



COURSE UNIT DESCRIPTION

Course unit title	Code
Human histology , academic year 2021-2022	HIST2115

Lecturer(s)	Department(s)
Coordinating: Prof. Renata Šimkūnaitė-Rizgeliienė Others lect. Rūta Karneckė, lect. Viktorija Gurskytė, prof. Violeta Žalgevičienė	Department of Anatomy, Histology and Anthropology, Institute of Biomedical Sciences, Faculty of Medicine, Vilnius University

Cycle	Level of the course unit	Type of the course unit
Integrated studies	-	Compulsory

Mode of delivery	Period of delivery	Language of instruction
Face-to-face: lectures, seminars, practical classes, colloquia, and self-studies	1 st semester	Lithuanian and English

Prerequisites and corequisites	
Prerequisites: -	Corequisites (if any): -

Number of ECTS credits allocated to the course unit	Total student's workload	Contact hours	Self-study hours
5	134	67	67

Purpose of the course unit		
Programme competences to be developed		
The purpose of the course is to aid students in acquiring basic knowledge and understanding of the microscopic structure of human tissues and detailed knowledge of the origin, microscopic structure and functions of oral organs, ensure that students understand the material so that they may proceed to the clinical odontology studies. After the course students are required to know the microscopic structure and functions of human tissues, to recognize, describe and compare histological slides of all tissues and oral organs, to know microscopic structure, development and functions of oral organs in detail.		
Learning outcomes of the course unit	Teaching and learning methods	Assessment methods
Generic competences: During the first semester students are required:		
- to act fairly and according to ethical obligations, be emphatic, to think critically and self-critically, be creative, take the initiative, to communicate with others	Lectures and seminars, self-study	Continuous assessment during seminars and practice
to make an assessment within the scope of one's competence and, if necessary, ask for help, to act in new situations and adapt to them, to act independently, to solve problems, to make judgements, to work with other students, to organise and plan	Seminars and practice, self-study	Continuous assessment during seminars and practice
to be able to analyse and synthesize, to use knowledge in practice	Seminars and practice, self-study	Continuous assessment during seminars, practice and colloquiums
Subject-specific competences: During the semester students are required:		

- to name and describe the main methods used in Histology and tissue preparation, to know how to work with light microscope	Theoretical material during the lecture, skills in using light microscope during seminars and practice, self-study	Continuous assessment during practice. At the end of theme – test. At the end of the course unit - examination
- to know the microscopic structure of the cell, to understand the cell cycle and cell division, main physiological features of the cell	Theoretical material during the lectures. Study of histological slides, electron micrographs during seminars and practice, self-study	Continuous assessment during seminars and practice. At the end of theme – test. At the end of the course unit - examination
- to know and describe periods of human prenatal development, causes of developmental defects, to know the structure of human embryo in early developmental stages, structure and main functions of placenta	Theoretical material during the lectures. Study of histological slides, moulages, conserved specimens during practice, discussions and analysis during seminar, self-study	Continuous assessment during practice and seminar. At the end of theme – test. At the end of the course unit - examination
- to know microscopic structure and functions of surface epithelial tissue, to recognize and describe the slides of different epithelial tissues	Theoretical material during the lectures. Study of histological slides, posters during seminars and practice, self-study	Continuous assessment during seminars and practice. At the end of theme – colloquium. At the end of the course unit - examination
- to know microscopic structure and functions of glandular epithelial tissue, to recognize and describe the slides of different glands	Theoretical material during the lectures. Study of histological slides, posters during seminars and practice, self-study	Continuous assessment during seminars and practice. At the end of theme – colloquium. At the end of the course unit - examination
- to know microscopic structure and functions of connective tissue, to recognize and describe the slides of different connective tissues	Theoretical material during the lectures. Study of histological slides, posters during seminars and practice, self-study	Continuous assessment during seminars and practice. At the end of theme – colloquium. At the end of the course unit - examination
- to know the composition of blood, to describe the stages of hemopoiesis, to recognize and describe the blood cells in histological slides	Theoretical material during the lectures, study of histological slides during seminars and practice, self-study	Continuous assessment during seminars and practice. At the end of theme – colloquium. At the end of the course unit - examination
- to know microscopic structure of muscle tissue, to recognize and describe the slides of different muscular tissues	Theoretical material during the lectures, study of histological slides during seminars and practice, self-study	Continuous assessment during seminars and practice. At the end of theme – colloquium. At the end of the course unit - examination
- to know microscopic structure of nervous tissue, to recognize and describe the slides of nervous tissue	Theoretical material during the lectures, study of histological slides during seminar and practice, self-study	Continuous assessment during seminars and practice. At the end of theme – colloquium. At the end of the course unit - examination
- to know the elements of human embryo face, to describe and to draw structural elements of developing face and neck, to explain their origin, development, to	Theoretical material during the lectures, study of histological slides, pictures and	Continuous assessment during seminars and practice. At the end of theme – colloquium. At

know the main developmental defects, to describe their causes and mechanisms.	moulages conserved specimens during practice, discussions during seminars, self-study	the end of the course unit - examination
- to have detailed knowledge and understanding about the development of human primitive mouth, to know the main developmental defects, to describe their causes and mechanisms, to explain their correlations and functions	Theoretical material during the lectures. Study of histological slides, moulages, during practice, discussions and analysis during seminars, self-study	Continuous assessment during practice and seminar. At the end of theme – colloquium. At the end of the course unit - examination
- to have detailed knowledge and understanding of the microscopic structure of oral mucosa, the peculiarities of mucosa of gums, tongue, lips, palate, cheeks, mouth floor, to have detailed knowledge and understanding of the microscopic structure of salivary glands, to recognize and describe the slides of different oral organs	Theoretical material during the lectures. Study of histological slides, moulages, during practice, discussions and analysis during seminars, self-study	Continuous assessment during practice and seminar. At the end of theme – colloquium. At the end of the course unit - examination
- to have detailed knowledge and understanding of the tooth formation, to describe and to draw structural elements of different stages of the developing tooth, to know the development of dentine, enamel, pulp and periodontium., to recognize and describe the slides of different developmental stages of a tooth	Theoretical material during the lectures. Study of histological slides, moulages, during practice, discussions and analysis during seminars, self-study	Continuous assessment during practice and seminar. At the end of theme – colloquium. At the end of the course unit - examination
- to have detailed knowledge and understanding of the microscopic structure and functions of dental tissues (enamel, dentine, pulp) and periodontal tissues (cementum, periodontal ligament, gums, alveolar bone), to recognize and describe the slides of different dental tissues	Theoretical material during the lectures. Study of histological slides, moulages, prepares during practice, discussions and analysis during seminars, self-study	Continuous assessment during practice and seminar. At the end of theme – colloquium. At the end of the course unit - examination

Topics	Contact work hours							Time and tasks of self-study	
	Lectures	Consultations	Seminars	Practice	Laboratory work	Practical training	Total contact hours	Self-study	Tasks
1. The methods and techniques of Histology. Cell structure, dividing and physiological features	1	-	2	1	-	-	4	4	Studies of the literature, preparing for seminar and practice
2. Gametes. Fertilisation. Characteristics of embryonic period. Gastrulation and differentiation of germ layers	2	-	2	1	-	-	5	5	Studies of the literature, preparing for seminar and practice
3. Characteristics of fetal period. Placenta	1	-	1	1	-	-	3	3	Studies of the literature, preparing for seminar, practice. Repeating the material about methods and techniques of Histology, material of cytology and embryology, preparing for the test

4. Epithelium: surface epithelium, surface specialisations, intercellular junctions	1	-	1	1	-	-	3	3	Studies of the literature, preparing for seminar, practice and interim testing
5. Epithelium: glands	1	-	1	1	-	-	3	3	Studies of the literature, preparing for seminar and practice. Repeating the material of epithelial tissue and preparing for the colloquium
6. Embryonic, specialized and proper connective tissue	2	-	1	1	-	-	4	4	Studies of the literature, preparing for seminar, practice and interim testing
7. Skeletal connective tissues. Histogenesis of skull and long bones	2	-	2	1	-	-	5	5	Studies of the literature, preparing for seminar, practice and interim testing.
8. Blood and haemopoiesis	2	-	1	1	-	-	4	4	Studies of the literature, preparing for seminar and practice. Repeating the material about connective tissues and blood, preparing for the colloquium
9. Muscle tissue	2	-	1	1	-	-	4	4	Studies of the literature, preparing for seminar, practice and interim testing.
10. Nervous tissue	2	-	1	1	-	-	4	4	Studies of the literature, preparing for seminar and practice. Repeating the material about muscle and nervous tissues and preparing for the colloquium
11. Development of the face, palate and pharyngeal apparatus.	2	-	1	-	-	-	3	3	Studies of the literature, preparing for seminar
12. Development of oral cavity. Oral mucosa.	2	-	1	1	-	-	4	4	Studies of the literature, preparing for seminar and practice
13. Gums and salivary glands	2	-	-	2	-	-	4	4	Studies of the literature, preparing for practice and interim testing
14. Development of teeth	2	-	1	1	-	-	4	4	Studies of the literature, preparing for seminar and practice.
15. Dentinogenesis and structure of dentin	2	-	0,5	0,5	-	-	3	3	Studies of the literature, preparing for seminar and practice
16. Emalogenesis and structure of enamel	2	-	0,5	0,5	-	-	3	3	Studies of the literature, preparing for seminar, practice and interim testing
17. Dental pulp	2	-	1	-	-	-	3	3	Studies of the literature, preparing for seminar
18. Cementum, periodontal ligament and alveolar bone	2	-	1	1	-	-	4	4	Studies of the literature, preparing for seminar, practice and interim testing. Repeating the material about oral embryology and histology, and preparing for the colloquium
Oral tissues and organs									
Total	32	-	19	16	-	-	67	67	

Assessment strategy	Weight (%)	Assessment period	Assessment criteria
Continuous assessment during practice		During semester	Interim testing (oral questioning or a written test) and discussions on the current topic (with the assessment “passed” or “not passed”) are organized. In case of failure, students should repeat the test. All tests should be passed before the colloquium.

			At the end of the practice the lecturer checks the drawings, points the mistakes, ascertains the correctness of terminology and depicted structures. Attendance of the practices is mandatory, and missing classes due to justified causes must not exceed 20% of the scheduled time.
Continuous assessment during seminars		During semester	Students report on self-dependently explored topics and projects, general discussion on problematic questions during seminars. Attendance of the seminars is mandatory, and missing classes due to justified causes must not exceed 20% of the scheduled time.
Interim assessment - theoretical colloquia: 1. Epithelial tissue 2. Connective tissue and Blood 3. Muscle tissue and Nervous tissue 4. Oral embryology and histology	20% 10%	During semester	The colloquia are organized in the Moodle system (closed-ended or open-ended questions with schemes, drawings, figures and histological slides). Assessment is in 10 points system (points are not rounded). More than 5 points should be collected in order to pass a colloquium. Failed colloquium could be retaken: two retakes are organized during the semester and the third – before the exam. An average grade of all the tissues colloquia makes up 20% of the final evaluation, the grade of the Oral embryology and histology colloquium makes up 10% of the final evaluation.
Final Exam	70%	During session	Student must fulfil the attendance requirements and pass all the colloquia. Examination is in written form (open-ended or closed-ended questions). Answer of each question is assessed by marks from 0 to 10. Average of all marks makes assessment of the examination (makes 70% of the final assessment). The final assessment consists of the following: - 70% - examination; - 20% - average of the tissues colloquia (Epithelial tissue, Connective tissue and Blood, Muscle and Nervous tissue) - 10% - Oral embryology and histology colloquium. The final assessment according to the scheme: 10 – if it is collected ≥ 90 % 9 – if it is collected ≥ 85 % 8 – if it is collected ≥ 75 % 7 – if it is collected ≥ 65 % 6 – if it is collected ≥ 55 % 5 – if it is collected ≥ 50 % 4 – if it is collected < 50 % (failed).

Author	Year of publication	Title	No of periodical or vol. of publication	Publication place and publisher or Internet link
Required reading				
Young B., O'Dowd G., Woodford P.	2014	Wheater's Functional Histology: a Text and Colour Atlas		Churchill Livingstone https://www.clinicalkey.com/#!/browse/book/3-s2.0-C20090600258
Berkovitz B.K.B., Holland G.R., Moxham B.J.	2018	Oral Anatomy, Histology and Embryology		Elsevier
Šimkūnaitė-Rizgelienė R.	2012	A Practical Guide to Human Embryology		VU Moodle system

Šimkūnaitė-Rizgeliene R.	2012	A Practical Guide to Human General Histology		VU Moodle system
Šimkūnaitė-Rizgeliene R.	2012	A Practical Guide to Human Special Histology		VU Moodle system
Recommended reading				
Mescher A.L.	2018	Junqueira's Basic Histology: Text and Atlas		https://accessmedicine.mhmedical.com/book.aspx?bookid=2430
Gartner L. P.	2021	Textbook of Histology		Elsevier https://www.clinicalkey.com/#!/browse/book/3-s2.0-C20140021375
Schoenwolf G. C.	2015	Larsen's Human Embryology		Churchill Livingstone https://www.clinicalkey.com/#!/browse/book/3-s2.0-C20100689383