

**Semmelweis University**  
**Department of Anatomy, Histology and Embryology**  
**Academic Year 2021/2022 Spring Semester**

# **ANATOMY HANDBOOK**



**Dr. Sándor Katz Ph.D.**  
**Assistant Professor**  
**Course Director**

Dr. Alán Alpár  
Full Professor  
Head of Department



# Anatomy ‘B’ Program for Physiotherapy, Nursing, Optometry and Midwifery Students

**Topics of second semester: *Internal organs and neuroanatomy***

**Place of lectures and practices: *Department of Anatomy, Histology and Embryology, Huzella’s Lecture Hall (2nd floor)***

Budapest, Tűzoltó Street 58.

H-1094 Budapest

<https://semmelweis.hu/anatomia/en/>

Weekly curriculum	Lectures Tuesdays: 11.45-14.00	Practices Thursdays: 8.00-9.30
<b>1st week</b>	<b>February 8</b> Introduction to the splanchnology. Oral cavity and pharynx. (Dr. Katz)	
<b>2nd week</b>	<b>February 15</b> Respiratory system (Prof. Kiss)	<b>February 17</b> Respiratory system. Specimen demonstration. (Dr. Katz)
<b>3rd week</b>	<b>February 22</b> Heart (Dr. Katz)	
<b>4th week</b>	<b>March 1</b> Chest cavity and mediastinum. (Dr. Katz)	<b>March 3</b> Cardiovascular system. Specimen demonstration. (Dr. Katz)
<b>5th week</b>	<b>March 8</b> Digestive system I. (esophagus, stomach, liver) Digestive system II. (pancreas, small and large intestines) (Prof. Kiss)	
<b>6th week</b>	<b>March 15</b> <b>National Holiday</b>	<b>March 17</b> Gastrointestinal tract. Specimen demonstration. (Dr. Katz)
<b>7th week</b>	<b>March 22</b> Urinary system (Dr. Katz)	

Weekly curriculum	Lectures Tuesdays: 11.45-14.00	Practices Thursdays: 8.00-9.30
8th week	<b>March 29</b> Reproductive system (Dr. Katz)	<b>March 31</b> Urogenital system. Specimen demonstration. (Dr. Katz)
9th week	<b>April 5</b> Review. (Dr. Katz)	
	<b>Spring break: April 11-18</b>	
10th week	<b>April 19</b> Nervous tissue. Meninges, gross anatomy of the brain. (Prof. Kiss)	<b>April 21</b> Spinal cord and sensory pathways. Specimen demonstration. (Dr. Katz)
11th week	<b>April 26</b> Diencephalon, brain stem, cerebellum and basal ganglia. Motor pathways. (Dr. Katz)	
12th week	<b>May 3</b> Cranial nerves. (Prof. Kiss)	<b>May 5</b> Nervous system. Sensory organs I. Specimen demonstration. (Dr. Katz)
13th week	<b>May 10</b> Neuroendocrine system. (Prof. Kiss)	
14th week	<b>May 17</b> Sensory organs II. Review. (Dr. Katz)	<b>May 19</b> Sensory organs III. Facultative pre exam. (Dr. Katz)

**Textbook:** *either* ‘Anatomy An Essential Textbook’ by Gilroy (publisher: Thieme) *or* ‘Color Atlas of Human Anatomy’ Vol. 1-3 (publisher: Thieme)

**Anatomy atlas:** ‘Human Gross Anatomy’ by Olinger (publisher: LWW)

## Human Anatomy 'A' and 'B' exams

The Anatomy 'A' and 'B' exams will be held in person at the Anatomy Department, Huzella's Lecture Hall (2nd floor) during the exam period (*May 23, 2022 - July 8, 2022.*). The parts of the exams are listed below.

The 'A' and 'B' exams are **oral exams** with preparation time.

**Parts of the Anatomy 'B' exam:** description of **one topic from the 'Internal organs'** and **one topic from the 'Neuroanatomy'**. The average of the two parts gives the final grade. If you fail one part of the exam, the entire exam will be failed and you have to retake it completely.

**THOSE WHO DID NOT PASS THE ANATOMY 'A' EXAM (LOCOMOTOR SYSTEM) BEFORE, CAN NOT TAKE THE ANATOMY B EXAM.**

**Parts of the Anatomy 'A' CV exam:** description of **one topic from the 'Upper limb, chest cavity and vertebral column. Histology'** and **one topic from the 'Lower limb, abdominal muscles and skull'**. The average of the two parts gives the final grade. If you fail one part of the exam, the entire exam will be failed and you have to retake it completely.

## RULES AND REGULATIONS OF ANATOMY EXAMS

- Every student has to identify herself/himself by providing a photographic card (ID card, passport, student card or driving license).
- DO NOT talk to, signal to or disturb other students during the exam.
- During the exam, it is strictly forbidden to talk or disturb other students. All forms of communication among students is strictly forbidden.
- DO NOT leave the exam room for any reason without the permission of the teacher.

## ADVICE AND INFORMATION

- Listen to the teacher and follow the instructions.
- If you are not sure about what to do, raise your hand to attract attention. The teacher will come to your assistance.
- YOU MUST NOT ASK FOR, AND WILL NOT BE GIVEN ANY EXPLANATION OF THE TOPICS.

## WARNING

- MAKE SURE YOU ARE ON TIME. KNOW THE DATE, TIME AND PLACE (Huzella's Lecture Hall) OF YOUR TEST AND ARRIVE WELL BEFORE THE SCHEDULED START TIME. IF YOU ARRIVE LATE, YOU WILL NOT BE ALLOWED TO TAKE THE EXAM.
- YOU MUST NOT BECOME INVOLVED IN ANY UNFAIR OR DISHONEST PRACTICE IN ANY PART OF THE EXAMINATION.
- YOU MUST NOT SIT FOR AN EXAMINATION IN THE NAME OF ANOTHER STUDENT.
- YOU MUST NOT HAVE IN YOUR POSSESSION ANY UNAUTHORISED MATERIAL OR EQUIPMENT WHICH MIGHT GIVE YOU AN UNFAIR ADVANTAGE.
- **DO NOT KEEP *your mobile phone, smart watch, written/printed study aids, books or any unauthorised material next to you during the exam, even if you do not intend to use it.* Such actions are considered as violation of the Study and Examination Policy of the Semmelweis University and it will result in an immediate termination of the examination with a fail and may be followed by a legal procedure.**

## Topics of Anatomy 'A' (first semester)

### Upper limb, chest cavity and vertebral column. Histology

1. Planes, directions, way of orientation in human body. Epithelial tissue.
2. Humerus, radius and ulna. Muscles of the forearm.
3. Carpal bones, carpal tunnel and related muscles. Metacarpal bones and fingers.
4. Shoulder joint. Muscles acting on the shoulder joint.
5. Elbow. Muscles acting on the elbow joint.
6. Wrist joint. Muscles of the hand.
7. General osteology, bone tissue, bone development. Wrist joint.
8. Flexor muscles of the forearm.
9. General myology, muscle tissue, structure of tendons. Extensor muscles of the forearm.
10. Cartilaginous and bone tissue. Flexor muscles of the forearm.
11. Blood and blood vessels. Structures and types of the joints.
12. Blood supply of the upper limb. Extensor muscles of the forearm.
13. Innervation of the upper limb. Carpal tunnel.
14. Connective tissue. Triangular and quadrangular spaces of the upper limb.
15. Vertebral column and superficial back muscles.
16. Chest cavity, diaphragm. Respiratory movements and muscles.

17. Muscles of the back. Movements of the vertebral column.

### **Lower limb, abdominal muscles and skull**

1. Bones of the lower limb. Hip joint.
2. Gluteal muscles, suprapiriform and infrapiriform hiatuses.
3. Abdominal muscles. Inguinal canal and subinguinal hiatus.
4. Hip: bones and joints.
5. Knee joint, muscles acting on the knee.
6. Tibia and fibula. Tarsal bones. Muscles of the leg.
7. Extensor and flexor muscles of the thigh.
8. Extensor and flexor muscles of the leg.
9. Structure of the foot, mechanism of walking. Muscles of the foot.
10. Pelvis, statics of the pelvis. Muscles of the pelvic region.
11. Ankle joint. Muscles of the foot.
12. Ankle joint. Blood supply of the lower limb.
13. Knee joint. Innervation of the lower limb.
14. Hernial canals, femoral trigone.
15. Structure of the skull: neurocranium.
16. Structure of the skull: viscerocranium.
17. Nasal cavity and orbit.
18. Bones of the skull and sutures. Pterygopalatine fossa.
19. Base of the skull.
20. Muscles of the head.

### **Topics of Anatomy 'B' (second semester)**

#### **Internal organs**

1. Oral cavity and teeth.
2. Oral cavity and tongue..
3. Salivary glands and pharynx.
4. Respiratory system: nasal cavity and larynx.
5. Respiratory system: trachea and lungs.
6. Chest cavity, anterior mediastinum.
7. Posterior mediastinum.

8. Heart: gross anatomy of the heart.
9. Blood supply of the heart.
10. Digestive system: esophagus and stomach.
11. Digestive system: small intestine.
12. Digestive system: large intestine.
13. Liver and pancreas.
14. Urinary system: kidney.
15. Urinary system: ureter, urinary bladder and urethra (male and female urethra).
16. Male genital organs.
17. Female genital organs.

## **Neuroanatomy**

1. Nervous tissue and synapses. Fasciculus gracilis and cuneatus.
2. Spinal cord.
3. Gross anatomy of the brain, meningeal layer, sinuses. Spinothalamic tracts.
4. Brain stem and diencephalon. Corticospinal tracts.
5. Cerebrum, cerebellum and basal ganglia. Spinocerebellar tracts.
6. Sensory pathways.
7. Motor pathways.
8. Cranial nerves: II. IV. VI. XI. XII.
9. Cranial nerves: VII. IX. X.
10. Neuroendocrine system: hypothalamus and hypophysis.
11. Neuroendocrine system: thyroid, parathyroid and adrenal glands, pancreas.
12. Visual apparatus. Oculomotor nerve.
13. Fibrous tunic of the eye.
14. Vascular tunic of the eye.
15. Nervous tunic of the eye.
16. Ear and hearing.

***Dr. Sándor Katz Ph.D.***  
***Course Director***