



COURSE OF STUDY Attività Motorie e Sportive

ACADEMIC YEAR 2023/2024

ACADEMIC SUBJECT Medical Science 2

TRAUMATOLOGY AND PATHOLOGY OF THE LOCOMOTOR APPARATUS

INTERNAL MEDICINE, SPORTS ACTIVITY MEDICINE AND PHARMACOLOGY

General information	
Year of the course	III Year
Academic calendar (starting and ending date)	II Term
Credits (CFU/ETCS):	10 CFU
SSD	MED-33 MED-05
Language	Italian
Mode of attendance	Not Mandatory

Professor/ Lecturer	
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Virtual room	https://teams.microsoft.com/l/team/19%3ac3364a03abb54ce4af5ea463561cfd54%40thread.tacv2/conversations?groupId=71f7f6b6-78c3-4f6e-8ecb-4528f492bf1d&tenantId=c6328dc3-afdf-40ce-846d-326eead86d49
Office Hours (and modalities: e.g., by appointment, on line, etc.)	To be agreed upon by e-mail
Professor/ Lecturer	
Name and Surname	Marcella Prete
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Department and address	UOC Medicina Interna Policlinico Universitario di Bari
Virtual room	https://teams.microsoft.com/l/team/19%3ac3364a03abb54ce4af5ea463561cfd54%40thread.tacv2/conversations?groupId=71f7f6b6-78c3-4f6e-8ecb-4528f492bf1d&tenantId=c6328dc3-afdf-40ce-846d-326eead86d49
Office Hours (and modalities: e.g., by appointment, on line, etc.)	To be agreed upon by e-mail (sede Pad Morgagni 1° piano)

Work schedule	
Hours	



Total	Lectures	Hands-on (laboratory, workshops, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
250	100		150
CFU/ETCS			
10	10		

Learning Objectives	<p>Basic knowledge of medical anatomy and semeiotics.</p> <ul style="list-style-type: none"> • Acquisition and use of terminology suitable scientific. • Knowledge of the physiopathological mechanisms basis of the main pathological frameworks and the influence of sports on organs and equipment; • Basics of the main pathologies of the app. cardiovascular, respiratory, gastro-enteric, renal, hemopoietic and immune and their implications in motor activity. • In addition, the basics of pharmacology should be acquired, with particular reference to pharmacokinetics and pharmacodynamics, therapeutic uses and effects undesirable of the drugs of main use in medicine. • It will deepen the beneficial effects of motor activity both in the sense of primary prevention, what for the secondary one. • Finally, first aid notions will be provided necessary to deal with major medical emergency and emergency situations
Course prerequisites	Knowledge of the basics of anatomy

Teaching strategie	Lectures
Expected learning outcomes in terms of	Knowledge of the basics of anatomy
Knowledge and understanding on:	<ul style="list-style-type: none"> • General concepts of motor and sports overload responsible for the onset of degenerative and traumatic pathologies • Knowledge of appropriate medical terminology to define symptoms and clinical signs of major internal diseases. • Knowledge of the main physiopathological processes underlying internal diseases. • Knowledge related to acute and chronic internal pathologies in athletes or amateurs who practice non-competitive sports activities. • Knowledge of the functioning of a drug, the main therapeutic indications and drug interactions, as well as the most frequent side effects. • Basic principles for balanced diets in athletes • Indications and contraindications to the practice of sport during internal pathologies
Applying knowledge and understanding on:	<ul style="list-style-type: none"> • Problems related to a program of rehabilitation in injured persons
Soft skills	<ul style="list-style-type: none"> • <i>evaluation of a rehabilitation programme for injured persons</i> • <i>the student must be able to communicate with the main stakeholders involved in the prevention of musculoskeletal overload</i> • <i>The basis of sport rehabilitatio</i>



Syllabus	
Content knowledge	<p>DISEASES OF THE LOCOMOTOR SYSTEM Osteoarthritis Osteoporosis Tendons, tendinopathies and muscle-tendon overload Biomechanics of the rachis Low back pain and discopathy Scoliosis TRAUMATOLOGY OF SPORT General trauma Muscle trauma Injuries of: elbow, knee, foot, spine, ankle, thigh, pelvis and hip, leg, hand, shoulder</p> <p>PARTICULAR SIGNS AND SYMPTOMS OF INTERNAL DISEASES - Primary skin lesions - Skin pigmentation (cyanosis, jaundice, purple) - Fever - Edema - Pain: pathological physiology (chest and abdominal pain) SPORT AND THE RESPIRATORY SYSTEM - General information on the respiratory system - Semeiotics of the respiratory system (dyspnea, cough and expectoration, hemophthioea) - Major respiratory diseases (broncho-pneumonia, bronchial asthma, emphysema, respiratory failure, pneumothorax, diseases of the rib cage) SPORT AND THE CARDIOVASCULAR SYSTEM - General information on the respiratory system - Adaptations of the cardiovascular system during motor activities - Heart semeiotics (blood pressure, pulse) - Major cardiovascular diseases (ischemic heart disease, valvulopathy, pericarditis, congestive heart failure, arrhythmias, lipothymia, syncope, shock, sudden death, thrombosis and thrombophlebitis) SPORT AND THE DIGESTIVE SYSTEM - General information on the gastroenteric tract - Digestive semeiotics (splenomegaly, hepatomegaly, ascites, vomiting, diarrhea, digestive bleeding) - Main pathologies (gastritis, hepatitis, pancreatitis) SPORT AND THE URINARY TRACT - General information on the urinary tract - Nephrological semeiotics (disorders of diuresis and urination, hematuria) - Major pathologies (glomerulonephritis, nephrotic syndrome, urinary tract infections, acute and chronic renal failure, kidney stones). SPORT AND THE DIGESTIVE SYSTEM - General information on the gastroenteric tract - Digestive semeiotics (splenomegaly, hepatomegaly, ascites, vomiting, diarrhea, digestive bleeding) - Main pathologies (gastritis, hepatitis, pancreatitis) SPORT AND THE URINARY TRACT - General information on the urinary tract - Nephrological semeiotics (disorders of diuresis and urination, hematuria) - Major pathologies (glomerulonephritis, nephrotic syndrome, urinary tract infections, acute and chronic renal failure, kidney stones). SPORT AND THE ENDOCRINE SYSTEM - Physical activity and hormone secretion - Main endocrine-metabolic disorders (thyroid disease, adrenal diseases and diabetes mellitus). SPORT AND HAEMOPOIETIC APPARATUS - Anaemia (classification classification) and clinical forms (anaemia in sportsmen) - Leukopenia and leukocytosis - Thrombocytopenia. SPORTS AND THE IMMUNE SYSTEM - Immune system generalities (immune response types, immune system cells) - Changes in the immune system during exercise - Main immune diseases (autoimmune diseases, immunodeficiencies, allergies). - Sports anaphylaxis SPORT AND MUSCULAR APPARATUS - Physiology of the muscle - Muscle fibres - Classification of sports - Outline of functional assessment of the athlete - Fatigue and super training syndrome. ACID-BASE AND HYDRO-ELECTROLYTE BALANCE (pathophysiology and main clinical pictures). ADAPTATIONS AND PATHOLOGIES RELATED TO DIVING AND HIGH ALTITUDE SPORTS ACTIVITIES. EXERCISE IN THE ELDERLY SUBJECT. SPORTSMANSHIP</p>



	<p>GENERAL PHARMACOLOGY AND GENERAL INFORMATION ON DRUGS</p> <ul style="list-style-type: none"> - Mechanism of action: - Drug links to cells <p>PHARMACOKINETICS</p> <ul style="list-style-type: none"> - Routes of drug administration - absorption - Distribution - Metabolism - elimination - Pharmacokinetic parameters <p>Therapeutic monitoring of drugs</p> <p>PHARMACODYNAMICS</p> <ul style="list-style-type: none"> - drug receptor interaction, - signal transduction, agonists and antagonists. - activity, effectiveness, power, selectivity. <p>ABNORMAL RESPONSES TO DRUG ADMINISTRATION</p> <ul style="list-style-type: none"> - idiosyncrasy - allergy - accumulation - Hypersensitivity and tolerance <p>SPECIAL PHARMACOLOGY (Outline)</p> <ul style="list-style-type: none"> - Pharmacology of the main diseases of the nervous system, cardiovascular system, blood, digestive system, inflammation and infectious diseases, endocrine system, chemotherapy. <p>MEDICINES AND SPORTS</p> <ul style="list-style-type: none"> - Compatibility of the drug with physical activity - Cardiovascular effects of sports medical drugs <p>DOPING DRUGS</p> <ul style="list-style-type: none"> - Doping: definition and legislative aspects - Classification of prohibited substances and prohibited methods
Texts and readings	<p>Suggested</p> <ul style="list-style-type: none"> - <i>Ortopedia illustrata</i>. Pipino F. ,Patella V. , Moretti B. , Martucci G. , Cuppone F. Editore MASSON - <i>Clinica Ortopedica</i>. Mancini A., Morlacchi C. Editore PICCIN-NUOVA LIBRARIA - L. Aldo Ferrara: “<i>Medicina dello Sport</i>”. Edises 2007 - Zepilli P: “<i>Manuale di Medicina dello Sport</i>”. 3° Ediz. 2011 - David R. Mottram: “<i>Drug in Sport (5th Edition)</i>”. Routledge Editore - H. Rang: “<i>Farmacologia</i>” - Edizioni Elsevier Masson <p>To learn more about:</p> <p>A. Incalzi: “<i>Medicina interna per scienze infermieristiche (2012)</i>”, Ed Piccin</p> <p>M. Furlanut: <i>Farmacologia generale e clinica per lauree triennali</i>. Ediz. 2012 Piccin</p> <p>“<i>World Anti Doping Agency (WADA). The 2013 prohibited list international standard</i>. Available at http://www.wada-ama.org/Documents/World_AntiDoping_Program/WADP-Prohibited-list/2013/WADAProhibited-List-2013-EN.pdf</p> <p>S. Ferrara “<i>Doping e antidoping</i>” Edizione “Picci”</p>
Notes, additional materials	
Repository	https://teams.microsoft.com/l/team/19%3ac3364a03abb54ce4af5ea463561cfd54%40thread.tacv2/conversations?groupId=71f7f6b6-78c3-4f6e-8ecb-4528f492bf1d&tenantId=c6328dc3-afdf-40ce-846d-326eead86d49
Assessment	
Assessment methods	<p><i>The verification of learning takes place through an oral test where the topics of the questions are relevant to the topics carried out during the lessons, as part of the course.</i></p> <p><i>The purpose of the test is to determine the level of specific knowledge reached by the student, to assess the ability to orient themselves in the problems dealt with, to evaluate the skills acquired regarding the proposal of solutions to the problems under study.</i></p>



<p>Assessment criteria</p>	<ul style="list-style-type: none"> • <i>Applied knowledge and understanding: Decision-making competence in using learned clinical reasoning (unsatisfactory, adequate, good, excellent)</i> • <i>Judgment autonomy (critical reasoning ability): Critical reasoning skills (unsatisfactory, adequate, good, excellent)</i> • <i>Communication skills: Quality of exposure and proficiency of specialist vocabulary (unsatisfactory, adequate, good, excellent)</i> • <i>Ability to learn independently: Adequacy and effectiveness in learning from individual study (unsatisfactory, adequate, good, excellent)</i>
<p>Final exam and grading criteria</p>	<p><i>The student must demonstrate knowledge of the topics under study and have understood the issues related to them, as well as to have reached a level of knowledge to develop independently interpretative arguments</i></p> <p><i>1) Failure to pass the test: insufficient knowledge of the course contents, insufficient evaluation and reasoning skills, lack of basic knowledge.</i></p> <p><i>2) 18 to 21: sufficient or barely sufficient preparation; minimum knowledge of the institutions and of the problems tackled during the course; presence of minor gaps;</i></p> <p><i>3) 22 to 24: average preparation characterized by no particular deepening and by gaps that can be filled in the continuation of the overall training;</i></p> <p><i>4) 25 to 27: generally good preparation even if not particularly thorough; technical language and adequate expressive ability;</i></p> <p><i>5) 28 to 30: excellent or excellent preparation; precise and precise technical language and expressive ability;</i></p> <p><i>6) 30 e lode: preparation, technical language, expressive and argumentative skills of the highest level</i></p>
<p>Further information</p>	<p>.</p>