

Course: Anatomy Course coordinator: Juraj Arbanas, Associate Professor Department: Anatomy Study program: Integrated Undergraduate and Graduate University Study of Dental Medicine Year: 1<sup>st</sup> Academic year: 2022/2023

#### SYLLABUS

#### Course information (brief course description, general guidelines)

Anatomy is a first-year compulsory course of the Integrated Undergraduate and Graduate University Study of Dental Medicine in English. The course is held for 6 weeks in the first semester and is consisted of 38 hours of lectures, 46 hours of seminars, and 66 hours of practicals, a total of 150 hours (16.5 ECTS).

The course aims to learn about the morphological and structural organization of the human body through topographic and systematic anatomy. Acquired knowledge of anatomy should enable the students to better understand the physiological, pathophysiological, and pathological processes in the body and master the clinical subjects of dental medicine. Students will acquire knowledge of general anatomy and knowledge of the structure of organs.

Course content: general anatomy, general and special osteology, general and special syndesmology, general and special myology, general and special neurology, general and special angiology, general and special splanchnology, special senses, topographic anatomy of the head and neck, topographic anatomy of the thoracic cavity and abdomen, anatomy of the upper and lower extremities.

#### Learning outcomes:

I. Cognitive domain - knowledge Acquisition of basic theoretical knowledge in the field of human body structure.

II. Psychomotor domain - skills

Acquiring the skills of recognizing and showing anatomical structures on a cadaver and concluding about the mutual relations of individual organs within certain topographic regions.

#### Forms of teaching:

Classes are held in the form of lectures, seminars, and practicals. During the practicals, students must have protective clothing and instruments to show the anatomical structures on the

anatomical sections of the corpse (anatomical tweezers, button probe, and gloves as needed). For the course, the Department of Anatomy organizes periodic theoretical and practical consultations with teachers and an anatomical classroom study time where students can watch repeat anatomical structures and consult student demonstrators of the Department of Anatomy.

## The student is required to study in advance for each seminar and practicals.

The course is designed so that students have the opportunity to practice describing anatomical structures and also to discuss the importance of knowing the anatomical structure in their future profession. The schedule and content of classes are defined and published in advance. During the practicals, the teacher points to the anatomical specimens and monitors the participation of students in performing the practicals. An active discussion on a given topic is expected in seminars. Students achieve points through 5 midterms which consist of the practical and oral examination. Points gaining system in midterms is described in Table 1.

## Assigned reading:

- 1. Werner Platzer: Locomotor system
- 2. Helga Fritsch, Wolfgang Kuhnel: Internal organs
- 3. Werner Kahle: Nervous system and sensory organs

## **Optional / additional reading:**

- 1. Richard L. Drake, A. Wayne Vogl, Adam W.M. Mitchell: Gray's Anatomy for students, 3rd Edition
- 2. Eric W. Baker: Anatomy for dental medicine, Latin nomenclature, 2nd Edition

## Grading system

## ECTS Grading System:

Student grading is conducted according to the current Ordinance on Studies of the University of Rijeka.

Students work is assessed and graded during the course and at the final exam. During the course, a student may achieve up to 50% of the grade, and at the final exam up to 50% of the grade ( meaning, out of the maximum 100 points, during the course students can achieve 50 points, and on the final exam also 50 points). Students are graded according to the ECTS credit (A-F) and numeric (1-5) system.

I. Assessment and grading in class (up to 50 points):

During the course, students are awarded points by taking 5 midterm exams:

MIDTERM 1 - EXTREMITIES (MS/MI)

MIDTERM 2 - CRANIUM AND CNS (CR-CNS)

MIDTERM 3 - TOPOGRAPHIC ANATOMY OF HEAD AND NECK (CC1)

MIDTERM 4 - ORGANS OF HEAD AND NECK (CC2)

MIDTERM 5 - THORAX, ABDOMEN (AT)

A midterm consists of a practical and oral examination. The practical part examines students' ability to deliver a hands-on exploration of human cadavers. Passing the practical part is a prerequisite to approach the oral part of the midterm. The oral part assesses students'

theoretical knowledge. When a student passes the oral part of a midterm he/she gains a number of points that corresponds to the awarded grade. The midterms are graded as shown in Table 1:

Table 1.

|                  | ORAL             |       | PRACTICAL |        | min | max |
|------------------|------------------|-------|-----------|--------|-----|-----|
|                  | grade            | point | Pass/     | points |     |     |
|                  |                  | S     | fail      |        |     |     |
| EXTREMITIES      | Excellent (5)    | 8     |           | 2      | 5   | 10  |
|                  | Very good (4)    | 7     |           |        |     |     |
|                  | good (3)         | 5     |           |        |     |     |
|                  | sufficient (2)   | 3     |           |        |     |     |
|                  | insufficient     | 0     |           | 0      |     |     |
|                  | (1)              |       |           |        |     |     |
| CRANIUM AND      | Excellent (5)    | 8     |           | 2      | 5   | 10  |
| CNS              | Very good (4)    | 7     |           |        |     |     |
|                  | good (3)         | 5     |           |        |     |     |
|                  | sufficient (2)   | 3     |           |        |     |     |
|                  | insufficient     | 0     |           | 0      |     |     |
|                  | (1)              |       |           |        |     |     |
| TOPOGRAPHIC      | Excellent (5)    | 8     |           | 2      | 5   | 10  |
| ANATOMY OF       | Very good (4)    | 7     |           |        |     |     |
| HEAD AND         | good (3)         | 5     |           |        |     |     |
| NECK             | sufficient (2)   | 3     |           |        |     |     |
|                  | insufficient     | 0     |           | 0      |     |     |
|                  | (1)              |       |           |        |     |     |
| ORGANS OF        | Excellent (5)    | 8     |           | 2      | 5   | 10  |
| HEAD AND         | Very good (4)    | 7     |           |        |     |     |
| NECK             | good (3)         | 5     |           |        |     |     |
|                  | sufficient (2)   | 3     |           |        |     |     |
|                  | insufficient     | 0     |           | 0      |     |     |
|                  | (1)              |       |           |        |     |     |
| ABDOMEN          | Excellent (5)    | 8     |           | 2      | 5   | 10  |
| THORAX           | Very good (4)    | 7     |           |        |     |     |
|                  | good (3)         | 5     |           |        |     |     |
|                  | sufficient (2)   | 3     |           |        |     |     |
|                  | insufficient     | 0     |           | 0      |     |     |
|                  | (1)              |       |           |        |     |     |
| Sum of the point | s during classes |       |           |        | 25  | 50  |

Students can retake a certain midterm (orally and practically) during dates assigned by the course coordinator. The midterm can be retaken only in case(s):

- 1. justifiably not attending the regular date of the midterm
- 2. failing midterm(s) and lacking points to take the final exam
- 3. not passing the practical part of the midterm

# II. Grading at the final exam (up to 50 points):

The final exam is oral and is graded as follows:

| Grade          | Points |
|----------------|--------|
| Excellent (5)  | 50     |
| Very good (4)  | 40     |
| Good (3)       | 30     |
| Sufficient (2) | 25     |

If the applicant did not get a satisfactory grade, it will be considered that she/he did not pass the final exam.

#### **Requirements for the final exam:**

1. To attend classes in accordance with the Ordinance on Studies of the University of Rijeka.

- 2. To pass practical parts of all 5 midterms.
- 3. To gain at least 25 out of 50 points during the course.

#### Who cannot take the final exam:

Students who gain less than 25 points during classes or who have more than 30% absence from classes cannot take the final exam, he/she must re-enroll the course in the following academic year.

**III. The final grade consists** of the sum of points gained during the course and at the final exam.

| Final grade  |                |
|--------------|----------------|
| A (90-100%)  | Excellent (5)  |
| B (75-89,9%) | Very good (4)  |
| C (60-74,9%) | Good (3)       |
| D (50-59,9%) | Sufficient (2) |

#### Other informations:

Teaching content and all information related to the course can be found on **Merlin system for elearning and MSTeams** (you can access them by using student e-mail and AAI password). <u>Lectures, seminars and practicals are held at the **Department of anatomy, Faculty of medicine**.</u>

#### List of lecture titles with description:

#### L1. Introduction to anatomy, a brief history of anatomy. Parts of the body. General terms.

<u>Learning outcomes</u>: The aim is to acquaint students with the subject they are beginning to study, anatomy will be defined as a morphological science. Anatomical methods of study will be analyzed and types of anatomy will be defined. Distinguish the organic system as a functional whole, analyze 10 organic systems. Define the concepts of anatomical orientation and the anatomical position of the body, which will show the position of the three basic orientation planes and axes concerning the body. Students will begin to use Latin terminology.

## L2. General osteology. Skeleton overview.

<u>Learning outcomes</u>: Define and describe bone as an organ of the skeletal system, distinguish axial and appendicular skeleton, describe types of bones - long, short and flat, define pneumatic and sesamoid bones, describe principles of the composition of compact and spongy bone substance.

#### L3. General syndesmology. Continuous and discontinuous joints.

<u>Learning outcomes</u>: Analyze and discuss the general principles of the structure of joint. Explain the structure and function of the syndesmosis, synchondrosis, synostosis, and diarthrosis with examples. Define and describe shapes of articulated bodies of spherical, ellipsoidal, cylindrical, angular, and saddle joints, types of joints by shape and movements.

#### L4. General syndesmology. Synovial joint composition and biomechanics.

<u>Learning outcomes</u>: Describe major parts of synovial joints, define the shapes of the articulating bodies and corresponding joint types, show and describe movements in synovial joints.

# L5. General myology. Muscle tissue and muscular system. Division of muscles. Skeletal, cardiac, and smooth muscles. Auxiliary structures of muscles.

<u>Learning outcomes</u>: Define and describe general principles of skeletal muscle structure, skeletal muscle parts, and skeletal muscle shapes, muscle function (isometric, isotonic, and tonic contraction). Fascia as an auxiliary muscle structure. Describe the division of muscles according to regions of the body.

#### L6. General myology. Muscle function and innervation.

<u>Learning outcomes</u>: Determine the position of the muscles according to the axes of the joints, based on the position towards the joint, conclude the movement performed by the muscle and synergistic and antagonistic action. Define neuromuscular junction and principles on innervation of skeletal muscles.

#### L7. Cardiovascular system. Arteries. Veins. Lymphatic system.

<u>Learning outcomes</u>: Describe and define cardiovascular system as an organ system, the types of blood vessels, the structure of the blood vessels wall, and blood circulation.

#### L8. Blood vessels of the upper and lower extremities.

<u>Learning outcomes</u>: Describe the arteries and veins of the upper and lower extremities. Describe the position of the subcutaneous veins of the extremities.

#### L9. General features of the cranial bones Division of the cranial bones.

<u>Learning outcomes</u>: As an introduction to the study of the skeleton of the head, define and describe general features of the skull bones, skull base, and skull roof. Define and describe the internal and external skull base, bones consisting of it, and openings for nerves and blood vessels.

# L10. Cranial norms. Joints of skull bones.

<u>Learning outcomes</u>: Define five cranial norms (norma frontalis, lateralis, superior, inferior, and posterior). Describe major joints of the skull and craniometrics points.

# L11. Maxilla and mandible. Teeth.

<u>Learning outcomes</u>: Describe and analyze the maxilla and mandible. Analyze and describe the shapes and parts of teeth. Define primary and permanent dentition.

# L12. Temporomandibular joint.

<u>Learning outcomes</u>: For articulatio temporomandibularis analyze and describe: joint surfaces, discus articularis, and joint capsule, movements performed in it, on the example of m. masseter explain why a particular muscle performs a certain function.

# L13. Distribution of gray matter and white matter of the cerebellum.

<u>Learning outcomes</u>: For the cerebellum, describe: external shape and connection with parts of the brain stem, arrangement and functional significance of the gray matter of the cerebellum, cortex cerebelli and deep gray matter.

# L14. Distribution of gray matter and white matter of the cerebrum.

<u>Learning outcomes</u>: For the cerebrum, describe: division into hemispheres and telencephalon medium, external shape and location of the cerebrum, structure and functional distribution of gray matter, parts of the telencephalon medium.

# L15. Head and neck muscles and fascia.

<u>Learning outcomes</u>: define and describe: division into muscle groups and group characteristics, the concept of fascia, and the division of the fascia into sheets.

## L16. Arterial supply of head and neck.

<u>Learning outcomes</u>: Define and describe: exit point, path, collateral and terminal branching and area of irrigation of a. carotis communis, path, terminal and collateral branching and area of irrigation of the a. carrotis externae.

# L17. Arterial supply of head and neck.

<u>Learning outcomes</u>: Define and describe: exit point, path, collateral and terminal branching and area of irrigation of a. maxillaris, define the topographic relations of the a. maxillaris according to the content of the infratemporal fossa, importance of a. maxillaris for irrigation of teeth, upper and lower jaws.

## L18. Overview of cranial nerves.

<u>Learning outcomes</u>: For cranial nerves define and describe: twelve cranial nerves, types of fibers that contain certain cranial nerves, their nuclei in brainstem, site of exit from the brain and the connection with the nuclei in the brainstem, generally determine the area of innervation.

# L19. Nervus facialis.

<u>Learning outcomes</u>: In the example of n. facialis describe: nuclei in the brainstem and types of fibers, sensitive ganglion, the site of exit from the brain and the path through the cranial cavity, branching into intrapetrous and extrapetrous branches and the area of innervation, significance n. facialis for innervation of taste buds.

## L20. Autonomic innervation of head and neck organs

<u>Learning outcomes</u>: Define and describe the centers and pathways of the autonomic nervous system, the reflex arc of the autonomic nervous system, explain the term paravertebral and prevertebral autonomic ganglia, the neck part of the truncus sympathicus and parasympathetic ganglia of the n. facialis and n. glossopharyngeus.

## L21. Visceral organs of the head and neck.

<u>Learning outcomes:</u> define visceral organs, describe the principles of composition of the visceral organs, distinguish and describe the principles of composition of the hollow and parenchymatous organs.

#### L22. Oral cavity: overview, palatum, vasculature, and innervation.

<u>Learning outcomes</u>: define and describe: walls (cheek, lips, palate, bottom of the oral cavity) and communications, alveodental arches, the division of the oral cavity into a vestibule, and the oral cavity in the narrower sense.

#### L23. Larynx. Phonatio.

<u>Learning outcomes</u>: describe and explain: wall and functional characteristics of the conductive airways. For laryngeal cartilage joints describe and explain: joints art. cricoarythaenoidea and art. cricothyreoidea, movements of vocal cartilage and consequently vocal folds, adduction and abduction of the vocal cords and consequent opening and closing of the rimae vocalis, laryngeal syndesmosis, position and mobility of the epiglottis.

## L24. Pharynx. Swallowing

Learning outcomes: define and describe the pharynx, the skeletal framework, pharyngeal wall, pharyngeal fascia and gaps in the pharyngeal wall, the nasopharynx, oropharynx, laryngopharynx, and tonsils, learn the irrigation, lymphatic drainage, and innervation of the pharynx. Describe the stages of the act of swallowing and the muscles involved in each individual phase of swallowing. Explain which part of the act of swallowing is influenced by voluntary and conscious control and innervation and which is reflexively conditioned and cannot be voluntarily prevented. Explain which cranial nerves guide the afferent fibers and form the afferent and which the efferent arm of the reflex arc for the act of swallowing.

## L25. Ear.

Learning outcomes: analyze and describe parts of the external, middle and inner ear.

#### L26. Inner ear, auditory and vestibular apparatus, auditory and vestibular pathway.

<u>Learning outcomes</u>: describe parts of the internal ear, the bony and membranous labyrinth, define organs of balance and the organ of hearing.

# L27. Thoracic cavity.

<u>Learning outcomes</u>: Describe and explain: external appearance and torso boundaries towards the neck, upper and lower extremities, division of the torso into chest, abdomen, and pelvis, division of torso cavities into thoracic, abdominal, and pelvic cavities, the anatomical elements of the chest wall (skeleton, muscles, fascia, and serous membranes), the position of the thoracic cavity organs, diaphragm morphology, function and innervation.

## L28. Heart.

<u>Learning outcomes</u>: Describe small and large blood circulation, define and distinguish their function. Describe the structure of the heart wall, describe the layers of the heart wall; endocardium, myocardium and epicardium, describe the shape and features of 4 heart cavities; right and left atria and right and left ventricles. Describe 4 cardiac orifices, describe valves of 4 cardiac orifices, define conductive cardiac musculature and explain its structure and function, describe irrigation (aa. and vv. coronariae), analyze topographic relations of the heart.

## L29. Respiratory system.

<u>Learning outcomes:</u> List and describe the organs of the respiratory system and their main morphological and topographical features.

## L30. Lungs.

<u>Learning outcomes</u>: Describe the position and shape of the right and left lungs. Analyze the contents of the hilus pulmonis and the elements of the pulmonary root (bronchus principalis, a. and v. pulmonalis), discuss the topographic relationships of the lungs to other organs of the thoracic cavity. Describe the pleural parietalis and pleura visceralis.

## L31. Abdominal cavity.

Learning outcomes: Describe and explain basic features of the structure of internal organs, hollow and parenchymatous. Describe the morphological and functional features of the wall layers of hollow organs. Describe the hollow organ on the example of the heart and intestines. Describe the morphological and functional features of the structure of parenchymal organs and on the example of the liver describe the stroma and parenchyma. Define the term serous membrane. Analyze the formation of visceral, parietal, and mesenteric leaf serous membranes. Describe the peritoneal serous membrane, explain its function.

## L32. Digestive system.

<u>Learning outcomes</u>: List and describe the organs of the digestive system and their main morphological and topographical features.

## L33. Retroperitoneal space.

<u>Learning outcomes</u>: Describe the boundaries of the retroperitoneal space. List and explain the topographic relationships of organs in the retroperitoneal space.

## L34. Urinary system.

<u>Learning outcomes:</u> List and describe the organs of the urinary system and their main morphological and topographical features.

## L35. Pelvis.

<u>Learning outcomes:</u> Define and describe pelvic space. List and explain the topographic relationships of organs in the lesser pelvis.

#### L36. Male genital system.

<u>Learning outcomes</u>: List and describe the organs of the male genital system and their main morphological and topographical features.

#### L37. Female genital system.

<u>Learning outcomes</u>: List and describe the organs of the fmale genital system and their main morphological and topographical features.

#### L38. Aorta abdominalis. Vena cava inferior. Vena portae.

<u>Learning outcomes</u>: Describe abdominal aorta and its branches. Describe inferior vena cava and its tributaries. Describe portal vein, its tributaries and anastomoses.

#### List of seminar titles with description:

Students have to study the theory before coming to the seminars.

# S1. General osteology. Bone tissue. Development of bone. Bones of the upper and lower extremity.

<u>Learning outcomes</u>: To analyze and discuss general principles of skeletal element structure. Systematize skeletal elements by shape, structure, functional characteristics, and developmental changes of the skeleton. Define the division of the skeletal system into appendicular and axial skeletons and define the bones that make up the bones of individual groups. Bone as an organ of the skeletal system (a division of bone types into long, short, and flat, define pneumatic and sesame bones, the structure of a compact and spongy bone substance, skeletal development through chondral and desmal ossification). Describe the main morphological characteristics of the skeletal elements of the upper and lower extremities.

**S2.** General syndesmology. Division of joints by shape. Joints of the upper and lower extremity. <u>Learning outcomes</u>: Practice describing joint surfaces, joint capsules, and movements that take place in the joints of the upper and lower extremities. Analyze the biomechanical laws of motion in the joints. Show and analyze movements in the joints.

## S3. General myology. Muscles of upper and lower extremity.

<u>Learning outcomes</u>: Analyze the division of limb muscles by groups and name the muscles. Discuss the position of muscle groups relative to a joint and the axis of a particular movement in that joint. Based on the muscles of the extremities, analyze the position of muscle groups in the axis of the joint and their synergistic and antagonistic effects. Describe and discuss the biggest muscles of the upper and lower extremity.

S4. General neurology. Peripheral nervous system. Nerves of the upper and lower extremity.

<u>Learning outcomes</u>: Analyze and discuss the general principles of the structure of the nervous tissue and organs of the nervous system. Explain the morphological and functional parts of a nerve cell. Explain the neural segment. Describe the spinal nerve, the type of fibers, the origin and destination of nerve fibers, the branches, the peripheral plexuses, and the peripheral nerves. Describe and analyze nerves of upper and lower extremities.

## S5. Theoretical work.

<u>Learning outcomes:</u> Discuss and analyze theoretical assignments.

## S6. Isolated skull bones

<u>Learning outcomes</u>: Orient, describe, and show the basic parts of the skull bones that make up the visceral part of the skull (mandible, maxilla, zygomaticum axis, nasal axis, palatinum axis, ethmoid axis, lacrimal axis, vomer, inferior concha nasalis, hyoideum axis). Orient, describe, and show the basic parts of the skull bones that make up the cerebral part of the skull (os occipital, os temporale, os sphenoidale, os parietale, os frontale).

# **S7.** Nervous tissue. Division and organs of the nervous system, anatomical and functional. Spinal cord.

<u>Learning outcomes</u>: For the nervous system define: neuron and nerve tissue support cells, gray and white matter of nervous tissue, morphological and functional division of the nervous system. Overview of the brain morphology and division. Describe external shape and location of the spinal cord, structure and functional arrangement of the gray matter of the spinal cord, arrangement of motor, sensory, autonomic neurons and interneurons, connection of spinal cord neurons with spinal nerve fibers.

## **S8.** CNS Functional systems. Motor systems. Sensory systems.

Learning outcomes: Define the pathways of the nervous system and analyze the types of pathways concerning function. Understand the principle of transmitting stimuli from neuron to neuron via synapses. Analyze the origin and center at which the path fibers begin or end. Describe the pyramidal motor pathways (tractus corticospinalis anterior et lateralis, tractus corticonuclearis), the centers and three circular pathways of the extrapyramidal system, and the efferent pathways of the extrapyramidal system: tractus rubroreticulospinalis, tectospinalis, vestibuloreticulospinal. Describe non-specific and specific sensory pathways. Describe the position of the body of neurons, the path of neuronal fibers and the function of the following pathways: pathways of nonspecific sensations (fasciculus gracilis et cuneatus, tractus spinothalamicus anterior et lateralis, tractus spinocerebellaris anterior et posterior), pathways of specific sensations (visual, auditory, vestibular, taste).

## **S9.** Theoretical work.

Learning outcomes: Discuss and analyze theoretical assignments.

## S10. Head muscles. Arteries and veins of the head and neck.

#### Learning outcomes:

Analyze and discuss the division, position, and functional characteristics of the head muscles. Describe masticatory muscles and their relation with the function of the temporomandibular joint. Analyze and discuss arteries and veins of the head and neck.

# S11. Cranial nerves (nn. VII, VIII, IX, X, XI, XII)

<u>Learning outcomes</u>: Analyze and discuss the exit from the brain, the passage through the cranial base, the types of fibers, branches and the area of innervation nn. VII. VIII, IX, X, XI, XII.

## S12. Cranial nerves (nn. I, II, III, IV, V, VI)

<u>Learning outcomes</u>: Analyze and discuss the exit from the brain, the passage through the cranial base, the types of fibers, branches and the area of innervation nn. I, II, III, IV, V, VI.

# S13. Theoretical work.

<u>Learning outcomes:</u> Discuss and analyze theoretical assignments.

# S14. Pharynx.

<u>Learning outcomes</u>: define and describe the pharynx, the skeletal framework, pharyngeal wall, pharyngeal fascia and gaps in the pharyngeal wall, the nasopharynx, oropharynx, laryngopharynx, and tonsils, learn the irrigation, lymphatic drainage, and innervation of the pharynx.

## S15. Larynx.

<u>Learning outcomes</u>: describe and explain: wall and cavity of the larynx. For laryngeal cartilage joints describe and explain: joints art. cricoarythaenoidea and art. cricothyreoidea, movements of vocal cartilage and consequently vocal folds, adduction and abduction of the vocal cords and consequent opening and closing of the rimae vocalis, laryngeal syndesmosis, position and mobility of the epiglottis.

## S16. Eyeball: blood supply, lens &cornea, iris, and ocular chambers, retina.

<u>Learning outcomes</u>: Analyze the embryonic origin and morphology of the eyeball. Analyze and describe parts of the outer, middle, and inner eyeball layers,

# S17. Theoretical work.

<u>Learning outcomes:</u> Discuss and analyze theoretical assignments.

## S18. Heart. Aorta (arcus, aorta thoracica). V. cava superior.

<u>Learning outcomes</u>: Describe small and large blood circulation, define and distinguish their function. Describe the structure of the heart wall, describe the layers of the heart wall; endocardium, myocardium and epicardium, describe the shape and features of 4 heart cavities; right and left atria and right and left ventricles. Describe 4 cardiac orifices, describe valves of 4 cardiac orifices, define conductive cardiac musculature and explain its structure and function, describe irrigation (aa. and vv. coronariae), analyze topographic relations of the heart. Describe arcus aortae and aorta thoracica and its branches. Describe v. cava superior and its tributaries.

## S19. Theoretical work.

Learning outcomes: Discuss and analyze theoretical assignments.

List of practical titles with description:

**Students have to study the theory before coming to the practicals.** It is obligatory to wear a lab coat and have tweezers.

## P1. Bones of upper extremity.

<u>Learning outcomes</u>: On anatomical preparations, place the skeletal element in the orientation position, argue the way in which the orientation was performed. Show and describe the parts of the bones that make up the skeletal element. Show the position of certain roughnesses, bumps and nodules, and bone lines and ridges that serve as muscle grips. Show and describe the shape and position of joint surfaces. It includes the bones of the upper extremity: clavicula, scapula, humerus, ulna, radius, carpal, metacarpal bones and finger joints.

# P2. Bones of lower extremity.

<u>Learning outcomes</u>: On anatomical preparations, place the skeletal element in the orientation position, argue the way in which the orientation was performed. Show and describe the parts of the bones that make up the skeletal element. Show the position of certain roughnesses, bumps and nodules, and bone lines and ridges that serve as muscle grips. Show and describe the shape and position of joint surfaces. It includes the bones of the lower extremity: os coxae, femur, tibia, fibula, tarsal, metatarsal bones and members of the toes.

# P3. Joints of upper extremity.

<u>Learning outcomes</u>: On anatomical preparations, show and describe joint surfaces, joint capsule, determine the type of joint with regard to the shape of joint bodies and show the movements that take place in a particular joint.

## P4. Joints of lower extremity.

<u>Learning outcomes</u>: On anatomical preparations, show and describe joint surfaces, joint capsule, determine the type of joint with regard to the shape of joint bodies and show the movements that take place in a particular joint.

## P5. Muscles of the upper extremity.

<u>Learning outcomes</u>: In the anatomical section, show the muscles of the upper extremity in groups (shoulder girdle muscles, thoracohumeral muscles, upper arm muscles, forearms and hands). For each group, show the muscles, show their starting point and grip, and explain the function they have in each joint.

## P6. Muscles of the lower extremity.

<u>Learning outcomes</u>: In the anatomical section, show the muscles of the lower extremity in goups (muscles of the hip, thigh, lower leg and foot). For each group, show the muscles, show their starting point and grip, and explain the function they have in each joint.

## P7. Blood vessels of upper and lower extremity.

<u>Learning outcomes</u>: Describe and show on an anatomical preparation the path and branching of blood vessels that irrigate the upper extremity. Show the position, boundaries and content of the topographic regions of the extremities: spatium axillare, sulci bicipitales, fossa cubiti, canalis carpi, canalis inguinalis trigonum femorale, fossa poplitea.

## P8. Nerves of upper and lower extremity. Review of the upper and lower extremity.

<u>Learning outcomes</u>: Show the position and branches of the plexus brachialis, plexus lumbalis and plexus sacralis on the anatomical preparation. Review of the anatomical structures of the upper and lower extremity.

#### P9. Work on the specimen.

Learning outcomes: Recognition of structures on an anatomical specimen.

#### P10. Work on the specimen.

Learning outcomes: Recognition of structures on an anatomical specimen.

#### P11. Isolated bones of the cerebral part of the skull. Basis cranii interna.

<u>Learning outcomes</u>: On the anatomical preparation of the macerated skull show the skull base and parts of the skull bones that participate in the construction of the base. Demonstrate the way the skull opens and separates the skull roof. Show the surfaces of the skull base. Delimit and distinguish 3 pits of the inner cranial base: anterior, middle and posterior cranial fossa. For each, show the surfaces of the parts of the skull bones that participate in the construction of each, show the communication openings and channels that penetrate it, and show the cranial spaces with which they are connected. Describe isolated bones of the cerebral part of the skull.

## P12. Basis cranii interna.

<u>Learning outcomes</u>: On the anatomical preparation of the macerated skull delimit and distinguish 3 fields of the external cranial base: anterior, middle and posterior field. For each, show the surfaces of the parts of the skull bones that participate in the construction of each, show the communication openings and channels that penetrate it, and show the cranial spaces with which they are connected.

# P13. Mandible. Maxilla. Teeth. Cavities of viscerocranium Vertebrae, ribs, sternum. Vertebral column.

<u>Learning outcomes:</u> On anatomical preparations of macerated mandibles and maxillae show and describe significant structures. On the anatomical preparation of the macerated skull show and describe the limitations of the following cavities of the viscerocranium and lateral regions of the skull: orbit, nasal cavity and oral cavity, fossa temporalis, fossa infratemporalis, fossa pterygopalatina. Show significant structures on the anatomical preparation of macerated vertebrae and ribs and distinguish individual groups of vertebrae and ribs.

## P14. General description of the brain. Medulla spinalis. Brainstem.

<u>Learning outcomes:</u> Show and describe the shape and segments of the spinal cord on the anatomical preparation. On cross-sections of the spinal cord in different segments to notice the difference in the mass of gray and white matter in the internal structure. Show the exit points of the roots of the spinal nerves, the cauda equina and the hard sheath of the spinal cord. Show and describe parts of the brainstem: the medulla oblongata, pons and midbrain. Connect the external appearance of parts of the brainstem with the internal structure and position of deep gray masses.

## P15. Cerebellum. Diencephalon. Telencephalon. Basal ganglia.

Learning outcomes: On the anatomical section of the brain show and describe the cerebellum. Describe the peduncles of the cerebellum and show how they connect the cerebellum to parts of the brainstem. Demonstrate an anatomical approach and opening of the fourth ventricle and communication with the subarachnoid space. Show and describe parts of the midbrain in the anatomical section of the brain. Demonstrate access to and opening of the third chamber. Connect the external appearance with the internal structure and the position of the deep gray masses. Describe and show the position of the pituitary gland. In the anatomical section of the lateral chambers. Connect the external appearance with the internal structure and opening of the lateral chambers. Connect the external appearance with the jutitary gland. In the anatomical section of the lateral chambers. Connect the external appearance with the internal structure and the position of the lateral chambers. Connect the external appearance with the internal structure and the position of the lateral chambers. Connect the external appearance with the internal structure and the position of the lateral chambers. Connect the external appearance with the internal structure and the position of the lateral chambers. Connect the external appearance with the internal structure and the position of the lateral chambers. Describe and show the position of the basal ganglia.

## P16. Cerebrovascular and ventricular system. Meninges.

<u>Learning outcomes</u>: Describe the parts of the dura mater, pia and arachnoid. Describe blood vessels of the brain, the path and branching of the intracranial part of the a. vertebralis and a. carotis internae. Describe ventricular system of the brain.

## P17. Work on the specimen.

Learning outcomes: Recognition of structures on an anatomical specimen.

## P18. Work on the specimen.

Learning outcomes: Recognition of structures on an anatomical specimen.

#### P19. Regio mediana cervicalis. Trigonum submandibulare.

<u>Learning outcomes</u>: Using anatomical terminology, name and describe muscles of neck. Describe using anatomical terminology, name and on the anatomical section of the neck show muscle constraints, content and interrelationships of the structure that make up the content of the anterior neck region, regio colli media and trigonum submandibulare.

## P20. Trigonum caroticum. Spatium parapharyngeum.

<u>Learning outcomes</u>: Using anatomical terminology, name and describe and on the anatomical section of the neck show muscle constraints, content and interrelationships of structures that make up the contents of the space lateral to the pharynx, spatium parapharyngeum (arteria carotis interna, vena jugularis interna, n. IX, n. X, n .XI and n. XII, truncus sympathicus). Describe and show on the anatomical section of the neck the muscle constraints, content and interrelationships of the structures that make up the content of the carotid triangle trigonum caroticum (path and branching of the artery carotis communis, vena jugularis interna, truncus sympathicus, n. X, n.XI, n.XII).

## P21. Spatium scalenovertebrale. Regio coli lateralis.

<u>Learning outcomes</u>: Using anatomical terminology, name and describe and on the anatomical section of the neck show muscle constraints, content and interrelationships of structures that make up the contents of the spatium scalenovertebrale and lateral cervical region, region coli lateralis (a. subclavia, v. subclavia, a. carotis communis, v. jugularis int., n. phrenicus, n. vagus, truncus symathicus, plexus brachialis, plexus cervicalis, n. accessorius).

## P22. Superficial neck regions. Posterior cervical region.

Learning outcomes: Using anatomical terminology, name and describe and on the anatomical section of the neck show muscle constraints, content and interrelationships of structures that make up the contents of the subcutaneous ventrolateral cervical region (v. jugularis externa, n. occipitalis minor, n. auricularis magnus, n transversus colli, nn. supraclaviculares). Describe and show on the anatomical section of the neck the muscle constraints, content and interrelationships of the structures that make up the content of the occipital region, regio occipitalis and posterior cervical region, regio colli posterior (n. occipitalis major, m. splenius capitis, m. semispinalis capitis, a. vertebralis, m. rectus capitis posterior major et minor, m. obliquus capitis superior et inferior.).

#### P23. Infratemporal fossa. Pterygopalaine fossa.

<u>Learning outcomes</u>: Describe and show in the anatomical section of the neck and using anatomical terminology, name the muscle constraints, content and interrelationships of the structures that make up the contents of the infratemporal fossa (n. mandibularis, a. maxillaris, and chorda tympani). Describe and show on the anatomical section of the neck and using anatomical terminology, name the muscle constraints, content and interrelationships of the structures that make up the contents of the pterygopalatal fossa (n. maxillaris, a. maxillaris, and ganglion pterygopalatinum).

#### P24. Parotideomaseteric region. Fossa retromandibularis.

<u>Learning outcomes</u>: Describe and show on the anatomical section of the head facial nerve its branches and regions where we can find them. Describe and show in the anatomical section of the neck and using anatomical terminology, name the muscle constraints, content and interrelationships of the structures that make up the content of region parotodeomasseterica (glandula parotis, a. facialis, m. masseter) and fossa retromandibularis (glandula parotis, a. temporalis superficialis, n. facialis, retromandibular vein).

#### P25. Work on the specimen.

Learning outcomes: Recognition of structures on an anatomical specimen.

#### P26. Work on the specimen.

Learning outcomes: Recognition of structures on an anatomical specimen.

## P27. Teeth. Oral cavity.

<u>Learning outcomes</u>: In the anatomical section using anatomical terminology, name and show the walls, cavity and communications of the oral cavity. Show on the anatomical preparation parts of teeth, distinguish and describe the shape of morphologically different permanent teeth, incisors of canines, premolars and molars. Learn to write a permanent tooth formula.

#### P28. Pharynx.

<u>Learning outcomes</u>: On anatomical preparations, using anatomical terminology, name and show the walls, cavity and communications of the pharynx. Describe and analyze the structure of the wall and the pharyngeal cavity.

## P29. Larynx. Thyroid gland.

<u>Learning outcomes</u>: In the anatomical section using anatomical terminology, name and show the walls, cavity, and communications of the larynx, trachea, and esophagus. Show parts of the thyroid gland.

#### P30. Nasal cavity.

<u>Learning outcomes</u>: On anatomical preparations, using anatomical terminology, name and show the walls, cavity and communications of the nasal cavity.

#### P31. Orbit.

<u>Learning outcomes</u>: show and describe walls of orbit, divisions and content of the orbit, vessels and nerves passing through orbit.

#### P32. Lacrimal apparatus. Eyelids. Muscles of the eye.

<u>Learning outcomes</u>: Describe the the structure, innervation and irrigation of the eyelids and lacrimal apparatus. Learn the origin, insertion, innervation and function of extrinsic muscles of the eyeball.

#### P33. Work on the specimen.

Learning outcomes: Recognition of structures on an anatomical specimen.

| Week | Date       | Lectures    | Seminars    | Practicals  | Teacher assigned         |
|------|------------|-------------|-------------|-------------|--------------------------|
| 1.   | 03/10/2022 | L1/L2       |             |             | Juraj Arbanas, Associate |
|      |            | 08:15-09:45 |             |             | Professor                |
|      | 03/10/2022 |             | S1          |             | Ana Jerbić Radetić MD    |
|      |            |             | 10:00-11:30 |             |                          |
|      | 03/10/2022 |             |             | P1          | Bojana Čulev DMD         |
|      |            |             |             | 12:15-13:45 |                          |
|      | 03/10/2022 |             |             | P2          | Bojana Čulev DMD         |
|      |            |             |             | 14:00-15:30 |                          |
| 2.   | 10/10/2022 | L3/L4       |             |             | Tamara Šoić-Vranić,      |
|      |            | 08:15-09:45 |             |             | Associate Professor      |
|      | 10/10/2022 |             | S2          |             | Sanja Zoričić Cvek, Full |
|      |            |             | 10:00-11:30 |             | Professor                |
|      | 10/10/2022 |             |             | P3          | Bojana Čulev DMD         |
|      |            |             |             | 12:15-13:45 |                          |
|      | 10/10/2022 |             |             | P4          | Bojana Čulev DMD         |
|      |            |             |             | 14:00-15:30 |                          |

## COURSE SCHEDULE for academic year 2022/2023

| 3. | 17/10/2022 | L5/L6<br>08:15-09:45   |                   |                    | Juraj Arbanas, Associate<br>Professor      |
|----|------------|------------------------|-------------------|--------------------|--|
|    | 17/10/2022 |                        | S3<br>10:00-11:30 |                    | Ana Jerbić Radetić MD                      |
|    | 17/10/2022 |                        |                   | P5<br>12:15-13:45  | Bojana Čulev DMD                           |
|    | 17/10/2022 |                        |                   | P6<br>14:00-15:30  | Bojana Čulev DMD                           |
| 4. | 24/10/2022 | L7/L8<br>08:15-09:45   |                   |                    | Sanja Zoričić Cvek, Full<br>Professor      |
|    | 24/10/2022 |                        | S4<br>10:00-11:30 |                    | Tamara Šoić-Vranić,<br>Associate Professor |
|    | 24/10/2022 |                        |                   | P7<br>12:15-13:45  | Bojana Čulev DMD                           |
|    | 24/10/2022 |                        |                   | P8<br>14:00-15:30  | Bojana Čulev DMD                           |
| 5. | 31/10/2022 |                        |                   | P9<br>08:15-09-45  | Sanja Zoričić Cvek, Full<br>Professor      |
|    | 31/10/2022 |                        |                   | P10<br>10:15-11:45 | Bojana Čulev DMD                           |
|    | 31/10/2022 |                        | S5<br>12:15-13:45 |                    | Tamara Šoić-Vranić,<br>Associate Professor |
|    | 31/10/2022 | MIDTERM I              |                   |                    |  |
| 6. | 07/11/2022 | L9/L10<br>08:00-09:30  |                   |                    | Juraj Arbanas, Associate<br>Professor      |
|    | 07/11/2022 |                        | S6<br>09:45-12:00 |                    | Ana Jerbić Radetić MD                      |
|    | 07/11/2022 |                        |                   | P11<br>12:45-14:15 | Bojana Čulev DMD                           |
|    | 07/11/2022 |                        |                   | P12<br>14:30-16:00 | Bojana Čulev DMD                           |
| 7. | 14/11/2022 | L11/L12<br>08:00-09:30 |                   |                    | Tamara Šoić-Vranić,<br>Associate Professor |
|    | 14/11/2022 |                        | S7<br>09:45-12:00 |                    | Sanja Zoričić Cvek, Full<br>Professor      |
|    | 14/11/2022 |                        |                   | P13<br>12:45-14:15 | Ana Jerbić Radetić MD                      |
|    | 14/11/2022 |                        |                   | P14<br>14:30-16:00 | Ana Jerbić Radetić MD                      |

| 8.  | 21/11/2022 | L13/L14<br>08:00-09:30 |                     |                    | Juraj Arbanas, Associate<br>Professor      |
|-----|------------|------------------------|---------------------|--------------------|--|
|     | 21/11/2022 |                        | S8<br>09:45-12:00   |                    | Sanja Zoričić Cvek, Full<br>Professor      |
|     | 21/11/2022 |                        |                     | P15<br>12:45-14:15 | Bojana Čulev DMD                           |
|     | 21/11/2022 |                        |                     | P16<br>14:30-16:00 | Bojana Čulev DMD                           |
| 9.  | 28/11/2022 |                        |                     | P17<br>08:15-09-45 | Juraj Arbanas, Associate<br>Professor      |
|     | 28/11/2022 |                        |                     | P18<br>10:15-11:45 | Ana Jerbić Radetić MD                      |
|     |            |                        | S9<br>12:15-13:45   |                    | Sanja Zoričić Cvek, Full<br>Professor      |
|     | 28/11/2022 | MIDTERM II             |                     |                    |  |
| 10. | 05/12/2022 | L15/L16<br>08:00-09:30 |                     |                    | Ivana Marić, Full Professor                |
|     | 05/12/2022 |                        | \$10<br>09:45-12:00 |                    | Ana Jerbić Radetić MD                      |
|     | 05/12/2022 |                        |                     | P19<br>12:45-14:15 | Bojana Čulev DMD                           |
|     | 05/12/2022 |                        |                     | P20<br>14:30-16:00 | Bojana Čulev DMD                           |
| 11. | 12/12/2022 | L17/L18<br>08:00-09:30 |                     |                    | Juraj Arbanas, Associate<br>Professor      |
|     | 12/12/2022 |                        | S11<br>09:45-12:00  |                    | Tamara Šoić-Vranić,<br>Associate Professor |
|     | 12/12/2022 |                        |                     | P21<br>12:45-14:15 | Ana Jerbić Radetić MD                      |
|     | 12/12/2022 |                        |                     | P22<br>14:30-16:00 | Ana Jerbić Radetić MD                      |
| 12. | 19/12/2022 | L19/L20<br>08:00-09:30 |                     |                    | Sanja Zoričić Cvek, Full<br>Professor      |
|     | 19/12/2022 |                        | S12<br>09:45-12:00  |                    | Ivana Marić, Full Professor                |
|     | 19/12/2022 |                        |                     | P23<br>12:45-14:15 | Juraj Arbanas, Associate<br>Professor      |
|     | 19/12/2022 |                        |                     | P24<br>14:30-16:00 | Juraj Arbanas, Associate<br>Professor      |

| 13. | 09/01/2023 |                        |                     | P25<br>08:15-09-45 | Ana Jerbić Radetić MD                      |
|-----|------------|------------------------|---------------------|--------------------|--|
|     | 09/01/2023 |                        |                     | P26<br>10:15-11:45 | Ana Jerbić Radetić MD                      |
|     | 09/01/2023 |                        | S13<br>12:15-13:45  |                    | Ivana Marić, Full Professor                |
|     | 09/01/2023 | MIDTERM III            |                     |                    |  |
| 14. | 16/01/2023 | L21/L22<br>08:00-09:30 |                     |                    | Juraj Arbanas, Associate<br>Professor      |
|     | 16/01/2023 |                        | \$14<br>09:45-12:00 |                    | Ana Jerbić Radetić MD                      |
|     | 16/01/2023 |                        |                     | P27<br>12:45-14:15 | Bojana Čulev DMD                           |
|     | 16/01/2023 |                        |                     | P28<br>14:30-16:00 | Bojana Čulev DMD                           |
| 15. | 23/01/2023 | L23/L24<br>08:00-09:30 |                     |                    | Tamara Šoić-Vranić,<br>Associate Professor |
|     | 23/01/2023 |                        | \$15<br>09:45-12:00 |                    | Sanja Zoričić Cvek, Full<br>Professor      |
|     | 23/01/2023 |                        |                     | P29<br>12:45-14:15 | Tamara Šoić-Vranić,<br>Associate Professor |
|     | 23/01/2023 |                        |                     | P30<br>14:30-16:00 | Tamara Šoić-Vranić,<br>Associate Professor |
| 16. | 30/01/2023 | L25/L26<br>08:15-09:45 |                     |                    | Ivana Marić, Full Professor                |
|     | 30/01/2023 |                        | S16<br>10:00-11:30  |                    | Ana Jerbić Radetić MD                      |
|     | 30/01/2023 |                        |                     | P31<br>12:15-13:45 | Juraj Arbanas, Associate<br>Professor      |
|     | 30/01/2023 |                        |                     | P32<br>14:00-15:30 | Juraj Arbanas, Associate<br>Professor      |
| 17. | 06/02/2023 |                        |                     | P33<br>08:15-09-45 | Bojana Čulev DMD                           |
|     | 06/02/2023 |                        | S17<br>12:15-13:45  |                    | Tamara Šoić-Vranić,<br>Associate Professor |
|     | 06/02/2023 | MIDTERM IV             |                     |                    |  |
| 18. | 13/02/2023 | L27/L28<br>08:15-09:45 |                     |                    | Ivana Marić, Full Professor                |

|     | 13/02/2023 | L29/L30<br>10:00-11:30 |                    | Ivana Marić, Full Professor                |
|-----|------------|------------------------|--------------------|--|
|     | 13/02/2023 | L31/L32<br>12:15-13:45 |                    | Tamara Šoić-Vranić,<br>Associate Professor |
|     | 13/02/2023 |                        | S18<br>14:00-15:30 | Ana Jerbić Radetić MD                      |
| 19. | 20/02/2023 | L33/L34<br>08:15-09:45 |                    | Ivana Marić, Full Professor                |
|     | 20/02/2023 | L35/L36<br>10:00-11:30 |                    | Ivana Marić, Full Professor                |
|     | 20/02/2023 | L37/L38<br>12:15-13:45 |                    | Sanja Zoričić Cvek, Full<br>Professor      |
|     | 20/02/2023 |                        | S19<br>14:00-15:30 | Juraj Arbanas, Associate<br>Professor      |
|     | 20/02/2023 | MIDTERM V              |                    |  |
| 20. | 27/02/2023 | FINAL EXAM             |                    |  |

# List of lectures and seminars:

|    | LECTURES (Topics)   | Teaching<br>hours | Location/Lecture<br>room |
|----|---|-------------------|--------------------------|
| L1 | Introduction to anatomy, a brief history of anatomy.<br>Parts of the body. General terms. | 1                 | Department of anatomy    |
| L2 | General osteology. Skeleton overview.   | 1                 | Department of anatomy    |
| L3 | General syndesmology. Continuous and discontinuous joints.                                | 1                 | Department of anatomy    |
| L4 | General syndesmology. Synovial joint composition and biomechanics.                        | 1                 | Department of anatomy    |

| L5  | General myology. Muscle tissue and muscular system.<br>Division of muscles. Skeletal, cardiac, and smooth<br>muscles. Auxiliary structures of muscles. | 1 | Department of<br>anatomy |
|-----|--|---|--------------------------|
| L6  | General myology. Muscle function and innervation.  | 1 | Department of anatomy    |
| L7  | Cardiovascular system. Arteries. Veins. Lymphatic system.  | 1 | Department of anatomy    |
| L8  | Blood vessels of the upper and lower extremities.  | 1 | Department of anatomy    |
| L9  | General features of the cranial bones Division of the cranial bones.   | 1 | Department of anatomy    |
| L10 | Cranial norms. Joints of skull bones.  | 1 | Department of anatomy    |
| L11 | Maxilla and mandible. Teeth.   | 1 | Department of anatomy    |
| L12 | Temporomandibular joint.   | 1 | Department of anatomy    |
| L13 | Distribution of gray matter and white matter of the cerebellum.  | 1 | Department of anatomy    |
| L14 | Distribution of gray matter and white matter of the cerebrum.  | 1 | Department of anatomy    |
| L15 | Head and neck muscles and fascia.  | 1 | Department of anatomy    |
| L16 | Arterial supply of head and neck.  | 1 | Department of anatomy    |
| L17 | Arterial supply of head and neck.  | 1 | Department of anatomy    |

| L18 | Overview of cranial nerves  | 1 | Department of anatomy |
|-----|---|---|-----------------------|
| L19 | Nervus facialis.  | 1 | Department of anatomy |
| L20 | Autonomic innervation of head and neck organs                                 | 1 | Department of anatomy |
| L21 | Visceral organs of the head and neck  | 1 | Department of anatomy |
| L22 | Oral cavity: overview, palatum, vasculature, and innervation                  | 1 | Department of anatomy |
| L23 | Larynx. Phonatio  | 1 | Department of anatomy |
| L24 | Pharynx. Swallowing   | 1 | Department of anatomy |
| L25 | Ear   | 1 | Department of anatomy |
| L26 | Inner ear, auditory and vestibular apparatus, auditory and vestibular pathway | 1 | Department of anatomy |
| L27 | Thoracic cavity   | 1 | Department of anatomy |
| L28 | Heart   | 1 | Department of anatomy |
| L29 | Respiratory system  | 1 | Department of anatomy |
| L30 | Lungs   | 1 | Department of anatomy |
| L31 | Abdominal cavity  | 1 | Department of anatomy |

| L32 | Digestive system                                   | 1  | Department of anatomy |
|-----|--|----|-----------------------|
| L33 | Retroperitoneal space                              | 1  | Department of anatomy |
| L34 | Urinary system                                     | 1  | Department of anatomy |
| L35 | Pelvis   | 1  | Department of anatomy |
| L36 | Male genital system                                | 1  | Department of anatomy |
| L37 | Female genital system                              | 1  | Department of anatomy |
| L38 | Aorta abdominalis. Vena cava inferior. Vena portae | 1  | Department of anatomy |
|     | Total number of lectures                           | 38 |                       |

|    | SEMINARS (Topics)                                  | Teaching hours | Location/Lecture room |
|----|--|----------------|-----------------------|
| S1 | General osteology. Bone tissue. Development of     | 2              | Department of         |
|    | bone. Bones of the upper and lower extremity.      |                | anatomy               |
| S2 | General syndesmology. Division of joints by shape. |                | Department of         |
|    | Joints of the upper and lower extremity            | 2              | anatomy               |
| S3 | General myology. Muscles of upper and lower        |                | Department of         |
|    | extremity  | 2              | anatomy               |
| S4 | General neurology. Peripheral nervous system.      |                | Department of         |
|    | Nerves of the upper and lower extremity.           | 2              | anatomy               |
| S5 | Theoretical work                                   |                | Department of         |
|    |  | 2              | anatomy               |
| S6 | Isolated skull bones                               |                | Department of         |
|    |  | 2              | anatomy               |

| S7  | Nervous tissue. Division and organs of the nervous    |    | Department of |
|-----|---|----|---------------|
|     | system, anatomical and functional. Spinal cord        | 3  | anatomy       |
| S8  | CNS Functional systems. Motor systems. Sensory        |    | Department of |
|     | systems.  | 3  | anatomy       |
| S9  | Theoretical work                                      | 2  | Department of |
|     |   |    | anatomy       |
| S10 | Head muscles. Arteries and veins of the head and      | 3  | Department of |
|     | neck.   |    | anatomy       |
| S11 | Cranial nerves (nn. VII, VIII, IX, X, XI, XII)        | 3  | Department of |
|     |   |    | anatomy       |
| S12 | Cranial nerves (nn. I, II, III, IV, V, VI)            | 3  | Department of |
|     |   |    | anatomy       |
| S13 | Theoretical work                                      | 2  | Department of |
|     |   |    | anatomy       |
| S14 | Pharynx   | 3  | Department of |
|     |   |    | anatomy       |
| S15 | Larynx  | 3  | Department of |
|     |   |    | anatomy       |
| S16 | Eyeball: blood supply, lens &cornea, iris, and ocular | 2  | Department of |
|     | chambers, retina                                      |    | anatomy       |
| S17 | Theoretical work                                      | 2  | Department of |
|     |   |    | anatomy       |
| S18 | Heart. Aorta (arcus, aorta thoracica). V. cava        | 2  | Department of |
|     | superior.   |    | anatomy       |
| S19 | Theoretical work                                      | 2  | Department of |
|     |   |    | anatomy       |
|     | Total   | 46 |               |

|     | Topics of Practicals  | Teaching<br>Hours | Lecture Room             |
|-----|---|-------------------|--------------------------|
| P1  | Bones of upper extremity  | 2                 | Department of<br>Anatomy |
| P2  | Bones of lower extremity.   | 2                 | Department of<br>Anatomy |
| P3  | Joints of upper extremity.  | 2                 | Department of<br>Anatomy |
| P4  | Joints of lower extremity   | 2                 | Department of<br>Anatomy |
| P5  | Muscles of the upper extremity.   | 2                 | Department of<br>Anatomy |
| P6  | Muscles of the lower extremity  | 2                 | Department of<br>Anatomy |
| P7  | Blood vessels of upper and lower extremity  | 2                 | Department of<br>Anatomy |
| P8  | Nerves of upper and lower extremity. Review of the upper and lower extremity.                       | 2                 | Department of<br>Anatomy |
| P9  | Work on the specimen  | 2                 | Department of<br>Anatomy |
| P10 | Work on the specimen  | 2                 | Department of<br>Anatomy |
| P11 | Isolated bones of the cerebral part of the skull. Basis cranii interna                              | 2                 | Department of<br>Anatomy |
| P12 | Isolated bones of the cerebral part of the skull. Basis cranii interna                              | 2                 | Department of<br>Anatomy |
| P13 | Mandible. Maxilla. Teeth. Cavities of viscerocranium<br>Vertebrae, ribs, sternum. Vertebral column. | 2                 | Department of<br>Anatomy |

| P14 | General description of the brain. Medulla spinalis.<br>Brainstem | 2 | Department of<br>Anatomy |
|-----|--|---|--------------------------|
| P15 | Cerebellum. Diencephalon. Telencephalon. Basal ganglia           | 2 | Department of<br>Anatomy |
| P16 | Cerebrovascular and ventricular system. Meninges                 | 2 | Department of<br>Anatomy |
| P17 | Work on the specimen   | 2 | Department of<br>Anatomy |
| P18 | Work on the specimen   | 2 | Department of<br>Anatomy |
| P19 | Regio mediana cervicalis. Trigonum submandibulare                | 2 | Department of<br>Anatomy |
| P20 | Trigonum caroticum. Spatium parapharyngeum                       | 2 | Department of<br>Anatomy |
| P21 | Spatium scalenovertebrale. Regio coli lateralis                  | 2 | Department of<br>Anatomy |
| P22 | Superficial neck regions. Posterior cervical region              | 2 | Department of<br>Anatomy |
| P23 | Infratemporal fossa. Pterygopalaine fossa                        | 2 | Department of<br>Anatomy |
| P24 | Parotideomaseteric region. Fossa retromandibularis               | 2 | Department of<br>Anatomy |
| P25 | Work on the specimen   | 2 | Department of<br>Anatomy |
| P26 | Work on the specimen   | 2 | Department of<br>Anatomy |
| P27 | Teeth. Oral cavity   | 2 | Department of<br>Anatomy |

| P28 | Pharynx  | 2  | Department of<br>Anatomy |
|-----|--|----|--------------------------|
| P29 | Larynx. Thyroid gland                            | 2  | Department of<br>Anatomy |
| P30 | Nasal cavity                                     | 2  | Department of<br>Anatomy |
| P31 | Orbit  | 2  | Department of<br>Anatomy |
| P32 | Lacrimal apparatus. Eyelids. Muscles of the eye. | 2  | Department of<br>Anatomy |
| P33 | Work on the specimen.                            | 2  | Department of<br>Anatomy |
|     | Total  | 66 |                          |

|    | FINAL EXAM DATES |
|----|------------------|
| 1. | 27.02.2023.      |
| 2. | 06.03.2023.      |
| 3. | 27.06.2023.      |
| 4. | 10.07.2023.      |
| 5. | 04.09.2023.      |
| 6. | 18.09.2023.      |