

SUBJECT CARD

Faculty of Medicine and Health Sciences

Field of studies: Medicine

Form of studies: Full-time

Degree: long-cycle Master's program

Specializations: No specialization

Academic year: 2022/2023

THE SKELETAL-MUSCULAR SYSTEM	
SUBJECT	The skeletal-muscular system
NUMBER OF ECTS POINTS	7
LANGUAGE OF INSTRUCTION	English
TEACHER(S)	Assoc. Professor Piotr Kopiński, MD, PhD Assoc. Professor Krzysztof Tomaszewski, MD, PhD Maciej Krupiński, MD, PhD Marcin Lipski, MD, PhD Izabela Zamojska, MD, PhD
PERSON RESPONSIBLE	Marcin Lipski, MD, PhD
NUMBER OF HOURS	
LECTURES	41 h
CLASSES	46 h
SEMINARS	5 h
GENERAL OBJECTIVES	
OBJECTIVE 1	Familiarization of students with the structure of the human body in terms of topography, functional and clinical approach - to familiarize students with the structure of the human body at the imaging scan.
LEARNING OUTCOMES	
MK1	Knowledge: The student uses the anatomical and histological nomenclatures in Polish and in English - describes the structure of the human body in terms of topography and function - presents characteristic feature of tissues.
MS1	Skills: Student uses in spoken and in written anatomical nomenclatures in Polish and in English - recognizes anatomical structures on cadavers - explains the anatomical basis for the physical examination - recognizes anatomical structures in images diagnostic (X-ray, CT, MRI, ultrasound) - recognizes tissue components under optical microscope and on electronmicrographs.

THE SKELETAL-MUSCULAR SYSTEM

MC1

Social Competency: The student manifests a respect for the corps.

INTRODUCTORY REQUIREMENTS

Biology, anatomy at the level of grammar school /(US) high school.

COURSE PROGRAM

DETAILED DESCRIPTION OF THE TOPIC BLOCKS

LECTURE 1

Anatomy: Anatomical terms related to position & movement. General structure and types of bones. Biological & mechanical properties of bones. Bone development. Classification of bones. Joints: brous, cartilaginous & synovial joints. General structure of synovial joint - types of synovial joints.

LECTURE 2

Anatomy: Vertebral column. General characteristics of a vertebra. Cervical, thoracic, lumbar vertebrae. Sacrum, coccyx. Intervertebral disc. Joints of vertebral column. Atlanto-occipital joints. Atlanto-axial joints.

LECTURE 3

Anatomy: Thorax. Ribs (true ribs, false ribs, oating ribs), sternum. Shoulder girdle scapula, clavicle. Free part of upper limb: humerus, radius, ulna. Bones of the hand: carpal bones, metacarpal bones I-V, ngers (digits), phalanges.

LECTURE 4

Anatomy: Pelvic girdle. Hip bone: Ilium, ischium pubis. Pelvic axis, plane, diameter. Ossa pedis, tarsus, tarsal bones, talus, navicular - Free lower limb: Femur, thigh bone. Patella, tibia, bula.

LECTURE 5

Anatomy: Ossa pedis, tarsus, tarsal bones, talus, navicular bone, medial cuneiform, intermediate cuneiform, lateral cuneiform cuboid bone. Metatarsal bones, phalanges of toes.

LECTURE 6

Anatomy: Neurocranium: occipital bone, sphenoid bone, parital bone, ethmoid bone, temporal bone. Viscerocranium: maxilla (upper jaw), palatine bone, zygomatic bone, Inferior nasal concha, nasal bone, vomer, lacrimal bone, mandible, hyoid bone.

LECTURE 7

Anatomy: Cranial fossa. Anterior cranial fossa, middle and posterior.

LECTURE 8

Anatomy: Norma lateralis: pterion, asterion, tempora fossa, zygomatic arch, infratemporal fossa, pterygopalatine fossa, retromandibular fossa, pterygomaxillary ssure, calviara.

LECTURE 9

Anatomy: Orbit, orbital additus, nasal cavity, oral cavity.

LECTURE 10

Anatomy: Muscles of the head.

LECTURE 11

Anatomy: Muscles of the neck: superficial, medial and profound. Trigones of the neck. Fascias of the neck.

LECTURE 12

Muscles of the thorax, upper limb, abdomen and lower limb.

CLASS 1

Osteology Vertebral column. Cervical vertebare, thoracic vertebrae, lumbar vertebrae, sacral bone, coccyx Osteology Thorax. Ribs (true ribs, false ribs, oating ribs), sternum.

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CLASS 2	Osteology - Shoulder girdle scapula, clavicle. Free part of upper limb: humerus, radius, ulna. Bones of the hand: carpal bones, metacarpal bones I-V, ngers (digits), phalanges.
CLASS 3	Anatomy: Osteology - Pelvic girdle. Hip bone: Ilium, ischium pubis. Pelvic axis, plane, diameter. Free lower limb: Femur, thigh bone. Patella, tibia, bula. Ossa pedis, tarsus, tarsal bones, talus, navicular bone, medial cuneiform, intermediate cuneiform, lateral cuneiform cuboid bone. Metatarsal bones, phalanges of toes.
CLASS 4	Anatomy: Osteology. Cranium. Overview of head. Neurocranium: occipital bone, sphenoid bone, parital bone, ethmoid bone, temporal bone. Viscerocranium: maxilla (upper jaw), palatine bone, zygomatic bone, inferior nasal concha, nasal bone, vomer, lacrimal bone, mandible, hyoid bone.
CLASS 5	Anatomy: Cranial fossa. Anterior cranial fossa, middle and posterior. Cranial meninges. Fracture of pterion. Thrombophlebitis of facial vein. Development of cranium. Obliteration of cranial sutures. Cranial sutures. Cranial synostosis and cranial malformation.
CLASS 6	Anatomy: Norma lateralis: pterion, asterion, tempora fossa, zygomatic arch, infratemporal fossa, pterygopalatine retromandibular fosa. Orbit, orbital additus,sa, pterygomaxillary ssure, calviara.
CLASS 7	Anatomy: Muscular system. Muscles of the head and neck.
CLASS 8	Muscular system. Muscles of the head and neck.
CLASS 9	Muscles of the thorax. Muscles of the back. Muscles of the abdomen.
CLASS 10	Muscles of the upper and lower limb.
CLASS 11	Review of the skeletal system.
CLASS 12	Review of the muscular system.
SEMINAR 1	Anatomy.
DIDACTIC METHODS (APPLIED)	
	Lectures; Laboratory Classes; Work in teams; Multimedia presentations.
STUDENTS WORKLOAD	
NUMBER OF HOURS UNDER SUPERVISION	92 hours

THE SKELETAL-MUSCULAR SYSTEM	
NUMBER OF PREPARATION HOURS	Preparation for classes (including study of the recommended literature): 108 hours (preparation of report, project, presentation and discussion)
TOTAL NUMBER OF HOURS FOR THE COURSE	200 hours
CONDITIONS FOR COURSE COMPLETION	
	Attendance of lectures, classes and seminars is obligatory. Final exam
METHODS OF ASSESMENT	
IN TERMS OF KNOWLEDGE	Multiple choice test
IN TERMS OF SKILLS	Practical examination Practical exam recognition of anatomical details (macroscopically)
IN TERMS OF SOCIAL COMPETENCY	Not applicable.
FORMATIVE	Not applicable.
SUMMATIVE (I & II term)	Multiple choice test
GRADING SCALE	
3,0 (SATISFACTORY)	55-60% correct answers
3,5 (SATISFACTORY PLUS)	61-68% correct answers
4,0 (GOOD)	69-85% correct answers
4,5 (GOOD PLUS)	86-95% correct answers
5,0 (VERY GOOD)	96%-100% correct answers
BASIC LITERATURE	
[1] Kyung Won Chung Harold M. Chung — Gross Anatomy, Philadelphia, 2008, Wolters Kluwer.	
SUPPLEMENTARY LITERATURE	
[1] Keith L. Moore; Arthur F. Dalley; Anne M.R. Agur — Clinically Oriented Anatomy, Philadelphia, 2010, Wolters Kluwer; [2] Frank. H. Netter — Atlas of human anatomy, Philadelphia, 2011, Saunders.	