

**Semmelweis University**  
**Department of Anatomy, Histology and Embryology**  
**2018**

**Faculty of Dentistry**  
**1<sup>st</sup> year, 2<sup>nd</sup> semester**

# **ANATOMY HANDBOOK**



Dr. Andrea D. Székely  
Associate Professor  
Course Director of the English Language Program

Dr. Gábor Gerber  
Associate Professor  
Deputy Head of the Department of Anatomy  
Dean of the Faculty of Dentistry



# Anatomy, Histology and Embryology for ED students

## TEACHING DEPARTMENT:

SEMMELWEIS UNIVERSITY

Department of Anatomy, Histology and Embryology

Budapest, Tűzoltó utca 58.

H-1094 Budapest

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

## LEARNING OBJECTIVES

**Aims of the lectures in Anatomy** - Presentation of important and/or complicated topics such as: 1<sup>st</sup> semester - the structure of the body wall (e.g. thorax, pelvis), extremities and the cranium, 2<sup>nd</sup> semester - the morphology of internal organs including the cardiovascular, digestive and urogenital systems; 3<sup>rd</sup> semester - the composition of the central nervous system, together with the organs of special senses and topography of body regions, and the 4<sup>th</sup> semester is devoted entirely to maxillofacial topographical anatomy.

**Aims of the lectures in Histology** - Presentation of the cell, basic principles in cellular morphology, detailed description of the epithelial, connective, muscle and nervous tissues. During the 3 semesters, the lectures contribute to the gross anatomical description of organs with a detailed presentation of their fine structures, including ultrastructural details. Important chapters: basic tissues, viscera, central nervous system.

**Aims of the lectures in Embryology** - Presentation of the early development from the differentiation of the germ cells to the formation of the human embryo (basic embryology) as well as the development of the locomotor system (1<sup>st</sup> semester). In the 2<sup>nd</sup> and 3<sup>rd</sup> semesters, the embryology topics will complement the gross anatomy and histology lectures of the organs and systems, also mentioning the most frequent malformations.

For the deeper understanding of relatively difficult questions small group discussions may be organized during the practical dissection room classes.

**Aims of the practical dissection classes** - In the first three semesters, based on their weekly programs, the students will study the morphology of the human body using anatomical specimens (bones, joints, muscles, viscera, brain) as well as learning the basic principles of dissection, including the proper usage of tools (scalpel, forceps, scissors) under the supervision of their lab instructors. The anatomy of the locomotor system and the peripheral nervous system will be principally taught in the dissecting room.

**Aims of the histology practical classes** - Under supervision by the lab instructor, the students will learn the use of the light microscope and the individual viewing of histology slides will facilitate the understanding of the basic tissues (epithelial, connective, muscle and nervous) and the fine structure of the organs.

The knowledge of students will be tested by regular **mid-term examinations** and a Semester-end Dissection Test.

### Lectures:

First semester: 3x 45 min; second semester: 3x 45 min;

third semester: 3x 45 min; fourth semester: 3x 45 min.

**Topics:**

**First semester:** Gross anatomy of the bones, joints and muscles, basic histology, general embryology, development of the skull, spine and limbs.

**Second semester:** Morphology, histology and embryology of the heart and vessels, lymphatic organs, viscera, body cavities and serous membranes. Sectional anatomy of the thorax, abdomen and pelvis. Description of the diaphragmas.

**Third semester:** Morphology, histology and embryology of the central and peripheral nervous systems, the organs of special senses, as well as of the endocrine organs; topographical anatomy of the extremities.

**Fourth semester:** Maxillofacial anatomy - organs, cavities, nervous and vascular supply of the head and neck regions, including topographical and cross sectional anatomy. Revision of the topics of the first three semesters.

**Practical course:**

First semester 5x 45 min; second semester: 4x 45 min;

third semester: 4x 45 min; fourth semester: 2x 45 min;

**First semester:** Gross anatomy of the bones, joints and muscles, basic histology, general embryology, development of the skull, spine and limbs.

**Second semester:** Morphology, histology and embryology of the heart and vessels, lymphatic organs, viscera, body cavities and serous membranes. Sectional anatomy of the thorax, abdomen and pelvis. Description of the diaphragmas

**Third semester:** Morphology, histology and embryology of the central and peripheral nervous systems, the organs of special senses, as well as of the endocrine organs; topographical anatomy of the extremities.

**Fourth semester:** Topographical anatomy of the head and neck. Individual revision of the subjects taught and studied during the four semesters.

**Type of exams:** first, second and third semesters: semifinal examination, fourth semester: final exam from the subjects of the four semesters.

**ECTS credits:** four semesters together: 27 (first semester: 8; second semester: 7; third semester: 7; fourth semester: 5)

# Announcements

**Acceptance of the semester:** active participation in lectures, dissection room and histology lab sessions is obligatory. Students should attend at least 75% of the scheduled hours to gain a signature proving the validity of the semester. Absences are therefore limited in **25%**. Attendance will be regularly checked in lectures and in practical classes

**Midterm examinations:** The **anatomy** mid-terms include both identification of several structures on the specimen and theoretical questions related to the subject. The **histology** midterm includes the identification of a certain number of structures in digital slides, as well as, theoretical questions related to the subject.

The results of all tests will appear on the personal achievement cards.

**A semester practical mark** is calculated from the midterm marks together with the personal achievement mark given by the group instructor. This practical mark will be counted into the semifinal examination and will be written on the personal achievement cards. The result of the 4<sup>th</sup> 'midterm' is not calculated in the average of midterms, it counts only in the practical mark.

## **Semifinal examinations consist of written and oral (practical and theoretical) parts**

1. Written pretest (e-learning module – access to SeKA account is obligatory)
2. Histology (digitized slides)
3. Anatomy (prosected specimens)

Notebooks should be regularly used in **histology lab sessions** in order to prepare schematic drawings of the histological specimens. Students will be asked to present their histology notebooks, containing the drawings, during the semifinal exams.

*N.B. – In case, when neither the first nor the repeated takes of a semifinal exam have been successful during the summer examination period, the students may register for a CV course and sit for an exam in the following winter examination period, but they cannot continue with their studies because a **successful ANA2 exam is the prerequisite of registering for the following ANA3 semester, i.e. there is no joint registration between academic years.***

# **RULES AND REGULATIONS IN THE DISSECTING ROOM**

**IT IS STRICTLY FORBIDDEN to eat, drink, smoke, to chew gums, or to use music devices or phones. Bags and coats should be left in the lockers before entering the dissecting room.**

**The lockers will have to be locked using your padlocks.**

**Please, remember to keep your valuables always on you, or lock them in the lockers since the department takes no responsibility for lost items.**

Everybody is supposed to behave in the dissecting room conforming to the spirit of the site. Loud speech, out-of-place jokes and any kind of behaviour, disregarding the dignity of human corpses, should strictly be avoided.

**Students are expected to be prepared for the practical work.**

Students should take care of the furniture and equipment of the dissecting room. Do not sit on the dissection tables or stand on the tripod stools to avoid accidents. **Fire and work safety regulations** should be maintained. The dissection room is a hazard area. **Cleanliness and order** should be kept.

**Working** in the dissection room involves the use of **sharp and pointed tools**, injuries should be reported to the lab instructor. The technical personnel will provide first aid when necessary.

The white lab coats should be worn while in the dissection room, but should be removed before leaving the dissection room area. The purpose of wearing the lab coats is to protect one's clothing from contacting the cadaver specimen. Furthermore we advise you to wear closed toed shoes and clothing covering the legs. In the end of the class, lab coats should be emptied and left in order on the coat hangers. The department is not responsible for valuables left in the dissecting room.

Only the members of the study group can participate in the sessions, visitors may be present only with prior permission by the lab instructor. Students can leave the sessions only with the approval of the lab instructor.

**Photos, or videos of blackboard/smart board drawings or anatomical or histological schematics can only be made with the agreement and in the presence of the lab instructor.**

Specimen preparations should be wrapped and labeled. Dissection materials of other groups or individuals should not be handled. Dissected cadaver pieces should be discarded in a designated container and discarded blades have to be collected separately.

Dissecting rooms are closed between 6:00 PM to 8:00 AM and over the weekends Students may not stay in the dissecting room without the supervision of one of the assistants of the department. In the absence of an instructor, the technical personnel should ask the students to leave the dissecting room.

**SMOKING IS STRICTLY FORBIDDEN  
ON THE DEPARTMENTAL PREMISES,  
INCLUDING THE GARDEN AND THE YARD!**

# ED I

## Subject matter of the 2<sup>nd</sup> semester

### I. Morphology, histology and development of the cardiovascular system

Heart and its associated structures (vessels and pericardium)

Vessels in general

Pulmonary circulation

Systemic circulation (subclavian, external carotid arteries, thoracic and abdominal aortae, branches of the internal iliac artery, superior and inferior venae cavae, together with the tributaries of the hepatic portal vein)

Fetal circulation

Lymphatic system

### II. Morphology, histology and development of internal organs

Gastrointestinal tract

Respiratory system

Urogenital apparatus

Serous membranes (pleura and peritoneum)

Pelvic floor, perineum

#### Test I.

Topic: Heart, great vessels, development, fetal circulation

Date: 4<sup>th</sup> week, March 2.

#### Test II.

Topic: Histology of the cardiovascular system, lymphatic organs and the gastrointestinal tract

Date: 8<sup>th</sup> week, April 6.

#### Test III.

Topic: Anatomy and development of the gastrointestinal and respiratory systems, cross sections of the abdomen and thorax

Date: 11<sup>th</sup> week, April 27.

### Semifinal examination

Topics: Subject matter of the semester

1) Written pretest

2) Histology (1 slide)

3) Anatomy (identification of structures on true anatomical specimens including relevant theoretical questions)

***N.B.: The following topics will be discussed later and DO NOT FORM PART OF THIS SEMESTER***  
*Anatomy, histology and the development of teeth, branches of the maxillary artery, development of lesser veins (BUT the development of the inferior and superior venae cavae, together with the development of the portal vein is included in the topic list)*

**ED I. Academic Year 2017/2018**  
**Faculty of Dentistry, First Year, Second Semester**

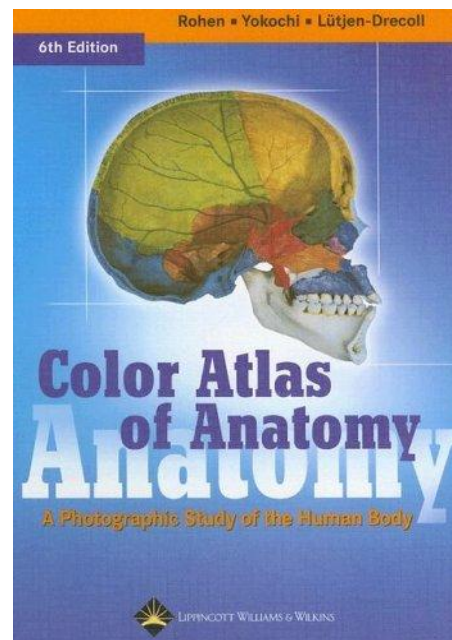
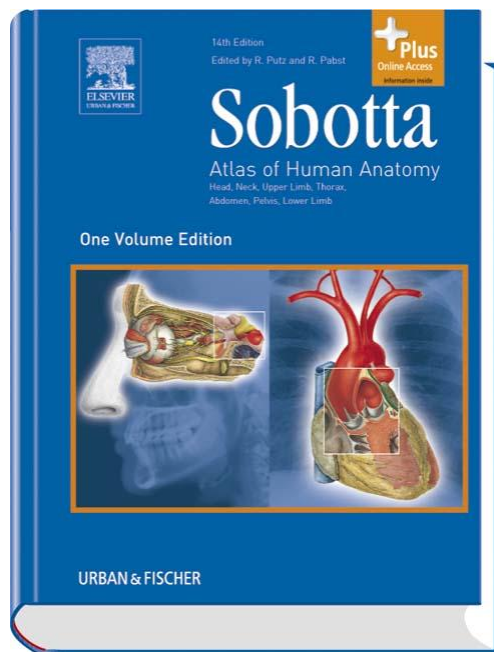
Week	Lectures <i>Tue 10.00 - 11.40      Thur 13.00-13.45</i>	Practical sessions Fridays	
		Dissection room 12.00-13.30	Histology 10.00-11.30
<b>Week 1</b> 02. 5-9.	1. Circulatory system, composition, significance. Histology of the vessels 2. Lymphatic organs 1- lymph node, tonsils 3. Lymphatic organs 2 - spleen, thymus	Dissection of heart, visceral complex	<b>Vessels:</b> arteries, veins, arterioles, venules, capillaries. <b>Lymphatic organs:</b> tonsils
<b>Week 2</b> 02.12-16.	4. Chambers of the heart, external features 5. Structure of heart wall, myocardium, valves, anuli fibrosi 6. Vessels, innervation, conducting system, surface projection of the heart, pericardium	Dissection of heart, visceral complex, fresh heart	<b>Lymphatic organs:</b> spleen, thymus
<b>Week 3</b> 02.19-23.	7 <i>Development of the heart (Film)</i> 8. <i>Development of the arteries and veins; malformations</i> 9. Morphology and histology of the tongue and salivary glands	Dissection of heart, visceral complex	<b>Oral cavity:</b> lip, filiform, fungiform vallate papillae, radix linguae
<b>Week 4</b> 02.26-03.02.	10. Morphology and histology of the oral cavity, soft palate and the faucial isthmus 11. <i>Development of the face (film)</i> 12. <i>Development of the pharyngeal pouches and the tongue</i>	<b>Test I.:</b> Heart, great vessels, heart and vessels' development, fetal circulation	Ground teeth, tooth bud. Parotid, submandibular, sublingual glands
<b>Week 5</b> 03.05-10. <i>Saturday class instead of March 16</i>	13. Pharynx and parapharyngeal spaces 14. Fine structure of the hollow viscera. Morphology and histology of the esophagus and the stomach 15. Morphology and histology of the small intestine and pancreas	Dissection: cervical viscera, vessels and nerves, branches of the aorta  <i>Dissection: cervical viscera, vessels and nerves, branches of the aorta</i>	<b>Gastrointestinal tract:</b> Oesophagus, cardia, fundus, pylorus of the stomach <i>Duodenum, jejunum ileum, colon, vermiform appendix</i>
<b>Week 6</b> 03.12-16. <i>March 15-16 National Holiday</i>	16. Morphology and histology of the large intestine and rectum 17. Morphology of the liver and biliary system. Portal vein 18. --- <b>March 15<sup>th</sup></b>	<b>March 15<sup>th</sup> long weekend</b> <b>No dissection class</b>	<b>March 15<sup>th</sup> long weekend</b> <b>No histology class</b>
<b>Week 7</b> 03.19-23.  03.26-30.	19. Histology of the liver and biliary system 20. Peritoneum, cross sections, abdominal cavity 21. <i>Development of the fore-, mid- and hindgut</i>	Demonstration of peritoneum, dissection of abdominal organs, vessels.	Liver, gall bladder, pancreas
<b>Easter break</b>			
<b>Week 8</b> 04.02-06. <i>Easter Monday</i>	22. Morphology of the nasal cavity and paranasal sinuses 23. Larynx, cartilages, joints, muscles 24. Larynx, connective tissue skeleton, mucous membrane	Dissection: visceral complex (abdominal organs, vessels)	<b>Test II.:</b> Vessels, heart, lymphatic organs, gastrointestinal tract
<b>Week 9</b> 04.09-13.	25. Morphology of the trachea and lung, pleura. Mediastinum, cross sections 26. Histology and development of the respiratory system 27. Morphology and histology of the kidney	Demonstration of thoracic and abdominal situs on fresh and embalmed cadavers	<b>Respiratory system:</b> larynx, trachea, lung.
<b>Week 10</b> 04.16-20.	28. Morphology and histology of the urinary passages, pelvis, ureter, and bladder 29. Morphology and coats of the testicle. Spermiogenesis. 30. Morphology and histology of the epididymis, spermatic cord and the seminal vesicle and prostate	Demonstration of thoracic and abdominal situs on embalmed cadavers	<b>Urinary system</b> kidney, ureter, urinary bladder
<b>Week 11</b> 04.23-27.	31. --- <b>Faculty Day</b> 32. --- <b>Faculty Day</b> 33. Morphology and histology of penis and male urethra	<b>Test III.:</b> Anatomy & embryology of the gastrointestinal & respiratory systems, cross sections of the thorax and abdomen	<b>Male genitals:</b> testis, epididymis, spermatic cord, seminal vesicle, prostate
<b>Week 12</b> 04.30-04. 04.30-05.02 <i>May1 long weekend</i> <b>COMPETITION 1</b>	34. --- <b>May1 long weekend</b> 35. --- <b>May1 long weekend</b> 36. Morphology and histology of the ovary and the uterine tube. Oogenesis	Dissection of the abdominal and pelvic visceral complexes Retroperitoneum, kidney, ureter, suprarenal gland, pancreas, vessels	Penis, Glans  <b>Female genitals:</b> Ovary, Corpus uteum
<b>Week 13</b> 05.07-11. <b>COMPETITION 2</b>	37. Morphology and histology of the uterus, divisions and content of the broad ligament 38. Morphology and histology of the vagina and the external genital organs 39 The pelvic and urogenital diaphragms (male, female). Cross sections of the male and female pelvis	Dissection of the abdominal and pelvic visceral complexes Retroperitoneum, kidney, ureter, suprarenal gland, pancreas, vessels Demonstration of pelvic situs.	Uterine tube, uterus (proliferation, secretion), vagina
<b>Week 14</b> 05.14-18.	40. <i>Development of serous membranes, separation of body cavities</i> 41. <i>Development of the uropoietic apparatus</i> 42. <i>Development and malformations of the genital system</i>	<b>Group test:</b> urogenital apparatus, pelvic floor, perineum	<b>Revision</b>

**ED I Histological specimens**  
**2017/2018 2<sup>nd</sup> semester Friday 10.00 – 11.30**

Week	Slides
Week 1 02. 5-9.	<p><b>Vessels</b> 50. Elastic artery (carotid artery, H-E) <i>Demonstration : 15. Elastic artery (R-F)</i>            51 Medium-sized artery and vein (H-E)            55. Arterioles, capillaries, venules (Fungiform papilla - H-E) <i>Demonstration: Muscular artery and vein (R-F)</i></p> <p><b>Lymphatic organs</b> 47. Palatine tonsil (H-E)            48. Lingual tonsil (H-E) <i>Demonstration: Pharyngeal tonsil (H-E)</i></p>
Week 2 02.12-16.	<p>44 Lymph node (H-E) <i>Demonstration: Lymph node (Ag-impr.)</i>            45. Spleen (H-E)            46. Spleen -white pulp (perfused preparation, H-E)            49. Thymus (H-E) <i>Demonstration: Thymus adiposus (H-E)</i></p>
Week 3 02.19-23.	<p><b>Gastro-intestinal organs</b> 53. Lip (H-E)            54. Filiform papillae (tongue, H-E)            55. Fungiform papillae and sma1l vessels (tongue, H-E)            56. Circumvallate papillae (tongue, H-E) - <i>Demonstration: Foliate papilla (H-E)</i>            48. Root of the tongue (lingual tonsil (H-E)</p>
Week 4 02.26-03.02.	<p>57. Developing tooth (Azan stain) - <i>Demonstration: Tooth (unstained)</i>            58. Parotid gland (H-E)            13. Submandibular gland, H-E            60. Submandibular gland (haematoxylin and mucicarmin stain)            59. Sublingual gland (H-E)</p>
Week 5 03.05-10.	<p>5. Esophagus, H-E            61. Esophago-gastric junction (cardia) (H-E)            62. Stomach (fundus) (H-E)            63. Stomach (fundus) (PAS-Congo-haematoxylin stain)</p> <p style="text-align: center;"><b>64. Pylorus (gastro-duodenal junction).(H-E)</b></p> <p style="text-align: center;">-----</p> <p>65. Duodenum (H-E)            30. Jejunum (H-E)            66. Ileum (H-E)            10. Colon (H-E)            67. Appendix (vermiform appendix; H-E)</p>
Week 6 03.12-16.	<b>March 15-16 National Holiday</b> <b>No histology class</b>
Week 7 03.19-23.	<p>68. Liver (Azan stain)            69. Liver (human, H-E)            16. Liver, (silver nitrate impregnation) - <i>Demonstration: Liver (ink injected)</i></p> <p>3. Gall bladder (HE)            70. Pancreas (H-E)</p>
03.26-30.	<b>Easter break</b>
Week 8 04.02-06. <i>Easter Monday</i>	<b>Test II.: vessels, lymphatic organs and digestive system</b>
Week 9 04.09-13.	<p>71. Larynx (H-E)            72. Trachea (H-E)            73. Lung (H-E) <i>Demonstration: Lung (R-F); Fetal lung (H-E)</i></p>
Week 10 04.16-20.	<p><b>Uropoetic organs</b> 2. Kidney (H-E) - <i>Demonstration: kidney (Tri-PAS)</i>            91. Ureter (H-E)            8. Urinary bladder, H-E</p>
Week 11 04.23-27.	<p><b>Male genital organs</b> 74. Testis (H-E)            4. Epididymis (H-E)            75. Spermatic cord (H-E)            76. Seminal vesicle            12. Prostate gland (H-E)</p>
Week 12 04.30-04.	<p>7. Penis (H-E)            77. Glans penis (H-E)</p> <p><b>Female genital organs</b> 78. Ovary (H-E)            79. Ovary, corpus luteum (H-E)</p>
Week 13 05.07-11.	<p>80. Uterine tube (oviduct) (H-E)            81. Uterus, proliferation phase (H-E)            82. Uterus, secretory phase (H-E)            84. Vagina (H-E)</p>
Week 14 05.14-18.	<b>Revision</b>



# RECOMMENDED BOOKS



# ED I Second semester

## TOPICS OF THE SEMIFINAL EXAM

### Circulatory system

Shape, external features of heart  
Chambers of heart, endocardium, orifices, valves  
Skeleton of heart, anuli fibrosi  
Structure and histology of heart wall, myocardium, cardiac muscle  
Conducting system  
Pericardium  
Position and surface projections of heart  
Radiology of heart  
Development of heart tube  
Division of atria (septum primum and secundum, foramen ovale)  
Development of ventricles (interventricular septum)  
Ascending aorta, arch of aorta and its branches  
Branches of the common and external carotid arteries  
Subclavian artery (+ branches)  
Thoracic aorta (+branches)  
Coeliac trunk (+ branches)  
Superior mesenteric artery (+ branches)  
Inferior mesenteric artery (+ branches)  
Branches of the internal iliac artery  
Superior vena cava and its tributaries  
Inferior vena cava and its tributaries  
Azygos and hemiazygos veins  
Portal vein, portocaval anastomoses  
Histology of arteries, arterioles and capillaries  
Development of aorta and branchial (pharyngeal) arch arteries  
Development of great veins (caval, portal, azygos)  
Fetal circulation  
Histology of venules, veins and lymphatic vessels

### Lymphatic organs

Tonsils (anatomy, histology, embryology)  
Spleen (anatomy, histology, embryology)  
Thymus (anatomy, histology, embryology)  
Lymphatic vessels and nodes of head and neck  
Lymphatic vessels and nodes of mediastinum  
Lymphatic vessels and nodes of retroperitoneal space  
Lymphatic vessels and nodes of pelvis  
Thoracic duct and right lymphatic duct  
Microscopic structure of lymphatic system (reticular cells, lymphocytes, plasma cells, antibodies, lymphatic follicles)  
Histology of lymph nodes

## **Digestive system**

Oral cavity (divisions, boundaries)  
Floor of mouth, sulcus lateralis linguae  
Tongue (parts, vessels, innervation, histology)  
Salivary glands (anatomy, histology)  
Isthmus of fauces  
Hard and soft palates, palatine muscles  
Pharynx, (shape, position, parts, muscles)  
Topography of the pharynx, para and retropharyngeal spaces  
Oesophagus (anatomy, histology, embryology)  
Development of the face  
Developmental derivatives of pharyngeal pouches  
Stomach (shape, position, parts)  
Peritoneal relations of stomach  
Blood supply and innervation of stomach  
Histology of stomach  
Duodenum (shape, position, divisions, vessels)  
Divisions and histology of small intestine  
Fine structure of the intestinal villi  
Large intestine (shape, position, divisions, vessels and histology)  
Histology of vermiform appendix  
Rectum, anal canal (shape, position, vessels)  
Liver (shape, position, vessels, peritoneal relations, development and histology)  
Gall bladder and biliary passages (anatomy, histology, embryology)  
Circulation of liver, liver sinusoids  
Histology of gall bladder and extrahepatic biliary tracts  
Pancreas (shape, position, development, histology and vessels)  
Peritoneum, greater omentum, lesser omentum, mesentery, omental bursa  
Development of the foregut (esophagus, stomach, duodenum)  
Derivatives of midgut, physiological umbilical hernia  
Development of hindgut  
Development and separation of body cavities  
Development of the peritoneum  
Development of diaphragm

## **Respiratory system**

Nose, nasal cavity (boundaries, nasal meatus, vessels)  
Paranasal sinuses (connections, vessels)  
Larynx (shape, position, vessels, nerves)  
Skeleton and joints of larynx  
Laryngeal ligaments (fibroelastic membranes, mucous membrane)  
Muscles of larynx, innervation  
Histology and development of the larynx  
Trachea and bronchial tree (anatomy, histology and development)  
Lung (shape, parts, surfaces, hilum, position, vessels, nerves)

Pleura, pleural cavity  
Surface projection of pleura and lung  
Histology and development of the lung

### **Urogenital system**

Kidney (shape, position, hilum, sinus, capsules and vessels)  
Histology of kidney (+JGA)  
Development of kidney (pronephros, mesonephros, metanephros)  
Calyces, renal pelvis and ureter (anatomy, histology and embryology)  
Urinary bladder (shape, position, muscles, vessels)  
Histology and development of the urinary passages  
Differentiation of the urogenital sinus  
Female urethra (anatomy, histology and embryology)  
Testis (shape, position, vessels)  
Histology and development of testis, spermatogenesis  
Epididymis, vas deferens, spermatic cord (anatomy, histology and embryology)  
Scrotum, coats of testis  
Seminal vesicle (anatomy, histology and embryology)  
Prostate (anatomy, histology and embryology)  
Development of male genital ducts and glands  
Male urethra, bulbourethral gland (anatomy, histology and embryology)  
Penis (shape, position, mechanism of erection, vessels, nerves)  
Histology of penis and male urethra  
Pelvic floor, male perineum  
Hernia canals (inguinal, femoral)  
Development of the male external genital organs  
Ovary (shape, position, vessels and development)  
Histology of ovary, oogenesis and the corpus luteum  
Uterine tube (shape, position, vessels; histology, embryology)  
Uterus (shape, parts, wall, cavity, position, supporting structures, vessels)  
Broad ligament (divisions and content)  
Histology of uterus, menstrual cycle  
Vagina, female perineum  
External female genital organs (mons pubis, labia, vestibule of vagina, greater vestibular gland, vascular supply)  
Development of female genital tracts  
Histology of vagina  
Development of the female external genital organs