

Programme of CYTOLOGY, HISTOLOGY and EMBRYOLOGY practica for 1st class students of DENTISTRY, *winter semester 2026*



1st week **16. 9. 2026** – *day off, self-study of DTS (online Distance theoretical seminar)*

I. Introduction to histology practicals. **Microscope.** Basics of histological technique (2 histological preparations)

- chicken blood (HE)
- fibroblast cultures (HE)

2nd w. **23. 9. 2026**

II. Cell structure at light and electron-microscopic level – Cytology (6 slides)

- nuclei of the epithelial cells of various shapes – vagina (IH)
- different types of spinal cord cells, ribosomes, rER, nucleolus – spinal cord (Nissl staining)
- pyramidal neurons and astrocytes – great brain (Golgi impregnation)
- Purkinje neurons – cerebellum (HE)
- sperms – semen smear (Papanicolau method)
- pigment granules - pigmented epithelium – eyeball/retina (without staining)

3rd w. **30. 9. 2026**

III. Introduction to tissues. Covering and lining epithelia (5 slides)

- simple columnar epithelium – small intestine (HE)
- pseudostratified columnar epithelium with cilia and goblet cells - trachea (HE)
- transitional epithelium, urothelium – urinary bladder (HE)
- stratified squamous epithelium nonkeratinized - oesophagus (HE)
- stratified squamous epithelium keratinized - skin (HE)

4th w. **7. 10. 2026**

IV. Glandular epithelia (6 slides)

- unicellular glands, goblet cells – small intestine (PAS-H)
- simple tubular gland – large intestine (HE)
- simple branched alveolar gland, holocrine secretion – skin (HE)
- compound acinar gland, merocrine secretion – parotid gland (HE)
- cords of endocrine glandular epithelium – adrenal gland (HE)
- follicular type of endocrine glandular epithelium – thyroid gland (HE)

5th w. **14. 10. 2026**

V. Connective tissue 1. Connective tissue proper (7 slides)

- collagen fibres - loose connective tissue (aniline blue)
- elastic fibres and membranes - aorta (orcein)
- loose connective tissue – mucosal and submucosal connective tissue of a rat small intestine (HE)
- dense irregular connective tissue - skin (trichrome)
- dense regular connective tissue - tendon (HE)
- reticular connective tissue – adrenal gland (impregnation with silver salts - reticulin)
- adipose/fatty tissue (HE)

6th w. **21. 10. 2026**

VIa. Connective tissue 2a. Cartilage (3 slides)

- hyaline cartilage - trachea (HE)
- elastic cartilage - epiglottis (orcein)
- fibrocartilage (trichrome)

VIb. Connective tissue 2b. Bone. Ossification (4 slides)

- compact bone, transversal ground section (without staining)
- trabecular bone – hard palate (HE)
- intramembranous ossification – skull bone of an embryo (trichrome)
- endochondral ossification – long bone of an embryo (trichrome)

7th w. **28. 10. 2026**

VII. Blood.

Blood smear stained by the Pappenheim method. Blood corpuscles. White blood cell count (only theoretically, without microscopy of the specimen)

VIII. Muscle tissue (5 slides)

- smooth muscle – uterus (HE)
- smooth and skeletal muscle - oesophagus (trichrome)
- skeletal muscle - tongue (IHE)
- cardiac muscle (IH)
- muscular artery (HE)

8th w. **4. 11. 2026**

VIII. Nervous tissue (4 slides)

- gray and white matter and their cell types – spinal cord (luxol blue and nuclear red)
- gray and white matter and their cell types – great brain (HE)
- gray and white matter and their cell types – little brain (luxol blue and kresyl violet)
- peripheral nerve, cross section (luxol blue and nuclear red)

9th w. **11. 11. 2026**

IX. Oral cavity (4 slides)

- lip (HE)
- tongue, dorsum (HE)
- tongue, papillae vallatae (HE)
- gum/gingiva (HE)
- palate (HE)

10th w. **18. 11. 2026** *consultations*

11th w. **25. 11. 2026**

X. Dens (4 slides)

- tooth (HE)
- tooth, section (without dyeing)
- tooth in development – cup stage (HE)
- tooth in development – bell stage (HE)

12th w. **2. 12. 2026**

XIa. Minor and major salivary glands (4 slides)

- parotid gland (Azan)
- submandibular and sublingual glands (HE)
- sublingual gland (trichrome)
- palate/palatine glands (HE)

XIb. Tonsils (2 slides)

- palatine tonsil (HE)
- lingual tonsil, lingual root (HE)

13th w. **9. 12. 2026**

XII. Skin (4 slides)

- skin, thin type (HE)
- skin, elastic fibers (orcein)
- skin, thick type (HE)
- skin with hair (HE)

14th w. **16. 12. 2026**

Substitution of missing practicals. Awarding credits (to students who were successful in all three partial tests, i.e. achieved an average of at least 70% of correct answers, have regular attendance at in-person practicals and have drawn/made all specimen figures from the semester).

Credit test (for students who were not successful in Partial tests, credit test questions contain topics from the entire semester).

Repeated credit test (for students who did not achieve at least 70% of correct answers in the credit test, date as agreed with the teacher).

Notice: Partial tests are written in the 5th, 9th and 13th weeks, credit test in the 14th week. Repeated credit test is written after agreement with the teacher.

CONDITIONS for awarding credits from the subject HaE:

Lectures: Study of knowledge from **Lectures 1** (Wednesdays) and also knowledge from textbooks on the given topic. **Lectures 2** (Fridays) will be prepared in the form of videos in the online space. These will have an interactive form - students will answer questions after watching individual parts of the videos.

Practicals:

- a) Study of knowledge from *distance theoretical seminars (DTS)* and at the same time knowledge from textbooks on the given topic of the teaching week, always in advance of the in-person practicum.
- b) 100% active participation in the face-to-face parts of the practicals with a maximum of 2 missing but substituted absences.
- c) Making figures (own drawings or photographs) with detailed marking of the structures of all *histological preparations* in your own notebook/tablet - send to the teacher a file of figures in PDF format (through the chat in MST) no later than 1 day before the Partial test.
- d) Passing three *partial tests* during the semester. The average of the test results must be at least 70% correct answers. If the student does not achieve this required average, at the end of the semester he/she writes a *credit test* (questions from the entire semester), which he/she must also write with a minimum of 70% correct answers.
- e) If a student cannot write a Partial or credit test with his/her group on the specified date for serious reasons, he/she must agree with his/her teacher on a substitution. It is not possible to write a test with another group without the teacher's knowledge.

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In Bratislava 2. 9. 2026