

COURSE OF STUDY: Medicina e Chirurgia (LM41)

ACADEMIC YEAR: 2024/25

INTEGRATED COURSE: HUMAN ANATOMY 2 (6 CFU/ECTS)

ACADEMIC SUBJECT: HUMAN 2 (6 CFU/ECTS)

CANALE: L-Z

| General information | |
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| Year of the course | II YEAR |
| Academic calendar (starting and ending date) | II SEMESTER |
| Credits (CFU/ETCS): | 6 |
| SSD | BIO/16 |
| Language | ITALIAN |
| Mode of attendance | MANDATORY ATTENDANCE |

| Professor/Lecturer | |
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| Name and Surname | VINCENZO BENAGIANO |
| E-mail | vincenzo.benagiano@uniba.it |
| Telephone | 080571633 |
| Department and address | Department Translational Biomedicine Neuroscience (DiBraiN), Section Anatomy |
| Virtual room | MS Teams, access code: ek3gsvf |
| Office Hours (and modalities: e.g., by appointment, on line, etc.) | Friday, h 11.00-13.00; on line (MS Teams, access code: ek3gsvf) |

| Work schedule | | | |
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| Hours | | | |
| Total | Lectures | Hands-on (laboratory, workshops, working groups, seminars, field trips) | Out-of-class study hours/Self-study Hours |
| 60 | 60 | | 90 |
| CFU/ETCS | | | |
| 6 | | | |

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| Learning Objectives | <i>Learning objectives. The aim of the course is to provide the student with knowledge of the anatomical terms useful for the recognition and macroscopic and microscopic description of the organs of the central and peripheral nervous system and the sense organs. The study of anatomy is essential for understanding physiology, pathology and for a correct and competent entry into the medical profession.</i> |
| Course prerequisites | <i>Required prerequisites are notions of general anatomy, such as anatomical terminology, nervous tissues, notions of macroscopic and topographic anatomy of the human body.</i> |

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| Teaching strategies | <i>Frontal classes</i> |
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| Expected learning outcomes (according to each descriptor of Dublin, DD) | <ul style="list-style-type: none"> • Knowledge and understanding: <i>The student will have to acquire knowledge regarding the macroscopic and microscopic organization of the central and peripheral nervous system and the sense organs, appropriately using the relevant terminology to be able to describe their macroscopic and microscopic characteristics.</i> • Applied knowledge and understanding: <i>The student must be able to apply the anatomical knowledge acquired to subsequently understand the physiology and pathology of the central and peripheral nervous system and of the sense organs.</i> |
| DD1 Knowledge and understanding on | |
| DD2 Applied knowledge and understanding: | |



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| <p>DD3-5 Soft skills</p> | <ul style="list-style-type: none"> • <i>Making informed judgments and choices:</i> The student will have to use the knowledge acquired to evaluate and judge a process, a situation or an activity in order to determine a resolution through a scientific approach and in complete autonomy. • <i>Communicating knowledge and understanding:</i> The student will have to develop the ability to relate in a professional and competent manner with possible interlocutors, taking into account their level of education and ability to understand, using appropriate language, both in oral and written form. • <i>Capacities to continue learning:</i> The student will have to develop skills that allow him to examine and understand scientific texts independently, in order to use them in everyday contexts for the profession and for research. Finally, the student must demonstrate the ability to use the concepts and knowledge acquired by demonstrating that they reason according to the specific logic of the discipline |
| <p>Syllabus</p> | |
| <p>Content knowledge</p> | <p>GENERAL ANATOMY OF THE NERVOUS SYSTEM SUBDIVISIONS - CENTRAL NERVOUS SYSTEM, PERIPHERAL NERVOUS SYSTEM - SOMATIC NERVOUS SYSTEM, AUTONOMIC NERVOUS SYSTEM STRUCTURE - GREY MATTER, WHITE MATTER - NERVES, GANGLIONS TOPOGRAPHIC ANATOMY OF THE CENTRAL NERVOUS SYSTEM NEUROCRANIAL CAVITY, CRANIAL MENINGES VERTEBRAL CANAL, SPINAL MENINGES</p> <p>SYSTEMATIC ANATOMY OF THE CENTRAL NERVOUS SYSTEM SPINAL CORD MACROSCOPIC ANATOMY: SITE, SHAPE, POSITION, RELATIONS MICROSCOPIC ANATOMY - GREY MATTER: POSTERIOR, INTERMEDIATE, ANTERIOR GREY COLUMN - WHITE MATTER: POSTERIOR, LATERAL ANTERIOR FUNICULUS BRAINSTEM: MEDULLA OBLONGATA, PONS, MIDBRAIN MACROSCOPIC ANATOMY: SITE, SHAPE, POSITION, RELATIONS MICROSCOPIC ANATOMY: - ANTERIOR (OR BASILAR PART): GREY MATTER, WHITE MATTER - TEGMENTUM: GREY MATTER, WHITE MATTER CEREBELLUM MACROSCOPIC ANATOMY: SITE, SHAPE, POSITION, RELATIONS MICROSCOPIC ANATOMY: CEREBELLAR CORTEX, WHITE MATTER, CEREBELLAR NUCLEI MIDBRAIN TECTUM MACROSCOPIC ANATOMY: SITE, SHAPE, POSITION, RELATIONS MICROSCOPIC ANATOMY: SUPERIOR, INFERIOR COLLICULI DIENCEPHALON: THALAMUS, HYPOTHALAMUS, SUBTHALAMUS MACROSCOPIC ANATOMY: SITE, SHAPE, POSITION, RELATIONS MICROSCOPIC ANATOMY: THALAMIC, HYPOTHALAMIC, SUBTHALAMIC NUCLEI TELENCEPHALON MACROSCOPIC ANATOMY: SITE, SHAPE, POSITION, RELATIONS MICROSCOPIC ANATOMY: CEREBRAL CORTEX, WHITE MATTER, TELENCEPHALIC NUCLEI NERVOUS CENTRAL SYSTEM CAVITIES, CEREBROSPINAL FLUID CIRCULATION NERVOUS CENTRAL SYSTEM VASCULARIZATION</p> <p>SYSTEMATIC ANATOMY OF THE PERIPHERAL NERVOUS SYSTEM SPINAL NERVES: ROOTS, TRUNK, BRANCHES CERVICAL PLEXUS: SITE, POSITION, RELATIONS, COLLATERAL AND TERMINAL</p> |



BRANCHES

- PHRENIC NERVE

BRACHIAL PLEXUS: SITE, POSITION, RELATIONS, COLLATERAL AND TERMINAL BRANCHES

- AXILLARY NERVE

- RADIAL NERVE

- MUSCOLOCUTANEOUS NERVE

- MEDIAN NERVE

- ULNAR NERVE

- CUTANEOUS MEDIAL NERVE OF THE ARM

- CUTANEOUS MEDIAL NERVE OF THE FOREARM

LUMBAR PLEXUS: SITE, POSITION, RELATIONS, COLLATERAL AND TERMINAL BRANCHES

- FEMORAL NERVE

- OBTURATOR NERVE

SACRAL PLEXUS: SITE, POSITION, RELATIONS, COLLATERAL AND TERMINAL BRANCHES

- SCIATIC NERVE

PUDENDAL PLEXUS: SITE, POSITION, RELATIONS, COLLATERAL AND TERMINAL BRANCHES

COCCYGEAL PLEXUS SITE, POSITION, RELATIONS

CRANIAL NERVES

- OLFACTORY NERVE

- OPTIC NERVE

- COMMON OCULOMOTOR NERVE

- TROCHLEAR NERVE

- TRIGEMINAL NERVE

- ABDUCENT NERVE

- FACIAL/INTERMEDIUS NERVE

- VESTIBULOCOCLEAR NERVE

- GLOSSOPHARYNGEAL NERVE

- VAGUS NERVE

- ACCESSORY NERVE

- HYPOGLOSSAL NERVE

GANGLIONS AND NERVES OF THE SYMPATHETIC NERVOUS SYSTEM

GANGLIONS AND NERVES OF THE PARASYMPATHETIC NERVOUS SYSTEM

SPECIAL SENSE ORGANS

TOPOGRAPHIC ANATOMY OF THE SPECIAL SENSE ORGANS

NASAL CAVITY

ORBITAL CAVITY

ORAL CAVITY

TEMPORAL BONE

OLFACTORY MUCOSA

MACROSCOPIC ANATOMY: SITE, SHAPE, POSITION, RELATIONS

MICROSCOPIC ANATOMY

EYEBALL, ACCESSORY ORGANS OF THE EYEBALL

MACROSCOPIC ANATOMY: SITE, SHAPE, POSITION, RELATIONS

MICROSCOPIC ANATOMY

GUSTATORY MUCOSA

MACROSCOPIC ANATOMY: SITE, SHAPE, POSITION, RELATIONS

MICROSCOPIC ANATOMY

EXTERNAL, MIDDLE, INTERNAL EAR

MACROSCOPIC ANATOMY: SITE, SHAPE, POSITION, RELATIONS

MICROSCOPIC ANATOMY

FUNCTIONAL ANATOMY

SENSORY SYSTEMS



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| | <p><i>GENERAL SOMATIC SENSORY SYSTEM</i></p> <ul style="list-style-type: none"> - <i>EXTEROCEPTIVE SENSIBILITY</i> - <i>PROPRIOCEPTIVE SENSIBILITY</i> <p><i>GENERAL VISCERAL SENSORY SYSTEM</i></p> <p><i>SPECIAL SOMATIC SENSORY SYSTEM</i></p> <ul style="list-style-type: none"> - <i>VISUAL SENSIBILITY</i> - <i>AUDITORY SENSIBILITY</i> - <i>VESTIBULAR SENSIBILITY</i> <p><i>SPECIAL VISCERAL SENSORY SYSTEM</i></p> <ul style="list-style-type: none"> - <i>OLFACTORY SENSIBILITY</i> - <i>GUSTATORY SENSIBILITY</i> <p><i>MOTOR SYSTEMS</i></p> <ul style="list-style-type: none"> - <i>MOTOR SOMATIC SYSTEM</i> - <i>MOTOR VISCERAL SYSTEM</i> <p><i>ANATOMICAL BASIS OF SUPERIOR NERVOUS FUNCTIONS</i></p> <p><i>ANATOMICAL BASIS OF REFLEX FUNCTIONS</i></p> |
| Texts and readings | <ul style="list-style-type: none"> - VVAA, <i>ANATOMIA DEL GRAY, EDRA, 2022</i> - VVAA, <i>ANATOMIA UMANA, EdiSES, 2021</i> - VVAA, <i>TRATTATO DI ANATOMIA UMANA, Edi-Ermes, 2021</i> |
| Notes, additional materials | |
| Repository | <i>Teaching material available on MS Teams, access code ek3gsvf</i> |
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| Assessment | |
| Assessment methods | ORAL |
| Assessment criteria | <ul style="list-style-type: none"> • <i>Knowledge and understanding</i> <i>The student must acquire and understand the anatomical features of the central and peripheral nervous system and of the sense organs.</i> <i>Applying knowledge and understanding</i> <i>The student must apply the knowledge acquired on tissues and apply it to the study of the central and peripheral nervous system and of the sense organs.</i> • <i>Autonomy of judgment</i> <i>The student must be self-assess the coherence between study and expositional ability.</i> • <i>Communicating knowledge and understanding</i> <i>The student is expected to apply their knowledge of the central and peripheral nervous system and of the sense organs to the subsequent study of their physiology and pathology.</i> • <i>Communication skills</i> <i>The achievement of at least sufficient anatomical knowledge provides an essential base for the study of physiology and pathology for which anatomy is a prerequisite.</i> • <i>Capacities to continue learning</i> <i>Be able to organize and manage the information to be acquired.</i> |
| Final exam and grading criteria | <p><i>The final grade is awarded out of thirty. The exam is considered passed when the grade is greater than or equal to 18.</i></p> <p><i>Since the human anatomy 2 exam is an integrated course of 4+2 CFU, the final evaluation derives from the weighted average of the individual parts.</i></p> <p><i>Evaluation of the level of understanding and argumentation ability of the theoretical notions acquired.</i></p> <p>UNSUITABLE:</p> <ul style="list-style-type: none"> • <i>significant gaps in knowledge and understanding of the topics; limited analysis and synthesis skills, frequent generalizations.</i> <p>ELIGIBLE:</p> <ul style="list-style-type: none"> • <i>18-20: just sufficient knowledge and understanding of the topics with possible imperfections; sufficient analytical, synthesis and independent judgment skills.</i> • <i>21-23: Knowledge and understanding of routine topics; correct analysis and</i> |



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| | <p><i>synthesis skills with coherent logical argumentation.</i></p> <ul style="list-style-type: none">• 24-26: <i>Fair knowledge and understanding of the topics; good analytical and synthesis skills with rigorously expressed arguments.</i>• 27-29: <i>Complete knowledge and understanding of the topics; remarkable analytical and synthesis skills. Good independent judgement.</i>• 30-30L: <i>Excellent level of knowledge and understanding of the topics. Remarkable analytical and synthesis skills and independent judgement. Arguments expressed in an original way.</i> |
| Further information | |