COURSE SYLLABUS

Academic year 2025 - 2026

1. Programme Information

1.1. Higher Education Institution	**„Lucian Blaga" University of Sibiu**
1.2. Faculty	Faculty of Sciences
1.3. Department	Environmental Sciences, Physics, Physical Education and Sports
1.4. Field of study	Biology
1.5. Level of study [i]	Bachelor
1.6. Programme of study	Biology (in english)

2. Details about the course

2.1. Name of course	**Human Histology and Anatomy**			Code	FSTI. MFE. BIOENG. L.FO.2.2020.E-3.5
2.2. Course coordinator	Lecturer dr. Ioan Tăușan				
2.3. Seminar / laboratory coordinator	Asist. univ. dr. Brînza Ion				
2.4. Year of study[ii]	1	**2.5.** Semester[iii]	2	**2.6.** Evaluation form [iv]	
2.7. Course type [v]	A	**2.8.** The formative category of the course [vi]			S

3. Estimated total time

3.1. Course Extension within the Curriculum – Number of Hours per Week					
3.1.a.Lecture	3.1.b. Seminar	3.1.c. Laboratory	3.1.d. Project	3.1.e Other	Total
2		2			**4**
3.2. Course Extension within the Curriculum – Total Number of Hours within the Curriculum					
3.2.a.Lecture	3.2.b. Seminar	3.2.c. Laboratory	3.2.d. Project	3.2.e Other	Total[vii]
28		28			**56**

Time Distribution for Individual Study [viii]	**Hours**
Learning by using course materials, references and personal notes	9
Additional learning by using library facilities, electronic databases and on-site information	4
Preparing seminars / laboratories, homework, portfolios and essays	2
Tutorial activities [ix]	2
Exams[x]	2

3.3. Total Individual Study Hours [xi] ***(NOSI$_{sem}$)***	**19**
3.4. Total Hours in the Curriculum (*NOAD$_{sem}$*)	**56**
3.5. Total Hours per Semester [xii] **(*NOAD$_{sem}$* + *NOSI$_{sem}$*)**	**75**
3.6. No. of hours / ECTS	**25**
3.7. Number of credits[xiii]	**3**

4. Prerequisites (if needed)

4.1. Courses that must be successfully completed first (from the curriculum) [xiv]	Not applicable.
4.2. Competencies	Ability to work in a team and to comply with hygiene and safety regulations in the laboratory

5. Conditions (wherever applicable)

5.1. For course/lectures [xv]	Classroom, equipped with laptop/desktop, video projector.
5.2. For practical activities (lab/sem/pr/other) [xvi]	Laboratory equipped with optical microscopes, slides and slides, biological material to be analyzed.

6. Learning outcomes [xvii]

Number of credits assigned to the discipline: 3				
Learning outcomes				Credit allocation based on learning outcomes
No.	Knowledge	Aptitudes	Responsibility and autonomy	
LO 1	The student/graduate describes, defines, and discusses fundamental principles in the field of Biology, as well as interdisciplinary aspects (e.g., evolutionary theory, animal physiology).	The student/graduate applies working methods using modern instruments/equipment and classical laboratory techniques in order to carry out and design experiments, to record, and to appropriately analyse the results obtained.	The student uses their own knowledge and experience to contribute to the scientific community and society at large by participating in professional and/or community activities.	0.6
LO 2	The student correctly uses and explains the terminology specific to Biology, the main concepts and laws, and the characteristics of biological systems from the perspective of the principles of organisation and functioning of living matter.	The student/graduate defines, describes, and discusses/presents the major concepts in Biology.	The student/graduate demonstrates responsibility and autonomy in using scientific knowledge in Biology by conducting research, developing or improving concepts, and making ethical and professional decisions within the scientific process.	0.6
LO 3	The student/graduate defines, explains, and exemplifies basic and modern experimental techniques in the analysis and characterization of biological systems, records and presents experimental results, and explains the	The student/graduate uses, investigates, and critically analyses the operating principles and use of equipment/instruments and working techniques/methods for investigating the	The student/graduate applies the knowledge learned in other courses to explain the interactions of organisms with the environment.	0.6

	principles of scientific methods.	functioning of biological systems.		
LO 4	The student/graduate demonstrates the ability to operate with scientific means of documentation and literature searching, critically evaluates the scientific literature, develops arguments supported by scientific evidence, and clearly communicates that information in a variety of formats (models, tables, graphs, mathematical equations, etc.).	-	-.	0.6
LO 5	The student/graduate demonstrates the ability to operate with appropriate methods of information/ documentation/knowledge and to instruct pupils, colleagues, students, and other persons in a scientific manner.	-	-	0.6

7. Course objectives (resulted from developed competencies)

7.1. Main course objective	Acquisition by students of knowledge regarding the subsystemic structures of the human body starting from the subcellular, histological structures of organs, apparatuses, systems in close connection with their physiology and their preservation in optimal physiological conditions by observing the most basic rules of hygiene.
7.2. Specific course objectives	1. To develop the capacity for exploration/investigation of the human body and to use the appropriate means and methods for its exploration. 2. Recognition of different types of human cells and tissues in microscopic preparations. 3. Making cytological and histological preparations, observing them under a microscope and making drawings of them.

8. Course description

8.1. Lecture[xviii]		**Teaching methods**[xix]	**Hours**
Lecture 1	Introduction, objectives of the discipline. - Brief history; - Structure, functions and general classification of tissues in vertebrates; - Histogenesis; - The general organization of the human body; - Descriptive and topographic anatomy;	Video projector-assisted lecture; Systematic exposure; Didactic demonstration, debate and problematization; Interactive dialogue with students; Activities carried out on e-learning platforms	2

	Classical and modern methods of anatomical study.	(Google Classroom, Google Meet, Zoom, etc.).	
Lecture 2	Integumentary system – epithelial tissue - General; - Types of epithelia; - External morphology of the skin; - Skin layering; Cutaneous appendages.	Video projector-assisted lecture; Systematic exposure; Didactic demonstration, debate and problematization; Interactive dialogue with students; Activities carried out on e-learning platforms (Google Classroom, Google Meet, Zoom, etc.).	2
Lecture 3	Bone system – connective tissues - General; - Own connective cells and migratory cells; - The chemical composition of the fundamental substance, and the characterization of collagen, elastic and reticular connective fibers; - Classification and role of connective tissues; - Osteogenesis; - Bone morphology and structure; - Composition of the human skeleton, types of bones, adaptive peculiarities; The skeleton of the human body.	Video projector-assisted lecture; Systematic exposure; Didactic demonstration, debate and problematization; Interactive dialogue with students; Activities carried out on e-learning platforms (Google Classroom, Google Meet, Zoom, etc.).	4
Lecture 4	Muscular System - Muscle tissue localization and classification; - Comparative characterization, both structural and ultrastructural, of skeletal striated muscle fiber, myocardocyte and smooth muscle cell; - Muscles of the human body; - Morphology and structure of skeletal muscles; Appendices and levers of the locomotor system.	Video projector-assisted lecture; Systematic exposure; Didactic demonstration, debate and problematization; Interactive dialogue with students; Activities carried out on e-learning platforms (Google Classroom, Google Meet, Zoom, etc.).	2
Lecture 5	Somatic and Vegetative Nervous System - Introduction and generalities; - Definition and organization of the nervous system; - Localization, neurogenesis and general structure (neurons and glial cells); - Description of permeable barriers in CNS; - The neuron, the nervous tissue; - Spinal cord and spinal nerves; Encephalon (morphology and structure of the myelencephalon, metencephalon, midbrain, diencephalon, telencephalon); - Peripheral nervous system (spinal nerves and cranial nerves);	Video projector-assisted lecture; Systematic exposure; Didactic demonstration, debate and problematization; Interactive dialogue with students; Activities carried out on e-learning platforms (Google Classroom, Google Meet, Zoom, etc.).	4

	- Vegetative nervous system (sympathetic and parasympathetic);		
Lecture 6	Receiving Structures (Sense Organs) - Introduction and generalities; cutaneous, kinesthetic, gustatory, olfactory, visual, acoustic-vestibular, visceral receptors;	Video projector-assisted lecture; Systematic exposure; Didactic demonstration, debate and problematization; Interactive dialogue with students; Activities carried out on e-learning platforms (Google Classroom, Google Meet, Zoom, etc.).	4
Lecture 7	Digestive System - Introduction and generalities; - Morphology and structure of the digestive tract; - The oral cavity (comprising the teeth and salivary glands); - Pharynx, esophagus, stomach, small intestine and large intestine, as well as the features of their wall; - Morphology and structure of the adnexal glands (parotid, sublingual, submandibular, parotid, liver and pancreas); Splanhnopleura.	Video projector-assisted lecture; Systematic exposure; Didactic demonstration, debate and problematization; Interactive dialogue with students; Activities carried out on e-learning platforms (Google Classroom, Google Meet, Zoom, etc.).	4
Lecture 8	Respiratory System - Introduction and generalities; - Morphology and structure of the airway wall (nasal passages, pharynx, larynx, trachea, bronchi); Lung morphology and structure;	Video projector-assisted lecture; Systematic exposure; Didactic demonstration, debate and problematization; Interactive dialogue with students; Activities carried out on e-learning platforms (Google Classroom, Google Meet, Zoom, etc.).	4
Lecture 9	Circulatory System - Introduction and generalities; - Blood; - Hematopoiesis; - Analysis of the structure of hematopoietic tissues and organs in adults; - Heart (morphology, structure of the heart wall, cardiac compartments, vascularization and innervation); - Morphology and structure of blood vessels (arteries, veins and capillaries); Distribution of the main blood vessels.	Video projector-assisted lecture; Systematic exposure; Didactic demonstration, debate and problematization; Interactive dialogue with students; Activities carried out on e-learning platforms (Google Classroom, Google Meet, Zoom, etc.).	4
Lecture 10	Lymphoid System - Introduction and generalities; - Lymph; - Morphology and structure of lymphoid vessels (veins and capillaries); - Morphology and structure of primary lymphatic organs (bone marrow and thymus);	Video projector-assisted lecture; Systematic exposure; Didactic demonstration, debate and problematization; Interactive dialogue with students; Activities carried out on e-learning platforms (Google Classroom, Google Meet, Zoom, etc.).	4

	- Morphology and structure of secondary lymphatic organs (lymph nodes, spleen and lymphoid formations associated with mucous membranes in tubular organs); Distribution of the main lymphatic vessels.		
Lecture 11	Urinary System - Introduction and generalities; - Morphology and structure of the kidneys (cortex and renal marrow, nephron, vascularization of the kidneys); Morphology and structure of the urinary tract (ureters, bladder, urethra).	Video projector-assisted lecture; Systematic exposure; Didactic demonstration, debate and problematization; Interactive dialogue with students; Activities carried out on e-learning platforms (Google Classroom, Google Meet, Zoom, etc.).	4
Lecture 12	Genital System - Introduction and generalities; - Morphology and structure of the female genital system: ovaries, genital tracts (fallopian tubes, uterus, vagina), adnexal glands and external genitalia; Morphology and structure of the male genital system: testicles and intratesticular sperm ducts.	Video projector-assisted lecture; Systematic exposure; Didactic demonstration, debate and problematization; Interactive dialogue with students; Activities carried out on e-learning platforms (Google Classroom, Google Meet, Zoom, etc.).	4
		Total lecture hours:	**28**

8.2. Practical activities

8.2.b. Laboratory		**Teaching methods** [xx]	**Hours**
Laboratory 1	Preparation of biological tissues for microscopic analysis. Histological, histochemical and immunohistochemical techniques; quality and safety management in the animal histology laboratory; optical and electron microscopy concepts.	Explanation, demonstration, graphic representation. Exercise. Video projection. Observation under a microscope. Simulator-based task (scenarios); applied mini-quiz.	2
Laboratory 2	Classification, localization and recognition of epithelial tissues. Covering epithelial tissues: simple and stratified, squamous, cubic and prismatic. Secretory epithelial tissues: exocrine and endocrine. Sensory epithelial tissues. Structure of the skin: sections through the skin (ensemble, detail - epidermis), skin glands (sweating, sebaceous). The hair, the nail.	Explanation, demonstration, graphic representation. Exercise. Video projection. Observation under a microscope. Simulator-based task (scenarios); applied mini-quiz.	2
Laboratory 3	Observation of different types of connective tissues. Their classification according to the consistency of the fundamental substance and the proportion between the component elements.	Explanation, demonstration, graphic representation. Exercise. Video projection. Observation under a microscope. Simulator-based task (scenarios); applied mini-quiz.	2

	Highlighting and describing the connective tissues proper (soft), semi-hard (hyaline, elastic and fibrous cartilaginous tissue), hard (compact and spongy bone tissue) and liquid (blood).		
Laboratory 4	Skeletal system. Bone morphology and structure. Axial skeleton.	Explanation, demonstration, graphic representation. Exercise. Video projection. Observation under a microscope. Simulator-based task (scenarios); applied mini-quiz.	2
Laboratory 5	The appendicular skeleton.	Explanation, demonstration, graphic representation. Exercise. Video projection. Observation under a microscope. Simulator-based task (scenarios); applied mini-quiz.	2
Laboratory 6	Observation of different types of muscle tissues. Their classification. Highlighting and describing muscle tissues (striated, smooth, cardiac). Classification of muscles. The shape and size of skeletal muscles. Skeletal muscle appendages. Locomotor system levers	Explanation, demonstration, graphic representation. Exercise. Video projection. Observation under a microscope. Simulator-based task (scenarios); applied mini-quiz.	2
Laboratory 7	The nervous system. Structure of neurons, glial and nerve cells. Morphological and functional classification of neurons and neurillas. Clinical correlations. Highlighting the structure of some organs of the central nervous system.	Explanation, demonstration, graphic representation. Exercise. Video projection. Observation under a microscope. Simulator-based task (scenarios); applied mini-quiz.	2
Laboratory 8	Receiving structures. Their classification according to: the specific excitant (mechanoreceptors, thermoreceptors, photoreceptors, chemoreceptors, nociceptors) and location (exteroceptors, proprioceptors, interoceptors). Highlighting the structure of the eye.	Explanation, demonstration, graphic representation. Exercise. Video projection. Observation under a microscope. Simulator-based task (scenarios); applied mini-quiz.	2
Laboratory 9	Highlighting the morphology and structure of the digestive tract wall.	Explanation, demonstration, graphic representation. Exercise. Video projection. Observation under a microscope. Simulator-based task (scenarios); applied mini-quiz.	2
Laboratory 10	Highlighting the morphology and structure of the airway and lung wall.	Explanation, demonstration, graphic representation. Exercise. Video projection. Observation under a microscope. Simulator-based task (scenarios); applied mini-quiz.	2

Laboratory 11	Respiratory system: lungs, dissection and observation of tissue under a microscope	Explanation, demonstration, graphic representation. Exercise. Video projection. Observation under a microscope. Simulator-based task (scenarios); applied mini-quiz.	2
Laboratory 12	Circulatory, arterial, venous and capillary systems. Highlighting the morphology and structure of the heart wall.	Explanation, demonstration, graphic representation. Exercise. Video projection. Observation under a microscope. Simulator-based task (scenarios); applied mini-quiz.	2
Laboratory 13	Lymphatic system. Highlighting lymphoid cells. Highlighting the morphology and structure of lymphoid organs.	Explanation, demonstration, graphic representation. Exercise. Video projection. Observation under a microscope. Simulator-based task (scenarios); applied mini-quiz.	2
Laboratory 14	Highlighting the morphology and structure of the kidneys and urinary tract. Highlighting the morphology and structure of the female genital system. Highlighting the morphology and structure of the male genital system.	Explanation, demonstration, graphic representation. Exercise. Video projection. Observation under a microscope. Simulator-based task (scenarios); applied mini-quiz.	2
		Total laboratory hours	

9. Bibliography

9.1. Recommended references	Atlas of Anatomy of Man Netter (fifth edition), Ed. Callisto, 2012
	Gray's Anatomy for Students. Fourth edition, Richard L. Drake; WayneVogl; Adam W. M. Mitchel; Scientific consultancy for the Romanian edition: Prof Univ Dr. Florin Mihai Filipoiu, ed Prior, 2019
	Comănescu G., Leonov, S., Neagu, A. - N., Elements of Cytology, Histology and Animal Embryology, Media Publishing House, Bacău, 2001
	Anne M Gilroy, Brian R MacPherson, Jamie Wikenheiser, Michael Schuenke, Erik Schulte, Udo Schumacher - Atlas of Anatomy-Thieme, 2020
	Elaine N. Marieb, Suzanne M. Keller - Essentials of Human Anatomy & Physiology, 13th edition-Pearson, 2020
	Wojciech Pawlina - Histology A Text and Atlas With Correlated Cell and Molecular Biology 9th, 2023
	Lap Ki Chan, Wojciech Pawlina - Teaching Anatomy_ A Practical Guide-Springer , 2020
	Beets Gordon J., Desaix P., Johnson E., et al., Anatomy and Physiology 2e, Rice University, Houston, Texas 77005, 2022
9.2. Additional references	Sandu, V.D., Pașca, C., Kis, E., 1999, Anatomia şi igiena uomo, Presa Universitară Clujeană, Cluj-Napoca.
	Zamfir Alexandra, 2000, Human Anatomy and Hygiene, Ed Alma Mater, Sibiu
	Frank H. Netter MD - Netter Atlas of Human Anatomy - Classic Regional Approach, 8th Ed.-Elsevier, 2023
	Wojciech Pawlina, Michael H. Ross - Histology_ A Text and Atlas_ With Correlated Cell and Molecular Biology-LWW Wolters Kluwer Health, 2019
	Werner Kahle - Color atlas of human anatomy. 3-Thieme, 2023

10. Conjunction of the discipline's content with the expectations of the epistemic community, professional associations and significant employers of the specific study program [xxi]

It is carried out through periodic contacts with them in order to analyze the problem.

11. Evaluation

Activity Type	11.1 Evaluation Criteria	11.2 Evaluation Methods		11.3 Percentage in the Final Grade	Notes. [xxii]
11.4a Exam / Coloquium	• Theoretical and practical knowledge acquired (quantity, correctness, accuracy)	Tests during the semester [xxiii]:	%	70 % (minimum 5)	
		Homework:	%		
		Other activities[xxiv]:	%		
		Final evaluation:	% (min. 5)		
11.4c Laboratory	• Knowledge of the equipment, how to use specific tools; evaluation of tools, processing and interpretation of results	• Oral response • Written questionnaire • Laboratory notebook, experimental works, reports, etc. • Practical demonstration		30 % (minimum 5)	
11.5 Minimum performance standard[xxv] Acquisition of the basic concepts from each chapter studied, and mandatory passing of the continuous assessments and the laboratory exam.					

The Course Syllabus will encompass components adapted to persons with special educational needs (SEN – people with disabilities and people with high potential), depending on their type and degree, at the level of all curricular elements (skills, objectives, contents, teaching methods, alternative assessment), in order to ensure fair opportunities in the academic training of all students, paying close attention to individual learning needs.

Filling Date: |_11_| / |_09_| / |_2025_|

Department Acceptance Date: |_17_| / |_09_| / |_2025_|

	Academic Rank, Title, First Name, Last Name	**Signature**
Course Teacher	Lecturer dr. Ioan Tăușan, PhD	
Study Program Coordinator	Assoc. Prof. Ana-Maria Benedek-Sîrbu, PhD	
Head of Department	Lecturer dr. Ioan Tăușan, PhD	

[i] *Bachelor / Master*

[ii] *1-4 for bachelor, 1-2 for master*

[iii] *1-8 for bachelor, 1-4 for master*

[iv] *Exam, colloquium or VP A/R - from the curriculum*

[v] *Course type: R = Compulsory course; E = Elective course; O = Optional course*

[vi] *Formative category: S = Specialty; F = Fundamental; C = Complementary; I = Fully assisted; P = Partially assisted; N = Unassisted*

[vii] *Equal to 14 weeks x number of hours from point 3.1 (similar to 3.2.a.b.c.)*

[viii] *The following lines refer to individual study; the total is completed at point 3.7.*

[ix] *Between 7 and 14 hours*

[x] *Between 2 and 6 hours*

[xi] *The sum of the values from the previous lines, which refer to individual study.*

[xii] *The sum (3.5.) between the number of hours of direct teaching activity (NOAD) and the number of hours of individual study (NOSI) must be equal to the number of credits assigned to the discipline (point 3.7) x no. hours per credit (3.6.)*

[xiii] *The credit number is computed according to the following formula, being rounded to whole neighbouring values (either by subtraction or addition*

$$\text{No.credits} = \text{NOCpSpD} \times \text{CC} + \text{NOApSpD} \times \text{CATOCpSdP} \times \text{CC} + \text{TOApSdP} \times \text{CA} \times 30 \text{ credits}$$

Where:

- NOCpSpD = Number of lecture hours / week / discipline for which the credits are calculated
- NOApSpD = Number of application hours (sem./lab./pro.) / week / discipline for which the credits are calculated
- TOCpSdP = Total number of course hours / week in the Curriculum
- TOApSdP = Total number of application hours (sem./lab./pro.) / week in the Curriculum
- C_C/C_A = Course coefficients / applications calculated according to the table

Coefficients	**Course**	**Applications (S/L/P)**
Bachelor	2	1
Master	2,5	1,5
Bachelor - foreign language	2,5	1,25

[xiv] *The courses that should have been previously completed or equivalent will be mentioned*

[xv] *Board, video projector, flipchart, specific teaching materials, online platforms, etc.*

[xvi] *Computing technology, software packages, experimental stands, online platforms, etc.*

[xvii] *The learning outcomes will be stated in accordance with the specific standards of the ARACIS expert commissions (https://www.aracis.ro/ghiduri/)*

[xviii] *Chapter and paragraph titles*

[xix] *Exposition, lecture, board presentation of the studied topic, use of video projector, discussions with students (for each chapter, if applicable)*

[xx] *Practical demonstration, exercise, experiment*

[xxi] *The relationship with other disciplines, the usefulness of the discipline on the labour market*

[xxii] *CPE – Conditions Exam Participation; nCPE – Does Not Condition Exam Participation; CEF - Conditions Final Evaluation; N/A – not applicable*

[xxiii] *The number of tests and the weeks in which they will be taken will be specified*

[xxiv] *Scientific circles, professional competitions, etc.*

[xxv] *The minimum performance standard in the competence grid of the study program is customized to the specifics of the discipline, if applicable*