

Katedra i Zakład Histologii i Embriologii Centrum Biostruktury Warszawski Uniwersytet Medyczny

HISTOLOGY, CYTOPHYSIOLOGY & EMBRYOLOGY 5 years EDD PROGRAM 2025/2026 **SPRING SEMESTER**

EMBRYOLOGY

14.

SEMINAR: HORMONES PRODUCES BY THE HYPOPHYSIS, REGULATION BY THE HYPOTHALAMUS. PRACTICAL CLASS: ENDOCRINE GLANDS.

- hypophysis (slide #40),
- 2. thyroid gland (slide #8),
- 3. parathyroid gland (slide # 90),
- suprarenal gland (slide # 39), 4.
- 5. pineal gland slide #49),
- 6. chromaffin reaction in the suprarenal gland (slide # 5),
- 7. primary hyperparathyroidis (text & fig. #85).
- photograph of a patient with a thyroglossal cyst (photo #87), 8.
- specimen x (slide # 32) please, answer the following questions:

Can you recognise in this specimen:

- 1) epithelium (if the answer is yes what type is it?),
- 2) glands (if the answer is yes, what type are they?), 3) fibroblasts,
- 4) adipocytes (fat cells),
- 5) fibers: a)collagen, b)elastic,
- 6) stratified muscle cells, 7) smooth muscle cells,
- 8) blood vessels, arterioles, venules,
- 9) capillaries,
- 10) nerves.

SEMINAR: STRUCTURE OF FEMALE REPRODUCTIVE SYSTEM AND ITS HORMONAL REGULATION. PRACTICAL CLASS: FEMALE REPRODUCTIVE SYSTEM.

- 1. ovary (slide # 72),
- 2. corpus luteum (slide # 94),
- 3. oviduct (slide # 73),
- 4. uterus (slide # 74),
- 5. fragments of uterus wall obtained from biopsy: slide # 105 proliferative phase, slide # 105a - secretory phase
- vagina (slides # 96)
- 7. vagina and fragment of vestibule (slides # 96a)

16.

SEMINAR: STRUCTURE OF MALE REPRODUCTIVE SYSTEM AND HORMONE REGULATION. PRACTICAL CLASS: MALE REPRODUCTIVE SYSTEM.

- 1. testis (slide # 69),
- 2. epididymis (slide #70),
- 3. ductus deferens (slide #71),
- prostate (slide # 92),
- 5. prostate fixed in glutaraldehyde (slide # 92a),
- 6. human spermatozoa (smear) (slide # 69a).
- 7. structure of the prostate (text # 96)

MARCH 9. 2026

THEORETICAL INTERMEDIATE EXAMINATION IN EMBRYOLOGY (classes # 14, 15 & 16 and lectures)

RETAKE OF THE THEORETICAL INTERMEDIATE EXAMINATION IN EMBRYOLOGY - MARCH 20. 2026

MICROSCOPIC ANATOMY

18.

SEMINAR: STRUCTURE OF THE IMMUNE SYSTEM, TYPES OF LYMPHOCYTES, LYMPHOKINES. PRACTICAL CLASS: IMMUNE SYSTEM.

- 1. spleen (slide # 34),
- 2. lymph node (slide # 36),
- 3. thymus (slide # 37),
- 4. palatine tonsil (slide # 46),
- 5. thymus-dependent and thymus-independent zones of lymph node (fig. 103), of spleen (fig. 104, and of appendix (fig. 105),
- high endothelial cell venule (EM # 106),
- 7. post-capilary venule (EM # 107),
- 8. e-selectin in the high-endothelium vein (EM # 122),
- 9. M cells in the palatine tonsils and in the Peyer's patches (text and fig. # 115, 116 & 117).

19.

SEMINAR: DEVELOPMENT AND STRUCTURES OF THE TOOTH. ORAL CAVITY MUCOSA AND PERIODONTAL LIGAMENT.

PRACTICAL CLASS: GASTRO-INTESTINAL SYSTEM, PART 1.

- 1. filiform papillae tongue (slide # 41),
- 2. circumvallatae papillae tongue (slide # 42),
- 3. parotid gland (slide # 44),
- 4. sublingual gland (slide # 45),
- 5. tooth germ (slide # 103),
- 6. dentine, ground section (slide # 100),
- 7. cross section of development (mature) tooth (# 101),

20.

SEMINAR: GLANDS IN STOMACH AND INTESTINES, STRUCTURE AND FUNCTION. PRACTICAL CLASS: GASTRO-INTESTINAL SYSTEM, PART 2.

- oesophagus (slide # 47),
- 2. stomach (slide # 48),
- 3. duodenum (slide # 50),
- 4. small intestine jejunum (slide # 51),
- 5. large intestine colon (slide # 52),
- 6. microvilli of jejunal resorptive cell (EM # 83),
- 7. parietal cells (text & fig. # 91),

21.

SEMINAR: RELATIONSHIP BETWEEN STRUCTURE AND FUNCTION OF THE LIVER. PRACTICAL CLASS: GASTRO-INTESTINAL SYSTEM, PART 3.

- 1. ileum Peyer's patches (slide # 55),
- 2. appendix (slide # 53),
- 3. liver (slide # 54),
- pancreas (slide # 58),
- 5. space of Disse (EM # 72),
- 6. bile canaliculi (EM # 20, 73),
- 7. kupffer and Ito cells (EM # 61).
- 8. objective detection of alcohol problems (text & fig. # 19)
- 9. anomalies in structure of large intestine, Hirschsprung's disease (text & fig. # 142).

APRIL 20. 2026

THEORETICAL INTERMEDIATE EXAMINATION IN HISTOLOGICAL STRUCTURE OF THE ORAL CAVITY (classes # 19 and lectures)

RETAKE OF THE THEORETICAL INTERMEDIATE EXAMINATION IN HISTOLOGICAL STRUCTURE OF THE ORAL CAVITY – MAY 8. 2026

23.

SEMINAR: UPPER AND DISTAL RESPIRATORY TRACT. PRACTICAL CLASS: RESPIRATORY SYSTEM.

- trachea (slide # 60),
- lung (slide # 61),
- 3. foetal lung (slide # 61a),
- 4. pulmonary alveoli (EM # 6),
- 5. surfactant covering alveolar epithelium (EM # 74),
- 6. interstitial cell (EM # 123),
- 7. immobile cilia syndrome, Kartagener's syndrome (text # 92).
- 8. EOTAXIN chemokine selective for eosinophils (text # 137).

24.

SEMINAR: RELATIONSHIP BETWEEN NEPHRONS AND BLOOD VESSELS. PRACTICAL CLASS: URINARY SYSTEM.

- 1. kidney (slide # 63),
- 2. urinary bladder (slide # 67),
- 3. ureter (slide # 66),
- 4. elements of filtration slits in kidney glomerulus (text & photo. # 93)

25.

SEMINAR: STRUCTURE AND FUNCTION OF SKIN, DEVELOPMENT OF THE MAMMARY GLAND. THE SENSE ORGANS. STRUCTURE OF THE EYE.

PRACTICAL CLASS: SKIN & ITS APPENDAGES, MAMMARY GLAND. EYE BALL.

- 1. nonhairy skin (slide #83),
- 2. hairy skin (slide #85),
- 3. active (lactating) mammary gland (slide #86),
- 4. inactive mammary gland (slide #87),
- 5. eye ball (slide # 81),
- 6. keratinization (fig. # 14),
- 7. hemidesmosomes in epidermis, the border epidermis dermis (EM # 131),
- 8. the structure of human epidermis (fig. # 15),

MAY 25, 2026

THEORETICAL INTERMEDIATE EXAMINATION IN MICROSCOPIC ANATOMY (classes: 17, 20-25 and lectures)

RETAKE OF THEORETICAL INTERMEDIATE EXAMINATION IN MICROSCOPIC ANATOMY - JUNE 12. 2026

27.

SEMINAR: DISCUSSION AND DEMONSTRATION OF HISTOLOGICAL SLIDES - MICROSCOPIC ANATOMY. PRACTICAL CLASS: PRACTICAL INTERMEDIATE EXAMINATION IN MICROSCOPIC ANATOMY (classes: 17, 23-25 and lectures)

28.

SEMINAR: DISCUSSION BEFORE THE FINAL EXAMINATION.

PRACTICAL CLASS: DEMONSTRATION OF HISTOLOGICAL SLIDES BEFORE THE FINAL EXAMINATION.

INTERMEDIATES EXAMINATIONS IN GENERAL HISTOLOGY

- January 16, 2026 Theoretical (MCQ)
- January 23. 2026 (Friday) Retake of the theoretical (MCQ)

INTERMEDIATES EXAMINATIONS IN EMBRYOLOGY

- March 9, 2026 Theoretical (MCQ)
- March 20. 2026 (Friday) Retake of the theoretical (MCQ)

INTERMEDIATE EXAMINATION IN HISTOLOGICAL STRUCTURE OF THE ORAL CAVITY

- April 20, 2026 Theoretical (MCQ)
- May 8. 2026 (Friday) Retake of the theoretical (MCQ)

INTERMEDIATES EXAMINATIONS IN MICROSCOPIC ANATOMY

- May 25, 2026 Theoretical (MCQ)
- June 12. 2026 (Friday) Retake of the theoretical (MCQ)

Final Examination in Histology and Embryology

- Practical examination will be held on June 30, 2026 (Tuesday)
- Theoretical Final Examination (MCQ test) will be held on July 1, 2026
- Retake of Final Examination (practical & MCQ) 3.09.2026

Dates of all examinations are not subject to negotiation.