVITY (Hrs)	30

EDUCATIONAL OBJECTIVES OF THE MODULE

The course is aimed to introduce the statistical methodology useful to the comprehension of medical and dental literature. The topics include the understanding of the study design and of statistical analysis. Students will be introduced to the elementary concepts of descriptive and inferential statistics and will be able to calculate and interpret simple tests of statistical hypothesis, measures of occurrence and risk

SYLLABUS

Hrs	Frontal teaching
2	Basic concepts: qualitative and quantitative characters, discrete and continuous characters, scales of measurement: nominal, ordinal, intervals and ratio
2	Data presentation: frequency and quantity distributions. Graphical representations
3	Measures of mean and variability
2	Measures of occurrence: prevalence and incidence
3	Observational and experimental studies
4	Elements of probability theory. Bayes Theorem. Measures of accuracy of diagnostic tests
2	Theoretical distribution for quantitative variables: Gauss or Normal distribution
2	Central Limit Theorem. Sample distributions of sample mean and sample frequency
3	Estimate of mean and frequency. Confidence Intervals
3	Statistical tests on mean and frequency. The p-value and the statistical power of tests
2	Measuring risk: Odds ratio and Relative Risk, with confidence intervals
2	Critical appraisal of a journal article