



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione		
ACADEMIC YEAR	2023/2024		
BACHELOR'S DEGREE (BSC)	PHYSICAL EDUCATION AND SPORT SCIENCES		
INTEGRATED COURSE	SPORTS MEDICINE - INTEGRATED COURSE		
CODE	09424		
MODULES	Yes		
NUMBER OF MODULES	2		
SCIENTIFIC SECTOR(S)	MED/09, MED/42		
HEAD PROFESSOR(S)	LO PRESTI ROSALIA	Professore Associato	Univ. di PALERMO
OTHER PROFESSOR(S)	LO PRESTI ROSALIA	Professore Associato	Univ. di PALERMO
CREDITS	9		
PROPAEDEUTICAL SUBJECTS			
MUTUALIZATION			
YEAR	3		
TERM (SEMESTER)	1° semester		
ATTENDANCE	Not mandatory		
EVALUATION	Out of 30		
TEACHER OFFICE HOURS	LO PRESTI ROSALIA Wednesday 12:00 - 13:00 In videocomunicazione nel team "Lo Presti - ricevimento studenti" tramite il seguente link: https://teams.microsoft.com/l/team/19%3a7ea36b9decef4f75872b17fdb5d064c7%40thread.tacv.conversations?groupId=130083c8-0c83-4751-8397-c34b149b3796&tenantId=bf17c3fc-3ccd-4f1e-8546-88fa851t		

DOCENTE: Prof.ssa ROSALIA LO PRESTI

PREREQUISITES	Knowledge of exercise physiology and anatomy.
LEARNING OUTCOMES	<p>Knowledge and understanding: knowledge and understanding of human body functional and structural adaptations to physical exercise and sport activity; ability to assess the risk of pathological events in sport practice, with reference to internal medicine and neurology.</p> <p>Applying knowledge and understanding: ability to gain a comprehensive view of the effects produced by physical exercise and sport activities on body organs and systems; ability to identify symptoms and signs aiding in the diagnosis and prevention of sport-related diseases; knowledge of sport-related benefits and risks.</p> <p>Making judgements: ability to evaluate the indications and contraindications to physical exercise and sport activities, showing critical scientific awareness.</p> <p>Communication: capacity to deliver the acquired knowledge adapting the way of communication to different audiences.</p> <p>Lifelong learning skills: development of the skills necessary to update knowledge by means of scientific publications specific to the professional setting and using the Internet; capacity for further learning with a high degree of autonomy.</p>
ASSESSMENT METHODS	<p>The exam includes a written exam about the Neurology module, followed by an oral exam about the Sports Medicine module. The exam is aimed at verifying the competences and skills to be acquired at the end of the course. The purpose of the questions is to verify knowledge of contents to be acquired at the end of the course, as well as analytical and expository skills. Knowledge check includes scrutiny of the capability to establish relationships between contents, theories, patterns and methodologies which have been an object of study during the course. As far as analytical skills are concerned, check will aim at verifying that the student has achieved at least one of the following goals: - make judgements and opinions about the disciplinary contents - understand applications and/or implications of the disciplinary contents within the specific discipline of reference - set the disciplinary contents within the professional, technological and sociocultural setting of reference. The student will have to answer at least two/three questions in the oral form about aspects of the syllabus with reference to the suggested textbooks. The exam aims at verifying knowledge and understanding of topics, interpretative competence and autonomy of judgement of concrete cases. The passing grade threshold will be considered reached if the student shows to have acquired the topics of the specific subject matter and is able to solve specific concrete cases as well as to correctly convey knowledge with satisfactory expository skills. Below the above-mentioned threshold, the exam will be considered unsatisfactory. The more the student can interact with his examiner showing mastery of language, of the specific subject matter and ability to convey his/her knowledge of the topics of the specific field of reference, the more the assessment will be positive. The latter will be expressed by 18 to 30-30 with honours marks.</p>
TEACHING METHODS	Frontal lessons

MODULE HYGIENE

SUGGESTED BIBLIOGRAPHY

- Igiene e medicina preventiva. Vol. 1 e Vol. 2. Barbuti, Fara, Giammanco. Editore: Monduzzi.
- Jekel's Epidemiology, Biostatistics, Preventive Medicine, and Public Health Paperback – 13 March 2020, by Joann G. Elmore MD MPH et al. (available also in Kindle edition).
- Igiene e Sanità Pubblica per Scienze motorie a cura di G. Brandi, G. Liguori, V. Romano Spica, Antonio Delfino Editore.
- Materiale didattico utilizzato in sede di lezione.

AMBIT	10683-Attività formative affini o integrative
INDIVIDUAL STUDY (Hrs)	54
COURSE ACTIVITY (Hrs)	21

EDUCATIONAL OBJECTIVES OF THE MODULE

The course aims to provide the student with the basic knowledge of health and disease, epidemiology and prevention strategies against the main infectious and non-communicable diseases.

SYLLABUS

Hrs	Frontal teaching
1	<ul style="list-style-type: none"> • Presentation of the course • General information and definitions <ul style="list-style-type: none"> - Definition and purposes of hygiene. - Definition of health and disease; general information on non-communicable and infectious diseases. - Prevention: primordial, primary, secondary, tertiary, quaternary. - Definition of risk, causal, protective, confounding factors.
2	<ul style="list-style-type: none"> • Epidemiology, demographics, health indicators and measures <ul style="list-style-type: none"> - Epidemiology and demography: definitions; epidemiological data; data sources; data collection; graphical representation of data. - Health indicators and the main measures of disease frequency: ratios, proportions, rates, indices; prevalence and incidence. - Epidemiological studies: Observational studies - descriptive, analytical and ecological; Experimental studies – clinical and preventive; Reviews and meta-analyses.
1	<ul style="list-style-type: none"> • Infectious diseases: microbiology, transmission, diffusion <ul style="list-style-type: none"> - Elements of medical and environmental microbiology: structure and classification of microorganisms. - The chain of infections: infectious agent, reservoir/source, exit port, transmission routes, entry port and final host. - Sporadic, endemic, epidemic, pandemic disease.
3	<ul style="list-style-type: none"> • Infectious diseases: prevention <ul style="list-style-type: none"> - Objectives of prevention and interventions. - Sterilization, disinfection, disinfestation: sterilization with physical, chemical, mechanical means; disinfection with natural, mechanical, chemical means; the practice of disinfection; hand hygiene; disinfestation: integrals; insecticides; rodenticides; sterilization and disinfection techniques. - Active immunoprophylaxis: vaccines-definition, classification, development; vaccine-preventable diseases; vaccination objectives and strategies - control, elimination and eradication of infectious diseases; eg. of smallpox; the vaccination calendar; contraindications and adverse effects. - Passive immunoprophylaxis.
3	<ul style="list-style-type: none"> • Infectious diseases: classification, epidemiology, risk factors and specific prevention <ul style="list-style-type: none"> - Airborne infectious diseases (measles, tuberculosis, meningitis, influenza); focus on COVID-19. - Parenterally transmitted infectious diseases: sexually transmitted diseases - STDs (Chlamydia, Syphilis, HPV genital warts); HIV infection and AIDS; Hepatitis B, Hepatitis C. - Infectious diseases transmitted by faecal-oral transmission: Hepatitis A, Rotavirus gastroenteritis. - Infectious diseases in pregnancy and early childhood. - Infectious diseases associated with physical, sporting and recreational activities.
3	<ul style="list-style-type: none"> • Food hygiene <ul style="list-style-type: none"> - Food safety: microbial, chemical and physical contamination of food at the origin and during the transformation processes; parameters that influence bacterial growth. - Biological contamination: foodborne diseases: intoxications (botulism); infections (salmonellosis, campylobacteriosis); toxic infections (Clostridium perfringens, Escherichia coli O157:H7); from parasites, from molds. - Chemical contamination. - Physical contamination.

4	<ul style="list-style-type: none"> • Chronic diseases: risk factors - Socio-economic, cultural, political factors. - External and domestic environmental air pollution. - Physical inactivity: epidemiological data and strategies. - Tobacco smoking: epidemiological data on smoking in the world, in Europe and in Italy; harmful effects of smoking; prevention strategies (MPOWER). - Alcohol: definitions and recommendations; epidemiological data on alcohol consumption in the world, in Europe and in Italy; harmful effects of alcohol; prevention strategies. - Drugs: types of drugs; epidemiology of drug use in the world, in Europe and in Italy; health effects; risk factors; strategies. - Wrong power supply.
2	<ul style="list-style-type: none"> • Chronic diseases: epidemiology, specific risk factors and prevention - Cardiovascular diseases: typologies, epidemiological data, projects/strategies - Obesity: epidemiological data in the world, in Europe and in Italy; surveillance systems; strategies. - Diabetes: epidemiological data, risk factors, strategies. - Cancers: epidemiological data in the world, in Europe and in Italy; risk factors; strategies. - Diseases of the respiratory system: characteristics, epidemiological data, strategies; COPD, asthma, sleep apnea syndrome, pulmonary fibrosis and emphysema, occupational lung diseases.
2	<p>Nutrition Hygiene:</p> <ul style="list-style-type: none"> - Proper nutrition: the Mediterranean diet; nutritional errors of the population; the food pyramids; needs and recommendations; the LARN, the guidelines; weight status and nutritional status. - Diet as a risk factor for: cardiovascular disease, cancer, type II diabetes

MODULE SPORTS MEDICINE

Prof.ssa ROSALIA LO PRESTI

SUGGESTED BIBLIOGRAPHY

P. Zeppilli. Manuale di Medicina dello Sport. Casa Editrice Scientifica Internazionale
Materiale fornito dal docente

AMBIT	50103-Medico-clinico
INDIVIDUAL STUDY (Hrs)	108
COURSE ACTIVITY (Hrs)	42

EDUCATIONAL OBJECTIVES OF THE MODULE

At the end of the course, the student will be able to distinguish physiological adaptations to physical exercise from pathological conditions able to interfere with physical effort and involving cardiovascular, respiratory and endocrine systems, metabolism, blood, bones and joints. Moreover, the student will have acquired basic knowledge about the principal diseases of cardiovascular and respiratory systems that can be provoked by physical exercise.

SYLLABUS

Hrs	Frontal teaching
2	Introduction to Sports Medicine. Energy metabolism during exercise
2	Anatomy and physiology of the cardiovascular system. Cardiovascular adaptations to physical exercise
2	Classification of physical, sport and gym activities according to the COCIS guidelines and protocols
2	The normal electrocardiogram and arrhythmias
2	Arterial hypertension. Ischemic heart disease
4	Cardiomyopathies
2	Ion channel disease. Sport-related sudden cardiac death
2	Congenital heart disease. Acquired valvular heart disease. Myocarditis
2	Heart failure
2	Anatomy and physiology of the respiratory system. Respiratory adaptations to physical exercise
4	Asthma and exercise-induced bronchoconstriction
2	Chronic obstructive pulmonary disease. Pneumothorax
2	Cardiopulmonary exercise test
6	Metabolic diseases. Diabetes mellitus
4	Blood and the immune system. Sport-related anemia
2	Shock: causes and clinical forms