Course Title:	**Anatomy with embryology and basic genetics**
Course Director:	**Prof. dr hab. Jerzy Walocha**
Coordinator/contact:	Dr n. med. Małgorzata Mazur, malg.mazur@uj.edu.pl
Responsible person/contact:	Dr n. med. Małgorzata Mazur, malg.mazur@uj.edu.pl
Address:	**Chair of Anatomy, Kopernika 12 street**
Year:	**1-DDS**
Total number of hours:	**214**
Lectures:	65
Seminars:	
Labs/Practicals:	149
Others (e.g. recitation):	Obligatory readings
Exams:	5
Conduct/Dress Code:	**White lab coat**

Student's Evaluation:

-credit requirements:

Several mid-semestral tests will take place following the syllabus
The tests will consist of two parts:
a). the laboratory part (identification of parts of organs) –**20 questions** (you can receive maximally 2 points for each well recognized specimen). There is 30 seconds per each specimen for its recognition during a mid-semestral test or 45 seconds during the final exam.
Passing the laboratory part **is NOT a prerequisite** for participation in the second part of the mid-semestral test.
The list of specimens placed in the end of syllabus is a **supplementary** list only (it is only a help for the Students), so both during the mid-semestral and final practical exams, some extra specimens (out of the list) can be used.
b). The theoretical part (TEST: multiple choice, matching, etc.) - **60 questions** (1 point for each correct answer). The test lasts 90 minutes. Question will be based on lectures, labs and a few from obligatory readings. Each student will receive confidential code number. Results of the test are available on the web-page of the Chair of Anatomy (www.katedra–anatomii.cm-uj.krakow.pl) → STUDENCI → dentistry
It is not possible to postpone the mid-semestral test or to take it earlier.
Only Students who have received at least **50%** from all mid-semestral tests (average, including both theoretical and practical) are allowed to take the final anatomy exam (both practical exam and the test). Grading system, both for the mid-semestral tests, practical exams and the final exam is as follows:
excellent = approximately 90% of all possible points;
very good = 80%;
good = 70%,
satisfactory = 60%;
sufficient = 50%.
A Student can be exempted from the final exam if the results of all mid-semestral tests (**including both practical and theoretical tests**) exceed **90%.** A Student is exempted from the final practical exam if results of **all practical mid-semestral tests** exceed **80%.**

The final grade consists of: the value of points received during final practical + value of points received during final test and points received during the mid-semestral tests above 60% points, (for each 10 points above 60%, a student gets 1 point extra) Student who does NOT receive credit must take credit test in September. The material of the test covers the whole material. After passing the test student is allowed to take both practical and theoretical exams.

-attendance requirements:	labs are **obligatory,** lectures not All excused absences on the labs must be passed. Student who have been absent must answer 10 practical questions regarding material discussed on the following lab.
-type of the final exam:	The final exam, held in June, is **the ultimate basis for the completion of the course. Evaluation of the anatomy & embryology course is based on the results of the final exam, however we consider also the results of the mid-semestral tests.** The final exam, covering the whole material of the course consists of two parts: **(a) The laboratory part**: identification of specific structures shown on cadavers or radiograms (head and neck); their parts; separate organs or bones. (30 questions – 2 : bones; 6: skull; 2: upper & lower limb; 2: thorax; 2: abdomen & pelvis; 12: head & neck; 4 – central nervous system). **Passing the laboratory part is NOT a prerequisite for participation in the second part of the final exam .** **(b) The theoretical part** (multiple choice test, matching, etc.) questions may also include problems based on histology. The test consists of 100 questions which cover the whole material of the course and include also embryology problems (80% of questions is based on the material on Head, neck, skull and central nervous system).
- retake information:	**The make-up exam** has the same form but the test consists of 60 questions (multiple choice and matching) (September 2022)

Teachers: Prof. dr hab. Jerzy Walocha, Dr Małgorzata Mazur, Dr Marcin Lipski

Week	Day	Time	Type of classes	N0 of hours	Group	Topic	teacher	Place
Week 1 October 4-8	Mo	9.45-11.15	lab	2	I,II	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. Curves of vertebral column.	Prof. Jerzy Walocha, MD, Ph.D/ Dr Małgorzata Mazur, MD,PhD	Dissection room 1,3,4
	Mo	12.15-13.45	lec	2	Whole class	Basic Anatomy. Descriptive Anatomical Terms : Terms Related to Position and Movement. Connective Tissue : general structure of the bone, Biological & mechanical properties of bones. Classification of bones. Joints : fibrous, cartilaginous & synovial joints.	Prof. Jerzy Walocha, MD, Ph.D	E-learning
	Wed	10-11.30	lab	2	I, II	Ribs. Sternum. The thoracic cage. Bones of the shoulder girdle: scapula, clavicle. Acromioclavicular, sternoclavicular joint.	Prof. Jerzy Walocha, MD, Ph.D\ Dr Małgorzata Mazur, MD,PhD	Dissection room 1,3,4

week 2 October 11-15	Mo	9.45-11.15	Lab	2	I,II	Humerus. Shoulder joint. Radius. Ulna. Bones of the hand. Elbow joint. Wrist joint. The carpal tunnel. The hand as a functional unit.	Prof. Jerzy Walocha, MD, Ph.D/ Dr Małgorzata Mazur, MD,PhD	Room 1,3,4
	Mo	12.15-13.45	lec	2	Whole class	Vascular system: Heart. Blood vessels. Lymphatic system. Muscles and Structures Associated with Muscles.	Prof. Jerzy Walocha, MD, Ph.D/	E-learning
	Wed	10-11.30	Lab	2	I,II	The bony pelvis. Hip bone. Sacrum. Coccyx. Sacroiliac joints. Symphysis pubis. Greater & lesser sciatic foramina. Inquinal ligament. Sex differences of the pelvis. Femur. Hip joint. Acetabulum. Tibia.	As above	Room 1,3,4

						Fibula. Patella. Knee joint. (intra- & extracapsular ligaments) Menisci. Bones of the foot. Ankle joint.		
		11.30 - 13.00	lab	2	Whole class	Practical review	Dr Małgorzata Mazur	Room1,3,4
week 3 October 18-22	Mo	9.45- 11.15	Lab	2	I,II	Bones of the Neurocranium. Frontal Bone. Occipital Bone.Sphenoid bone.	As above	Room 1,3,4
	Mo	12.15- 13.45	lec	2	Whole class	Divisions of the skull. Development of the skull.	Prof. Jerzy Walocha	E-learning
	Wed	10.00 - 11.30	Lab	2	I,II	Ethmoid Bone. Parietal Bone. Temporal Bone. Review of the specimens.	As above	Room 1,3,4
		11.30- 13.00	lab	2	Whole class	Practical review	Dr Małgorzata Mazur	Room1, 3,4
week 4 October 25-29	Mo	9.45- 11.15	Lab	2	I,II	Bones of the Visceral Cranium. Mandible. Hyoid Bone. Maxilla. Palatine Bone. Inferior Nasal Concha. Lacrimal Bone. Vomer. Zygomatic Bone. Zygomatic and mandible fractures.	As above	Room 1,3,4
	Mo	12.15- 13.45	lec	2	Whole class	The Ear: External Ear. Middle Ear (Tympanic Cavity). Inner Ear (Osseous Labyrinth).	Prof. Jerzy Walocha	E-learning
	Wed	10.00 - 11.30	Lab	2	I,II	Orbital Cavity. Nasal Cavity. Oral Cavity. Limitation and and communication.	As above	Room 1,3,4
		11.30 - 13.00	lab	2	Whole class	Practical review	Dr Małgorzata Mazur	Room 1,3,4

week 5 Nov 3 1.11-day off (All Saints day)	Wed	10-11.30	Lab	2		I,II	Anterior middle and posterior cranial fossae practically.	As above	Room 1,3,4

week 6 November 8-12	Mo	9.45-11.15	Lab	2	I,II	Temporal, infratemporal, retromandibular and pterygopalatine fossae.- practically	As above	Room 1,3,4
	Mo	12.15-13.45	lec	2	Whole class	Anterior, middle and posterior cranial fossae- limitation communication Openings in the skull- contents. Pterygopalatine fossa- limitation, communication.	Prof. Jerzy Walocha	E-learning
	WED	10-11.30	lab	2	I,II	Practical review	As above	Room 1,3,4
		11.30-13.00	lab	2	Whole class	Practical review	Dr M.Mazur	Room 1,3,4

week 7 November 15-19	Mo	9.45-11.15	lab	2	I,II	Practical review	As above	Room 1,3,4
	Mo	12.15-13.45	lec	2	Whole class	**Test 1 – osteology and skull(60 Questions)**	Prof. Jerzy Walocha	online
	Wed	10.00-11.30	Lab	2	I,II	**Practical exam on osteology and skull-20 details.**	As above	Room 1-5

week 8 November 22-26	Mo	9.45-11.15	Lab	2	I,II	Spinal cord, brainstem, medulla oblongata, midbrain.	As above	Room 1,3,4
	Mo	12.15-13.45	lec	2	Whole class	Introduction into the anatomy of the Nervous system.Divisions of the nervous system. Neurons.Central, peripheral and autonomic nervous system.	Prof. Jerzy Walocha	E-learning
	Wed	10.00-11.30	Lab	2	I,II	Exit of the cranial nerves from brain. Brainstem and its relation with the cerebellum, Cerebellum. Interbrain. 3rd and 4th ventricles.	As above	Room 1,3,4
		11.30 -13.00	lab	2	Whole class	Practical review	Dr Małgorzata Mazur	Room1, 3,4

week 9 November 29- December 3	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Telencephalon(hemisphere). Brodman areas. Blood supply of the brain Motor neuronal tracts	As above Prof. Jerzy Walocha	Room 1,3,4 E-learning
	Wed	10:00-11:30 11.30 -13.00	Lab lab	2 2	I,II Whole class	Practical review Practical review	As above Dr Małgorzata Mazur	Room 1,3,4 Room1, 3,4

Week 10 December 6-10	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Practical review. Sensory neuronal tracts	As above Prof. Jerzy Walocha	Room 1,3,4 E-learning
	Wed	10.00-11.30 11.30 -13.00	Lab lab	2 2	I,II Whole class	Practical review Practical review	As above Dr Małgorzata Mazur	Room 1,3,4 Room1, 3,4

week 11 December 13-17	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Practical review **Test 2 on central nervous system- 60 questions**	As above Prof. Jerzy Walocha	Room 1,3,4 online
	Wed	10.00-11.30	lab	2	I,II	**Practical exam on CNS- 20 questions.**	As above	Room 1-5

December 20 th- January 3rd CHRISTMAS BREAK

week 12 January 3-7 (**6th – day off)**	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Muscles of the neck and nuchal region. Cervical plexus Head and neck development	As above Dr Małgorzata Mazur	Room 1,3,4 E-learning
	Wed	10-11.30	lab	2	I,II	Surface anatomy of the neck. Triangles of the neck. Thyroid gland. Parathyroid glands.	As above	Room 1,3,4

week 13 January 10-14	Mon	9.45-11.15 12.15-13.45	Lab lec	2 2	I, II Whole class	Vagus nerve, accessory nerve, hypoglossal nerve and sympathetic trunk(cervical part) The Orbit & its walls. Structure of the Eyeball. Nerve & blood supply of the eyeball. Ciliary ganglion. The accessory organs of the eyeball (muscles, eyelids, lacrimal apparatus). Optic nerve. Oculomotor nerve. Trochlear nerve. Abducent nerve. Clinical notes : Horner's syndrome. Crocodile tears syndrome. Glaucoma. Cataract. Retinal detachment.	As above Prof.Jerzy Walocha	Room 1,3,4 E-learning
	Wed	10.00-11.30	Lab	2	I,II	External & internal carotid arteries. External & internal jugular veins. Lymph drainage of the neck.	As above	Room 1,3,4

week 14 January 17-21	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Pharynx, parapharyngeal space, glossopharyngeal space, tonsils The Ear (external, middle & internal). Vestibulocochlear nerve. Temporomandibular joint. Clinical notes : Hyperacusis. Otosclerosis. Conductive deafness. Otitis media. Meniere's disease (labyrinthine hydrops).	As above Prof . Jerzy Walocha	Room 1,3,4 e-learning
	Wed	10.00-11.30	lab	2	I,II	Larynx- structure, blood and nerve supply, lymph drainage.	As above	Room 1,3,4
	Wed	11.30-13.00	Lab	2	whole class	Practical review	Dr M. Mazur	Room1, 3,4

Week 15 January 24-28	Mon	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Practical review **Test 3 on neck, ear and eye- 60 questions**	As above Prof. Jerzy Walocha	Room 1,3 online
	Wed	10.00-11.30	lab	2	I,II	**Practical exam on neck, ear and eye- 20 questions.**	As above	Room 1-5

January 31st – February 27th **WINTER BREAK**

week 16 February 28th March 4th	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Blood and nerve supply of the face. Facial artery and nerve. Parotid gland. Development of face.	As above Prof. Jerzy Walocha	Room 1,3,4 E-learning
	Wed	10.00-11.30	lab	2	I,II	Dura mater venous sinuses. Venous drainage of the head. Blood & nerve supply of the meninges.	As above	Room 1,3,4

week 17 March 7-11	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Oral cavity.Teeth.Gingiva. The tongue Development of the teeth	As above Prof. Jerzy Walocha	Room 1,3,4 E-learning
	Wed	10.00-11.30	lab	2	I,II	Maxillary artery. Maxillary nerve.	As above	Room 1,3,4

Week 18 March 14-18	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Mandibular division of trigeminal nerve. Communication of the pterygopalatine and infratemporal fossa (clinical correlation)	As above Prof Jerzy Walocha	Room 1,3,4 E-learning
	Wed	10.00-11.30	lab	2	I,II	Pterygopalatine, infratemporal and retromandibular fossae.	As above	Room 1,3,4

Week 19 March 21-25	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Nasal cavity- walls, nerve & blood supply. Paranasal sinuses-practically Nasal cavity- walls, nerve & blood supply. Paranasal sinuses-theoretically	As above Prof. Jerzy Walocha	Room 1,3,4 online
	Wed	10.00-11.30	lab	2	I,II	Practical review	As above	Room 1,3,4

Week 20 March 28-30, April 1st	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Practical review **Test 4 – on head(60 questions)**	As above Prof.J.Walocha	Room 1,3,4 online
	Wed	10.00-11.30	lab	2	I,II	**Practical exam on head- 20 questions.**	As above	Room 1-5

Week 21 April 4-8	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Thoracic walls- muscles, vessels , nerves. The diaphragm. Mediastinum. Pericardium. Conducting system of the heart. Arterial supply and venous drainage of the heart.	As above Prof. Jerzy Walocha	Room 1,3,4 E-learning
	Wed	10.00-11.30	lab	2	I,II	Lungs and heart	As above	Room 1,3,4

Easter break- April 13th-April 19th

Week 22 April 11th and April 20th	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Large vessels of the thorax: SVC, IVC, Aorta, pulmonary trunk, Pulmonary veins. Nerves of upper limb	As above Prof. Jerzy Walocha	Room 1,3,4 E-learning
	Wed	10.00-11.30	lab	2	I,II	Azygos veins. Vagus & phrenic nerves. Thoracic part of ST.	As above	Room 1,3,4

Week 23 April 25-29	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Muscles of the shoulder girdle and arm. Vascular system of upper limb	As above Prof.Jerzy Walocha	Room 1,3,4 E-learning
	Wed	10.00-11.30	lab	2	I,II	Muscles of forearm and hand	As above	Room 1,3,4
	Fri	12:30-14.45	Lab.	3	Whole class	Practical review	Prof. Jerzy Walocha	1,3,4

Week 24 May 2-6	Mo	9.45-11.15	lab	2	I,II	Nerves of upper limb .	As above	Room 1,3,4
	Wed	10.00-11.30	lab	2	I,II	Arterial and venous blood supply of upper limb.	As above	Room 1,3,4

Week 25 May 9-13	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Walls of abdomen and pelvis.Peritoneum. Vascular system of abdomen and pelvis Portal circulation.	As above Prof. Jerzy Walocha	Room 1,3,4 E-learning
	Wed	10.00-11.30	lab	2	I,II	Gastrointestinal tract-esophagus, stomach, small and large intestine. Liver.Gallbladder.	As above	Room 1,3,4

Week 26 May 16-20	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Retroperitoneal space, kidneys, suprarenal glans, ureters, abdominal aorta, IVC. Abdominal cavity- mini quiz	As above Prof. Jerzy walocha	Room 1,3,4 E-learning
	Wed	10.00-11.30	lab	2	I,II	Rectum. Urinary bladder. Urinary tract	As above	Room 1,3,4

Week 27 May 23-27	Mon	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Male and female genital organs. Nerves of the lower limb – clinical correlation	As above Prof. Jerzy Walocha	Room 1,3,4 E-learning
	Wed	10.00-11.30	lab	2	I,II	Muscles of the lower limb.	As above	Room 1,3,4
	Fri	12:30-14.45	lab	3	Whole class	Practical review	Prof. J. Walocha	Room 1,3,4

week 28 May 30, June 3	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Nerves of the lower limb. Arteries of the lower limb – clinical correlations. Muscles. Superficial veins and lymphatic drainage of the upper limb – clinical correlations.	As above Prof.Jerzy Walocha	Room 1,3,4 E-learning
	Wed	10.00-11.30	lab	2	I,II	Vessels of the lower limb.	As above	Room 1,3,4
	Fri	12:30-14.00	Lab.	2	Whole class	Practical review	Prof. Jerzy Walocha	1,3,4

Week 29 June 6-10	Mo	9.45-11.15 12.15-13.45	Lab lec	2 2	I,II Whole class	Practical review **Test 5 (thorax, upper limb, abdomen, pelvis, lower limb) –60 questions**	As above Prof. Jerzy Walocha	Rooms 1,3,4 online
	Wed	10-11.30	Lab	2	I, II	**Practical exam on thorax, upper limb, abdomen, pelvis, lower limb –20 specimens**	As above	Rooms 1-5

week 30 June 13-17	Mo	9.45-11.15	lab	2	I,II	Review of specimens to the final practical exam		As above	Room 1,3,4
	Wed	10.00-11.30	lab	2	I,II	Review of specimens to the final practical exam		As above	Room 1,3,4
	Fri	12:30-14.00	Lab.	2	Whole class	Review of specimens to the final practical exam		Prof. Jerzy Walocha	1,3,4

week 31 June 20-24	Mo	12.15-13.45	lec	2	whole class	Final test on anatomy – 100 questions	Prof. Jerzy Walocha	online
	Fri	12:30-15.30	Lab.	2	Whole class	Final practical exam on anatomy – 30 questions	As above	Rooms 1-5

LECTURES ONLINE ASYNCHRONOUS by Dr Marcin Lipski, excluded from schedule:

1.Temporomandibular joint: function, introduction to TMJ dysfunction (week 4) - 1h

2. Fascia of the neck, fascial spaces – suprahyoid, infrahyoid, communication and potential for infection. Ludwig's angina, Abscesses. Cervical emphysema.(week 13) – 2h

3. Muscles of the facial expression and mastication(week 17) - 2h

4. Trigeminal system – overview (week 18) - 2h

5. Anatomy of anesthesia – intraoral injections (week 19) - 2h

6. Lymphatic system of the head and neck (week 29) - 2h