



Curriculum development based on LEANBody Project in Masaryk University



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1. Description of current curriculum

Anatomy is taught in the first two semesters of the study program General Medicine for domestic students in the Czech language using Latin nomenclature and international students in English using both Latin and English nomenclature. In the first semester, the curriculum is focused on the locomotor system, and in the second semester, visceral organs and neuroanatomy. Complete online learning was prepared during the COVID-19 pandemic and all materials including commented PowerPoint presentations, and demonstrations of anatomy specimens are available for students in the interactive syllabus on the Information System. The Department of Anatomy was awarded by rector of the Masaryk University for innovations in teaching preparation of online materials and innovation of the curriculum.

The whole subject of Anatomy is composed of particular subjects. Every week, the same topic is discussed in the Anatomy lecture and seminar. The anatomy lecture gives a theoretical background to students and is always placed before the seminar. In contrast to the lecture, the Anatomy seminar is practical where students work with anatomical specimens.

After completing the teaching unit (e.g. upper extremity or lower extremity), students undergo Anatomy practice in the Simulation center where the regional anatomy in cross-sections is taught.

Anatomy dissection is performed at the end of the semester and is focused on dissection of cadavers. At the end of the first semester, dissection of the back and extremities is performed and

The complete curriculum is described in *Supplement Materials 1 and 2*.

2. Evaluation methods, teaching hours, and credits

Anatomy – lecture I is taught in the autumn semester and is composed of 45 teaching hours.

The students are evaluated after completing Anatomy – lecture II in the final examination.

Two credits are given based on attendance on the first USMLE-based test (see below).

Anatomy – lecture II - is taught in the autumn semester and is composed of 45 teaching hours. The subject is evaluated in the scope of the final examination after completing all particular subjects (Anatomy – seminar I, II, Anatomy – practice I, II, and Anatomy –

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Dissection I, II). The final examination in Anatomy consists of a practical and a theoretical part. To pass successfully the exam, the student has to obtain at least a grade E in both practical and theoretical parts of the final examination. The practical part of the final examination is represented by the results of the examination in Anatomy I – Dissection. The student, who has not obtained at least a grade E during the Anatomy I - Dissection, will be re-examined at the respective date of the theoretical part of the final examination in Anatomy, together with the practical exam from Anatomy II dissection. The theoretical part of the final examination consists of 4 topic questions (from Locomotor System 3, Organ Systems 3, Nervous System 2, regional Anatomy 1 and presents anatomical descriptions of two imaging techniques). The complete list of questions is in *Supplement Material 3*. Students obtain 5 credits after a successful examination.

Anatomy – seminar I is taught in the autumn semester and is composed of 45 hours (15 seminars). Students obtain 2 credits based on attendance at the seminars (one absence is allowed).

Anatomy – seminar II is taught in the spring semester and is composed of 45 hours (15 seminars). Students obtain 2 credits based on attendance on the seminars (one absence is allowed).

Anatomy – a practice I is taught in the autumn semester and is composed of 6 hours (two practices) in the Simulation center. Students obtain 2 credits based on 100% attendance on the practices.

Anatomy – practice II is taught in the spring semester and is composed of 9 hours (three practices) in the Simulation Center. Students obtain 2 credits based on 100% attendance on the practices.

Anatomy – dissection I is taught at the end of the autumn semester and is composed of 20 hours of anatomical dissection. Students obtain 2 credits based on 100% attendance on the practices. Upon completing the practice, the student is examined from 10 random anatomical structures on dissected specimens. A minimum of 6 out of 10 possible points (grade E) in the examination at the end of the course is required for fulfillment. For unsuccessful students, a resit date will be offered (involved in the final exam date). This examination is considered a practical examination which is a part of the final examination.

Anatomy – dissection II is taught at the end of the spring semester and is composed of 40 hours of anatomical dissection. Students obtain 2 credits based on 100% attendance on the practices. A student is examined from 10 random anatomical structures on dissected

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specimens on the day of the final examination. A minimum of 6 out of 10 possible points (grade E) in the examination at the end of the course is required for fulfillment.

3. USMLE-based tests

During the autumn and spring semesters, three USMLE-based tests that have motivational character. Successful students needn't attend the final oral examination.

The first test is written in the autumn semester and is focused on the locomotor system. The second test is written in the spring semester and is focused on the locomotor system and visceral organs. The last test is written at the end of the spring semester and is focused on the locomotor system, visceral organs, and neuroanatomy. The Head of the Department divides the students into four groups based on the results. Students in the 1st group obtain 3 points, in the 2nd group 2 points, in the 3rd group 1 point, and in the 4th group 0 points. Once the student is in the 4th group he/she has to attend the final examination. In the Final validation, students with a total of 9 and 8 points are eligible to obtain an A from the final examination. Students with 7 points B and students with 6 points C. The students must have appropriate results also from the practical exams.

4. Possible changes in curriculum based on LEANBody Project

I see very great potency in the Intended Learning Outcomes (ILOs) used in the University of Zagreb. The ILOs give very high specifications of what is expected in every class. It specifies which structures are crucial for the appropriate topic. The ILOs have links to the examination questions. Therefore, our institution would use ILO in all classes starting in the 2025/2026 academic year. We plan to be in close collaboration with the Zagreb Team.

The second point I took from the LEANBody Project is Professionalism and ethical behavior. From the very first class, we explained to our students those cadavers were real human beings and that they should get great respect. Based on this, we organize The Thanksgiving Event dedicated to Donors where students come and can think about role cadavers in their curriculum.