



# UNIVERSITÀ DEGLI STUDI DI PALERMO

<b>DEPARTMENT</b>	Biomedicina, Neuroscienze e Diagnostica avanzata		
<b>ACADEMIC YEAR</b>	2017/2018		
<b>BACHELOR'S DEGREE (BSC)</b>	BIOMEDICAL LABORATORY TECHNIQUES		
<b>INTEGRATED COURSE</b>	OCCOPATIONAL AND PREVENTIVE MEDICINE - INTEGRATED COURSE		
<b>CODE</b>	15505		
<b>MODULES</b>	Yes		
<b>NUMBER OF MODULES</b>	3		
<b>SCIENTIFIC SECTOR(S)</b>	MED/44, MED/42, MED/01		
<b>HEAD PROFESSOR(S)</b>	TRAMUTO FABIO	Professore Associato	Univ. di PALERMO
<b>OTHER PROFESSOR(S)</b>	TRAMUTO FABIO	Professore Associato	Univ. di PALERMO
	MATRANGA DOMENICA	Professore Ordinario	Univ. di PALERMO
	LACCA GUIDO	Ricercatore	Univ. di PALERMO
<b>CREDITS</b>	9		
<b>PROPAEDEUTICAL SUBJECTS</b>			
<b>MUTUALIZATION</b>			
<b>YEAR</b>	3		
<b>TERM (SEMESTER)</b>	1° semester		
<b>ATTENDANCE</b>	Mandatory		
<b>EVALUATION</b>	Out of 30		
<b>TEACHER OFFICE HOURS</b>	<p><b>LACCA GUIDO</b> Monday 11:00 13:00 Dipartimento Promise Istituto di Medicina del Lavoro</p> <p><b>MATRANGA DOMENICA</b> 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</p> <p><b>TRAMUTO FABIO</b> Monday 14:00 16:00 Dipartimento di Promozione della Salute, Materno-Infantile, Medicina Interna e Specialistica di Eccellenza "G. D'Alessandro"AOUP "P. Giaccone" Via del Vespro, 133Piano terra Wednesday 14:00 16:00 Dipartimento di Promozione della Salute, Materno-Infantile, Medicina Interna e Specialistica di Eccellenza "G. D'Alessandro"AOUP "P. Giaccone" Via del Vespro, 133Piano terra Friday 14:00 16:00 Dipartimento di Promozione della Salute, Materno-Infantile, Medicina Interna e Specialistica di Eccellenza "G. D'Alessandro"AOUP "P. Giaccone" Via del Vespro, 133Piano terra</p>		

<b>PREREQUISITES</b>	Fundamentals of hygiene and biostatistics Fundamentals of physio-pathology
<b>LEARNING OUTCOMES</b>	<p>Knowledge and ability to understand At the end of the course, students will need to demonstrate:</p> <ul style="list-style-type: none"> <li>• knowledge and ability to understand the epidemiological and frequency measurements in health-care setting;</li> <li>• ability to understand the theoretical and practical differences in epidemiological study models;</li> <li>• knowledge of the different modes of transmission and spread of infectious diseases and related prophylaxis and prevention methods;</li> <li>• knowledge of the biological risk assessment for health-care workers in laboratory activities;</li> <li>• knowledge of the etiology, pathogenesis and social impact of the most common occupational diseases;</li> <li>• ability to identify and describe the legislative indications characterizing prevention and safety in the workplace.</li> </ul> <p>Ability to apply knowledge and understanding The knowledge gained by the students with the course "Medicina del Lavoro e della Prevenzione" will constitute a wealth directly spendable in the working world of both public and private laboratories. The comprehension and the ability to apply the knowledge acquired during the course, will allow the students to manage the laboratory procedures with autonomy and critical sense, in terms of prevention and control of transmissible infectious diseases, and possible occupational risks of physical and chemical nature.</p> <p>Making judgments The students will be able to independently meet the professional issues related to the knowledge of the course. In particular, they will:</p> <ul style="list-style-type: none"> <li>• be able to rationally and independently deal with issues related to the professional knowledge of the course and to deal with issues regarding the laboratory through a correct scientific approach.</li> <li>• be able to assess and implement preventive/corrective measures in professional practice and in issues concerning the discipline (management of risk from biological infectious agents in a professional context, human health effects from exposure to environmental pollutants, risk assessment and risk control of chemical and biological hazards in the workplace).</li> </ul> <p>Communication skills Students will be able to communicate clearly and without ambiguity their conclusions as well as the knowledge and rationale to specialist and non-specialists. The following learning objectives have to be acquired:</p> <ul style="list-style-type: none"> <li>• scientific and experimental communicative methodology in the context of health promotion and occupational medicine.</li> <li>• ability to manage all biomedical investigations in respect and protection of human health.</li> </ul> <p>Learning capacity Students/graduates must have developed adequate learning capacity, interpretation and evaluation of risks associated with specific diagnostic biomedical and research contexts. In addition, the ability to interact with different databases, specialized scientific publications and legislation related disciplines of the course, will allow to address the innovations and updates in the field of disease prevention and occupational hazards, with autonomous learning, analysis and resolution of problems related to their specific professional field.</p>
<b>ASSESSMENT METHODS</b>	<p>The sufficiency threshold will be reached if the student shows knowledge and understanding of the issues at least in broad outline, and has application skills sufficient; he must also have presentation and argumentative skills allowing the transmission of his knowledge to the examiner. Below this threshold, the examination will be insufficient. The more the candidate will be able to interact with the examiner with his argumentative and presentation skills, and the more his knowledge and application capabilities will go into detail on the subjects under evaluation, the more the judgement will be positive.</p> <p>The evaluation is expressed using a 30-point scale. ECTS grades: A – A+ Excellent (30-30 cum laude) - Grade descriptors : Excellent knowledge of teaching contents; students should show high analytical and synthetic capabilities and should be able to apply their knowledge to solve highly complex problems. ECTS grade : B Very good (27-29) - Grade descriptors: Good</p>

	<p>knowledge of the teaching contents and excellent language control; students should show analytical and synthetic skills and be able to apply their knowledge to solve problems of medium and, in some cases, even higher complexity.</p> <p>ECTS grade: C Good (24-26)- Grade descriptors: Good knowledge of teaching contents and good language control; the students should be able to apply their knowledge to solve problems of medium complexity</p> <p>ECTS grade: D Satisfactory (21-23)- Grade descriptors: Average knowledge of the teaching contents, in some cases limited to the main topic; acceptable ability to use the specific discipline language and independently apply the acquired knowledge.</p> <p>ECTS grade: E Sufficient (18-20) - Grade descriptors: Minimum teaching content knowledge, often limited to the main topic; modest ability to use the subject specific language and independently apply the acquired knowledge.</p> <p>ECTS grade: F Fail (1-17) - Grade descriptors: Lack of an acceptable knowledge of the main teaching content knowledge; very little or no ability to use the specific subject language and apply independently the acquired knowledge. Exam failed.</p>
<b>TEACHING METHODS</b>	Frontal lectures

## MODULE GENERAL AND APPLIED HYGIENE

*Prof. FABIO TRAMUTO*

### SUGGESTED BIBLIOGRAPHY

Vitale F, Zagra M. Igiene, epidemiologia e organizzazione sanitaria orientate per problemi - Con accesso online. Elsevier - Masson

Ricciardi W. Igiene, medicina preventiva e sanita' pubblica. Idelson – Gnocchi

Barbuti S, Beilelli E, Fara GM, Giammanco G. Igiene. Moduzzi Editore

<b>AMBIT</b>	10731-Attività formative affini o integrative
<b>INDIVIDUAL STUDY (Hrs)</b>	45
<b>COURSE ACTIVITY (Hrs)</b>	30

### EDUCATIONAL OBJECTIVES OF THE MODULE

The Hygiene module aims to:

- a) present, analyze and discuss the theoretical and practical methods of prevention, monitoring and control to improve the population's health status.
- b) provide scientific and professional knowledge in the fields of preventive medicine, health education and health promotion, the organization of environmental and epidemiological studies.

## SYLLABUS

Hrs	Frontal teaching
3	Frequency measures of health events Proportions, rates and ratios. Prevalence and incidence
6	The risk in epidemiology: risk measures and calculation methods Epidemiological studies: descriptive and analytical observational studies, clinical trials Systematic errors and random errors in epidemiology
9	Health promotion and disease prevention. General epidemiology of infectious diseases Host-parasite relationships - General prophylaxis of infectious diseases Disinfection, sterilization and disinfestation
6	Biological risk assessment in health-care workers Epidemiology and prevention of airborne infectious diseases Epidemiology and prevention of enteric infectious diseases Epidemiology and prevention of sexually transmitted infectious diseases
3	Quality of atmospheric air (indoor and outdoor) Effects of air pollution on human health
3	Quality of water for human consumption Water consumption and human health risks Drinking water treatment

## MODULE OCCUPATIONAL MEDICINE

*Prof. GUIDO LACCA*

### SUGGESTED BIBLIOGRAPHY

Scansetti-Piolatto-Perrelli "Medicina del Lavoro" Minerva Medica Ed. Torino  
Lorenzo Alessio, Pietro Apostoli "Manuale di medicina del lavoro e igiene industriale" - Piccin-Nuova Libreria

<b>AMBIT</b>	10731-Attività formative affini o integrative
<b>INDIVIDUAL STUDY (Hrs)</b>	45
<b>COURSE ACTIVITY (Hrs)</b>	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)
6	The organizational risks (manual handling of loads, VDU, awkward postures)
3	Stress indices and thermal comfort
3	The evaluation of work-related stress

## MODULE MEDICAL STATISTICS

*Prof.ssa DOMENICA MATRANGA*

### SUGGESTED BIBLIOGRAPHY

Libro di testo  
Triola MM Triola MF, Statistica per le discipline biosanitarie, Pearson

<b>AMBIT</b>	10337-Scienze propedeutiche
<b>INDIVIDUAL STUDY (Hrs)</b>	45
<b>COURSE ACTIVITY (Hrs)</b>	30

### EDUCATIONAL OBJECTIVES OF THE MODULE

The course is aimed to introduce the statistical methodology useful to the skills of the health professional. Students will be introduced to the elementary concepts of descriptive statistics, probability calculation and measurement of accuracy of diagnostic tests.

## SYLLABUS

Hrs	Frontal teaching
3	Sources of health data
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
4	Measures of mean and variability with exercises
4	Elements of probability theory. Bayes Theorem. Measures of accuracy of diagnostic tests. Roc Curves
3	Theoretical distributions: Gauss and Binomial distribution, with exercises
2	Central Limit Theorem. Sample distributions of sample mean, with exercises
2	Statistical estimate of the mean
2	Statistical tests of significance for the mean

  

Hrs	Practice
2	Practice on the use of health databases
4	Practice on preparation of tables and graphics to describe and summarize data