

Department of Histology, Cytology and Embryology M. Gorky Donetsk National Medical University

TERM PLAN

of the lectures and classes for the students of the international stomatological faculty,
1st year, 1st semester

Lectures	Classes
MODULE 1 INTRODUCTION TO HISTOLOGY. CYTOLOGY. EMBRYOLOGY	MODULE 1 1. Introduction to histology, cytology and embryology. Microscopy and its methods. Using the microscope. Histological technique. The accident prevention and avoidance of accidents in histology department. 2. Cytology . Common cell structure. Plasma membrane. Intercellular junctions.
	3. Cytology . Cytoplasm. Nonmembranouse organelles. 4. Cytology . Cytoplasm. Membranouse organelles.
MODULE 2 TISSUE LEVEL OF THE LIVING ORGANISMS. EPITHELIA	5. Cytology . Inclusion. Cell nucleus. Interaction between the nucleus and cytoplasm.. 6. Cytology . Cell cycle. Cell reproduction. Ageing and death of the cell.
	7. Cytology . Cytodiagnosis. 8. General Embryology . Birds and mammals embryology.
TISSUES OF THE INTERNAL ENVIRON- MENT. BLOOD. CONNECTIVE TISSUES	9. Human Embryology . Progenesis. Fertilisation. 10. Human Embryology . Cleavage.
	11. Human Embryology . Gastrulation. 12. Human Embryology . Histogenesis and organogenesis. Human extraembryonic organs. The mother-fetus system.
MODULE 3 CIRCULATORY SYSTEM	13. RESULTING TEST CONTROL ON MODULE 1. MODULE 2
	14. Tissues. Epithelial tissues . Classification of the covering epithelia. Simple epithelia.
	15. Epithelial tissues . Stratified epithelia. Glandular epithelium. Secretion cycle. Regeneration. 16. The tissues of the internal environment. Blood . Plasma. Erythrocytes, structure and functions. Platelets (thrombocytes): structure and functions.
ORGANS OF THE HEMATOPOIESIS AND LYMPHOID ORGANS	17. Blood . Leukocytes. Classification, structure and functions. Lymph. 18. Hematopoiesis . Embryonic hematopoiesis. Postembryonic development of the erythrocytes, platelets, granulocytes monocytes and lymphocytes.
	19. Connective tissues . Classification. Loose connective tissue. Structure and function of cells. 20. Loose connective tissue . Extracellular matrix, its structure and functions.
	21. Connective tissues . Dense connective tissue. Connective tissues with special properties. Regeneration of the connective tissues.
	22. Skeletal tissues . Cartilage. Structure, functions and regeneration of the different types of the cartilage.
	23. Skeletal tissues . Structure and functional features of the different types of the bone tissues. Joint structure. 24. Skeletal tissues . Histogenesis. Regeneration of the bone tissues.
	25. Control of practical skills on content module 3 "The common meaning tissues" . 26. Muscle tissues . Classification, development, structure and functions.
	27. Nerve tissue . Classification of Neurons and glial cells, their structure and functions. 28. Nerve tissue . Nerve fibers and nerve endings. Classification and structure. Synapses.
	29. Control of practical skills on Module 2 "General histology" . 30. RESULTING TEST CONTROL ON MODULE 2 "General histology" .
	MODULE 3
	31. Circulatory system . General characteristic of blood vessels. Histophysiology, structure and functions of the muscle type arteries and veins. 32. Circulatory system . Histophysiology, structure and functions of elastic and mixed types arteries. Heart. Development, structure and functions.
	33. Circulatory system . Microcirculatory bed. Histophysiology of the microvessels. Lymphatic vessels. 34. Endocrine system . General morphological characteristic and functions. Hypothalamo-pituitary system. Development, structure and histophysiology.
	35. Endocrine system . Pineal gland. Development, structure and functions. Adrenal glands. Development, structure and functions. 36. Endocrine system . Thyroid glands. Development, structure and histophysiology. Secretion cycle. Parathyroid glands.
	37. Immune System and Lymphoid Organs . Common morphological characteristic and functions. Central lymphoid organs (bone marrow, thymus). Structure and functions. 38. Immune System and Lymphoid Organs . Spleen. Development, structure and functions.
	39. Immune System and Lymphoid Organs . Lymph nodes, its development, structure and histophysiology. Immune reactions. 40. Control of practical skills on content module 5 "Circulatory system, endocrine system and immune system and lymphoid organs" .

1st year, 2nd semester

Lectures	Classes
Module 3 (continuation)	
FACE AND ORAL DEVELOPMENT	1. Nervous system. Histogenesis, structure and functions of the nerves, dorsal root ganglia and spinal cord. 2. Nervous system. Embryogenesis and morphofunctional characteristic of the brain stem. Cerebellum.
	3. Nervous system. Cerebral cortex. Structure and functions. Functional units of the cerebral cortex. 4. Nervous system. Autonomic nervous system. Structure and functions. Meninges. Blood-brain barrier.
TEETH DEVELOPMENT	5. Special senses. General characteristic. Development, structure and functions of the eye. 6. Special senses. Eye. Retina. Barriers.
	7. Special senses. Development, structure and histophysiology of the vestibulocochlear apparatus. 8. Special senses. Development and histophysiology of the taste, olfaction and touch..
TEETH STRUCTURE. ENAMEL DENTIN	9. Control of practical skills on 6-th content module. 10. Face and oral development. Pharyngeal (branchial) apparatus. Digestive system. General structure of the digestive tract.
	11. Mucosa. Oral mucosa. Structural peculiarities of lips, cheeks, palate and gingiva. 12. Oral cavity. Development, structure and functions of tongue. Papillae. Taste buds. Tonsils.
DENTAL SUPPORTING TISSUES	13. Salivary glands. Development, structure and functions. 14. Teeth development. Early teeth development. Teeth primordial formation and differentiation.
	15. Teeth development. Dentinogenesis. Amelogenesis. 16. Teeth development. Amelogenesis.
ORGANS WHICH MAINTAIN HOMEOSTASIS (DIGESTIVE, URINARY SYSTEM)	17. Teeth development. Development of pulp. Dental root formation. Development of dental supporting tissues. Cementogenesis. Tooth eruption. Replacing of teeth. Teeth abnormalities. 18. Teeth structure. Enamel. Structure, chemical composition and properties.
	19. Dentin. Structure, chemical composition and properties. Role of odontoblasts. Types of dentin. 20. Teeth structure. Cementum. Structure, chemical composition and properties. Types of cementum. Dental pulp. Structure and functions.
	21. Dental supporting tissues. Periodontum. Dental alveolus. 22. Control of practical skills on 7-th content module "Oral cavity. Teeth development and structure".
	23. Digestive system. Morphofunctional characteristic of the alimentary canal. Development, structure and functions of the pharynx and esophagus. 24. Digestive system. Development, structure and functions of the stomach.
	25. Digestive system. Development, structure and histophysiology of the small intestine. APUD (enteroendocrine) cells. 26. Digestive system. Development, structure and histophysiology of the large intestine. Immune reactions in the alimentary canal.
	27. Digestive system. Development, structure and functions of the liver. Histophysiology of the liver. 28. Digestive system. Development, structure and functions of the pancreas. Histophysiology of the pancreas.
	29. Respiratory system. Morphofunctional characteristic. Respiratory tract. Development, structure and histophysiology. 30. Respiratory system. Lungs. Structure of the alveoli, alveolar cells. Blood-gas barrier. Regeneration. Pleura.
	31. Integument. Development, structure and functions. Immune reactions in the skin. Regeneration. 32. Urinary system. Development and structure of kidney. Histophysiology of the nephron and collecting ducts.
	33. Urinary system. Juxtaglomerular apparatus. Structure and functions. Regeneration of kidney. Excretory passages. Morphofunctional characteristic. 34. Control of practical skills on 8-th content module "Histology of systems which maintain homeostasis".
	35. Male reproductive system. Development, structure and functions of the male reproductive system. Spermatogenesis. Histophysiology of the testis. Genital ducts. Epididymis. Accessory genital glands. 36. Female reproductive system. Ovaries. Development, structure and functions. Oogenesis. Ovarian cycle and its regulation.
	37. Female reproductive system. Development, structure and functions of oviducts, uterus and vagina. Menstrual cycle. Development, structure and functions of the placenta. 38. Control of practical skills on 8-th content module "Histology of reproductive systems".
	39. Resulting control of practical skills on module 3 "Special histology and embryology". 40. RESULTING TEST CONTROL ON MODULE 3 "Special histology and embryology".