

# **OBSAH**

1. Analytical chemistry.....	3
2. Anatomy.....	5
3. Bachelor Thesis Defence.....	7
4. Basic of Information and Communication Technologies.....	8
5. Basics of Management and Economics in Health Care, Organisation of Health.....	10
6. Biochemistry 1.....	12
7. Biochemistry 2.....	14
8. Biology.....	16
9. Biophysics.....	18
10. Clinical Practice 1.....	20
11. Clinical Practice 2.....	22
12. Clinical Practice 3.....	24
13. Clinical Practice 4.....	26
14. Clinical Practice 5.....	28
15. Communication.....	30
16. English Language 1.....	32
17. English Language 2.....	34
18. English Language 3.....	36
19. English Language 4.....	38
20. Examination Methods in Biochemistry.....	40
21. Examination Methods in Biochemistry 2.....	42
22. Examination Methods in Haematology and Transfusion.....	44
23. Examination Methods in Haematology and Transfusion 2.....	47
24. Examination Methods in Histology and Cytology.....	50
25. Examination Methods in Microbiology.....	52
26. First Aid.....	54
27. Focus on Spirituality - Spirituality of Truth.....	56
28. Focus on Spirituality - Spirituality of Good.....	58
29. Genetics.....	60
30. German Language.....	62
31. German Language 1.....	64
32. German Language 3.....	66
33. German Language 4.....	68
34. Haematology and Transfusion Study 1.....	70
35. Haematology and Transfusion Study 2.....	72
36. Histological Techniques 1.....	74
37. Histological Techniques 2.....	76
38. Histology and Cytology 1.....	78
39. Histology and Cytology 2.....	80
40. Immunology and Examination Methods in Immunology 1.....	82
41. Immunology and Examination Methods in Immunology 2.....	84
42. Laboratory Examination Methods - Practical Part.....	87
43. Laboratory Examination Methods in Biochemistry and Microbiology.....	88
44. Laboratory Examination Methods in Hematology and Transfusion, Histopathology and Cytology.....	89
45. Laboratory Techniques.....	90
46. Latin Language.....	92
47. Law and Legislation.....	94

48. Microbiology 1.....	96
49. Microbiology 2.....	98
50. Nuclear Medicine.....	100
51. Pathology and Pathological Physiology.....	102
52. Pedagogy, psychology, and sociology.....	104
53. Pharmacology.....	107
54. Physiology.....	109
55. Preventive Medicine and Hygiene.....	111
56. Professional Practice 1.....	113
57. Professional Practice 2.....	115
58. Professional Practice 3.....	117
59. Professional Practice 4.....	119
60. Professional Practice 5.....	121
61. Professional Practice 6.....	123
62. Research in Health Care.....	125
63. Seminar to Final Thesis.....	127
64. Slovenský jazyk 1.....	129
65. Slovenský jazyk 2.....	130
66. The Basic Theme of the Bible.....	131
67. The Basic Theme of the Theology.....	133
68. Toxicology and Examination Metods.....	135

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1001W/22	<b>Course title:</b> Analytical chemistry
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 / 2 <b>hours per semester:</b> 24 / 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 4	<b>Working load:</b> 100 hours
<b>Recommended semester/trimester:</b> 1.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During the semester there will be two written examinations in the field of General Chemistry and Organic Chemistry. Students must obtain a rating better than FX from both, thus fulfilling the condition for participation in final exam. The final evaluation will be determined on the basis of the results of the ongoing evaluation and evaluation oral exam.	
<b>Learning outcomes of the course:</b> The student will master the meaning of basic concepts and laws in chemistry, gain knowledge about properties chemicals. He or she is familiar with the nomenclature of inorganic and organic compounds. He or she wins basic knowledge of individual groups of organic substances, with emphasis on compounds that are part of living organisms. He or she knows the basic principles of laboratory methods of chemical analysis.	
<b>Course contents:</b> 1. Subject and object of chemistry research. Basic concepts, quantities and laws in chemistry. Structure of atom. 2. Periodic law and periodic table of elements. Chemical bond. Chemical structure and properties of chemical substances. 3. Phase states and Phase transformations. 4. Chemical reactions. Reaction kinetics. Thermochemistry. 5. Selected chapters from organic chemistry. Construction and bonds in molecules of organic compounds. Reactions of organic compounds. Effects of substituents. 6. Classification and nomenclature of organic compounds. 7. Carboxylic acids, structure and reactivity of functional and substitution derivatives of carboxylic. 8. Natural substances. Carbohydrates. Lipids. Isoprenoids (terpenes and steroids). Proteins. Nucleic acids. Alkaloids. 9. Basics of analytical chemistry. Quantitative analysis. 10. Protolytic, complexation, redox and precipitation equilibria in solutions. 11. Chemical calculations for the preparation of laboratory solutions 12. Laboratory electrodes.	
<b>Recommended or required literature:</b>	

<b>Language of instruction:</b> Slovak					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 37					
A	B	C	D	E	FX
10.81	21.62	35.14	24.32	0.0	8.11
<b>Name of lecturer(s):</b> Prof. Ing. Peter Tomčík, PhD., doc. Ing. Eva Culková, PhD., Ing. Jaroslav Durdiak, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1002W/22	<b>Course title:</b> Anatomy
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 / 3 <b>hours per semester:</b> 24 / 36 <b>Teaching method:</b> on-site	
<b>Credits:</b> 3	<b>Working load:</b> 75 hours
<b>Recommended semester/trimester:</b> 1.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During the semester: Active participation in presentations. After completing the presentations, a written examination. To participate in the exam, it is necessary to obtain 6 points from a 10-point test. The final evaluation is in the form of a written test, which contains 20 questions. It is necessary to write a test for 60%.	
<b>Learning outcomes of the course:</b> Course objective: Orientation in the subject of anatomy. Acquisition of anatomical nomenclature and basic anatomical concepts, anatomical planes and directions. The aim of the course is applied (clinical) anatomy and topographic anatomy. Theoretical knowledge: Gaining detailed knowledge of the anatomical structure of individual organs and organ systems. To be able to describe in Latin the macroscopic view of individual organs as well as their anatomical structure and the anatomical structure of the wall of individual organs. By understanding the anatomical structure and structure, to understand the physiological functions of individual systems. Practical skills: Based on anatomical description, the ability to identify and characterize individual organs and individual systems of the human body.	
<b>Course contents:</b> <ol style="list-style-type: none"> <li>1. Anatomy of the axial skeleton, skeleton of the limbs.</li> <li>2. Myology, muscles of the head, torso and limbs.</li> <li>3. Anatomy and structure of the digestive system.</li> <li>4. Anatomy and structure of the respiratory system.</li> <li>5. Structure of the heart, anatomy and branching of blood vessels.</li> <li>6. Lymphatic system.</li> <li>7. Anatomy and structure of the urinary system.</li> <li>8. Anatomy of male and female genitals.</li> <li>9. Blood.</li> <li>10. Endocrine system.</li> </ol>	

11. Nervous system. 12. Sensory organs.					
<b>Recommended or required literature:</b> KUBAS, V. a kol.:Anatómia pre nelekárske vedy. Verbum, Ružomberok 2021. ČIHÁK, R.: Anatomia I. Praha, Avicenum 1987 ČIHÁK, R.: Anatomie II. Praha, Avicenum 1988 ČIHÁK, R.: Anatomie III. Praha, Grada 1997 Kol. autorov: Anatómia ľudského tela I. a II. Martin, Osveta 2007					
<b>Language of instruction:</b> Slovak language					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 41					
A	B	C	D	E	FX
14.63	2.44	17.07	12.2	29.27	24.39
<b>Name of lecturer(s):</b> doc. MUDr. Marián Šanta, CSc., MUDr. Viliam Kubas, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54L21S/22		<b>Course title:</b> Bachelor Thesis Defence			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> <b>Recommended study range:</b> <b>hours weekly:</b> <b>hours per semester:</b> <b>Teaching method:</b> on-site					
<b>Credits:</b> 10		<b>Working load:</b> 250 hours			
<b>Recommended semester/trimester:</b> 5., 6..					
<b>Level of study:</b> I.					
<b>Prerequisites:</b>					
<b>Requirements for passing the course:</b>					
<b>Learning outcomes of the course:</b>					
<b>Course contents:</b>					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 6					
A	B	C	D	E	FX
66.67	16.67	0.0	16.67	0.0	0.0
<b>Name of lecturer(s):</b>					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1006W/22	<b>Course title:</b> Basic of Information and Communication Technologies
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 <b>hours per semester:</b> 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 2	<b>Working load:</b> 50 hours
<b>Recommended semester/trimester:</b> 1.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During the semester, participation in exercises, handing over practical tasks and elaboration of the final assignment.	
<b>Learning outcomes of the course:</b> During the semester, develop and submit 8 practical tasks, each with a weight of 10 points, a total of 80 points. Credits will not be awarded to a student who obtains less than 4 points from an assignment and at the same time does not submit all assignments with a minimum score. A: 80 - 72 points. B: 71 - 63 points. C: 62 - 54 points. D: 53 - 45 points. E: 44 - 32 points.	
<b>Course contents:</b> <ol style="list-style-type: none"> <li>1. Terminology in the field of ICT, acquisition, security, archiving, data compression, antivirus protection, cloud, types of software.</li> <li>2. Work in Windows OS, selected system programs of Windows OS, identity of individual versions of Windows OS.</li> <li>3. Hospital and health information systems - structure, databases, data collection, administration, output reports and statistics, personal data protection.</li> <li>4. Use of information technologies in medicine.</li> <li>5. Access to value information by the Internet, web databases, external KU databases.</li> <li>6. Microsoft Office desktop version and online version - principle, similarity and difference of individual versions.</li> <li>7. Text editors - advanced formatting, typesetting, tables and graphics tools.</li> <li>8. Spreadsheets - cell formatting, table design, functions and calculations, graphs, presentation and graphics tools.</li> <li>9. Graphic editors - acquisition, editing of image documentation.</li> <li>10. Effective and rational acquisition of technical assistance in individual programs and systems.</li> </ol>	



**Recommended or required literature:**

Integrovaný pomocník v Microsoft Windows a Microsoft Office.

Office 2016 CZ - Průvodce uživatele, Josef Pecinovský a Rudolf Pecinovský, Grada 2016. 1001 tipu a triku pro Windows 7; Ondřej Bitto, Computer Press Brno 2010.

Strana: 2

Microsoft Office Excel 2007 Podrobná uživatelská příručka, Milan Brož, Computer Press Brno 2008.

Microsoft Office Word 2007 Podrobná uživatelská příručka, Milan Brož, Computer Press Brno 2008.

Microsoft Office PowerPoint 2007 Podrobná uživatelská příručka, Milan Brož, Computer Press Brno 2008.

Office 2010 - Pecinovský Josef, Grada 2011, - [http://www.grada.sk/office-2010\\_4824/kniha](http://www.grada.sk/office-2010_4824/kniha).

**Language of instruction:****Notes:****Course evaluation:**

Assessed students in total: 42

A	B	C	D	E	FX
57.14	26.19	14.29	0.0	0.0	2.38

**Name of lecturer(s):** Mgr. Milan Kaman

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:

doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1055W/22	<b>Course title:</b> Basics of Management and Economics in Health Care, Organisation of Health
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 / 1 <b>hours per semester:</b> 12 / 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 2	<b>Working load:</b> 50 hours
<b>Recommended semester/trimester:</b> 5.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During semester: There will be at least one written test during semester, the maximum of 20 points can students achieve. Final evaluation: There will be oral or written test, students can reach 80 points. The overall points that student can obtained is 100. Course evaluation: A – 100 %-93 % B – 92 %-85 % C – 84 %-77 % D – 76 %-69 % E – 68 %-60 % FX – 59 %- 0 %	
<b>Learning outcomes of the course:</b> The aim of the course: Through the synthesis of acquired knowledge and skills to create a comprehensive and conceptual view of management and economic activities in health care, to be able to act preventively and think about effective economic thinking and action in the health team, department and the entire facility from the perspective of health care. Theoretical knowledge: Students are able to act preventively and think in matters of economic thinking and leadership of the medical team at the level of the outpatient clinic, department and the whole facility from the perspective of health care economics, know the issues and use of marketing and informatics in health care economics. Practical knowledge: Students are able to use knowledge of general economic laws in the practical activities of the health care provider, ensure economic efficiency while maintaining the quality of health care.	
<b>Course contents:</b> The structure of the course:	

1. Basics of management, definition, procedures, characteristics. Economic efficiency. Personal management. Marketing in healthcare
2. History of health care.
3. Healthcare - organization and health systems.
4. Healthcare and health services in the social market economy.
5. Forms and structure of medical facilities. Medical professions and their characteristics
6. Health care systems in individual EU countries and in some countries around the world.
7. Organization and methods of providing health services.
8. Financing of health care and methods of financing according to the type of care. Contributory and budgetary organizations.
9. Health insurance, types and basic characteristics
10. International cooperation in health care. WHO.

**Recommended or required literature:**

**Bibliography:**

1. JAKUŠOVÁ, V.: The basis of health care management, Osveta Martin, 2010, ISBN 9788080633479
2. ŠAGÁT, T. et al.: Organisation in the health care, Osveta Martin, 2010 s., ISBN 8080631433, 2005
3. Ozorovský V., Vojteková I.: Health care management and funding, 2016 Wolters Kluwer
4. Jakušová V.: Management for non-medical study fields, Osveta 2016
5. Ondruš P., Ondrušová I.: Management and funding in health care, Matica slovenská 2017
6. DOMENIK, J.: The basic of prevention and hygiene, Learning material, Faculty of health care, Ružomberok, 2019

**Language of instruction:**

Slovak language

**Notes:**

This course is taught during the winter semester and is evaluated during the exam period of the winter semester.

**Course evaluation:**

Assessed students in total: 14

A	B	C	D	E	FX
35.71	28.57	21.43	14.29	0.0	0.0

**Name of lecturer(s):** doc. MUDr. Jozef Domenik, PhD., MPH

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1010W/22	<b>Course title:</b> Biochemistry 1
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture <b>Recommended study range:</b> <b>hours weekly:</b> 3 <b>hours per semester:</b> 36 <b>Teaching method:</b> on-site	
<b>Credits:</b> 5	<b>Working load:</b> 125 hours
<b>Recommended semester/trimester:</b> 2.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During the semester: there will be 4 written test at the lectures, for each of which it is possible to obtain a maximum of 20 points. To sit the exam, it is necessary to obtain at least 40 points from the written tests. At the final oral exam, the student can get max. 60 points. The final evaluation will be based on the total number of points obtained from the tests and the oral exam. Course evaluation: A - 100% -90% B - 89% -80% C - 79% -70% D - 69% -60% E - 59% -45% FX - 44% and less	
<b>Learning outcomes of the course:</b> Course objective - to acquire basic and necessary knowledge of organic and inorganic chemistry and biochemistry to understand other subjects of Biochemistry-2 and Biochemistry – LEM (Laboratory Examination Methods). Theoretical knowledge: description of basic chemical structures - simple and complex - occurring in the cell and in biological fluids in humans, both from a static and dynamic point of view, their interrelationship under physiological conditions and basic changes in disease states.	
<b>Course contents:</b> 1. Revision of the most important concepts of organic chemistry - functional groups and types of bonds 2. Structure and function of the main cellular components - cell topohistochemistry. 3. Water and acid-base balance. 4. Amino acids and structure of proteins. Relationship between function and structure of proteins. 5. Enzymes, mechanism of catalysis, kinetics, inhibition, regulation 6. Carbohydrates, classification and nomenclature, structure, glycosidic bonds, glycoproteins 7. Lipids and related compounds, fatty acids, phospholipids, eicosanoids, steroids, lipoproteins - structure and properties.	

8. Nucleic acids, DNA replication, RNA synthesis, translation mRNA-protein synthesis, recombinant DNA, regulation of gene expression. 9. Introduction to metabolism, glycolysis, alternative pathways of carbohydrate metabolism, ATP production, mitochondrial electron transport and oxidative phosphorylation, pentose cycle, Krebs cycle. 10. Fatty acid metabolism, metabolism of lipids and related compounds. 11. Metabolism of proteins, biosynthesis of amino acids and compounds derived from them, metabolism of amino acids 12. Vitamins and hormones					
<b>Recommended or required literature:</b> 1. ŠTERN et al: Obecná a klinická biochemie pro bakalárske odb.studia, Univezita Karlova,Praha, 2011 2. D.M. VASUDEVAN, S. SREEKUMARI, K. VAIDYANATHAN: Základy všeobecnej a klinickej biochémie, Balneotherma, Bratislava, 2014, strán 665. slov. preklad 6. vyd. Textbook of Biochemistry, 2011, ISBN 978-93-5025-016-7					
<b>Language of instruction:</b> Slovak					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 21					
A	B	C	D	E	FX
19.05	14.29	28.57	19.05	14.29	4.76
<b>Name of lecturer(s):</b> doc. MUDr. Ivan Solovič, CSc., Mgr. Anton Vaňuga, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1023W/22	<b>Course title:</b> Biochemistry 2
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture <b>Recommended study range:</b> <b>hours weekly:</b> 4 <b>hours per semester:</b> 48 <b>Teaching method:</b> on-site	
<b>Credits:</b> 4	<b>Working load:</b> 100 hours
<b>Recommended semester/trimester:</b> 3.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b> KLVM/54L1010W/22	
<b>Requirements for passing the course:</b> During the semester: there will be 4 written test at the lectures, for each of which it is possible to obtain a maximum of 20 points. To sit the exam, it is necessary to obtain at least 40 points from the written tests. At the final oral exam, the student can get max. 60 points. The final evaluation will be based on the total number of points obtained from the tests and the oral exam. Course evaluation: A - 100% -90% B - 89% -80% C - 79% -70% D - 69% -60% E - 59% -45% FX - 44% - 0%	
<b>Learning outcomes of the course:</b> Course objective: gaining an overview of knowledge about the used analytes for individual groups of diseases and diagnoses. Theoretical knowledge: Gaining comprehensive knowledge of methods commonly used in laboratory and clinical practice, the preparation of patients in the pre-analytical stage. The curriculum is divided according to individual organ systems and the main clinical conditions in them. The student will gain an overview not only of the pathobiochemistry of the conditions, but also of the indications for examination, conditions of material collection, transport, method of examination, control of test reliability, possible serious interferences affecting the result, reference values, method of interpretation.	
<b>Course contents:</b> Overview in test panels for the most clinically important indications: 1. laboratory parameters and preoperative preparation and postoperative monitoring, laboratory monitoring of patients at JIS 2. determination of inflammatory activity, indicators of various forms of inflammation - SIRS, MODS, monitoring of septic conditions	

3. Diagnosis of acute ischemic conditions in cardiology and laboratory differential diagnosis of hypertension, examination of renal function in these conditions
4. risk factors for atherosclerosis, disorders of lipoprotein metabolism and monitoring of treatment of these conditions
5. monitoring of nutritional status,
6. monitoring of acid base and homeostasis disorders, especially in acute conditions
7. monitoring of oncological patients and tumor markers,
8. examinations in endocrinology according to individual diagnostic algorithms - e.g. hypothyroidism, hyperthyroidism, hypo- and hypercortisolism, sterility, decreased function of the hypothalamic-pituitary system
9. diabetes monitoring, lab. monitoring complications of diabetes (nephropathy, etc.)
10. gastroenterological and hepatological examinations,
11. examinations in neurology and psychiatry - examination of cerebrospinal fluid
12. monitoring of a pregnant woman during pregnancy and mother and child in the perinatal period
13. laboratory examination in pediatrics; pediatric reference values - specificities
14. diagnosis and monitoring of osteoporosis; metaphylaxis of urolithiasis.
15. monitoring of drug concentrations, poisoning, determination of alcohol, drugs
16. examination of renal function, monitoring of dialysis patients, monitoring of patients with transplanted organs (especially kidneys, but also after other transplants)
17. oxidative stress monitoring
18. clinical conditions for which examination by molecular biological methods is appropriate / necessary

**Recommended or required literature:**

1. PullmannR, Pavlovič M: Laboratórne nálezy a ich klinická aplikácia, RAABE Slovensko,2008-2014-vybrané kapitoly
2. Stern et al.:Klinická a obecná biochemie, KU Praha, 2011
3. Meško D, Pullmann R, Nosálová G: Vademekum klinickej biochémie,Osveta Martin, 2005

**Language of instruction:**

Slovak

**Notes:**

**Course evaluation:**

Assessed students in total: 21

A	B	C	D	E	FX
14.29	23.81	14.29	4.76	42.86	0.0

**Name of lecturer(s):** Mgr. Anton Vaňuga, PhD., doc. MUDr. Ivan Solovič, CSc.

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1004W/22	<b>Course title:</b> Biology
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 / 2 <b>hours per semester:</b> 24 / 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 4	<b>Working load:</b> 100 hours
<b>Recommended semester/trimester:</b> 1.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> Conditions for passing the course: presence on the lectures. Final evaluation: written exam Course evaluation: A - 100% -91% B - 92% -85% C - 84% -77% D - 76% -69% E - 68% -60% FX - 59% - 0%	
<b>Learning outcomes of the course:</b> Aims of the course unit: The aim of the course is to acquaint students with basic knowledge of general cytology, cell morphology, physiology, molecular biology and general genetics. Theoretical knowledge: The student will gain basic theoretical knowledge about the structure and physiology of the cell, molecular biology, as well as general genetics. This knowledge belongs to the general basis that the student must acquire and is necessary for other professional subjects.	
<b>Course contents:</b> 1. Cell theory, chemical composition of the cell 2. Cell organization, Prokaryotic cell, Eukaryotic cells, 3. Cytoplasm, Biological membranes, Cell wall, Basics of microscopy 4. Membrane organelles (Cytoplasmic membrane, Nucleus, Mitochondria, Chloroplasts, Golgi apparatus, Endoplasmic reticulum, Vacuola, Lysosomes, Microthelium, Plastids), 5. Fibrillar organelles (Cytoskeleton, Centrioles), Non-membrane organelles (Ribosomes, Inclusions) Microscopy of cells, cell organelles, Microscopic preparations 6. Intercellular communication, uptake and expenditure of substances, cell bioenergetics 7. Cell cycle (Mitosis, Amitosis, Meiosis), Cell division microscopy, Presentation of seminar papers 8. Molecular biology, Chemical basis of heredity: DNA, RNA, Genetic code and its expression 9. Transcription, Translation, Native and permanent preparations 10. Autosomal, Gonosomal inheritance 11. Gene interactions, extranuclear inheritance, presentation of seminar papers 12. Mutagenesis (mutations, mutagenic and repair, gene, chromosome, genomic mutations), Quantitative and population genetics	



**Recommended or required literature:**

SABÓ, A. 2008. Biológia. Trnava : Typi Universitatis Tyrnaviensis, 2008. 165 s. ISBN 978-80-80821-99-9

SRŠEŇ, S. 2000. Základy klinickej genetiky a jej molekulárna podstata. Martin : Osveta, 2000. 409 s. ISBN 80-8063-021-6

ŠUBOVÁ, D. 2005. Cytológia. Ružomberok : Katolícka univerzita, 2005. 68 s. ISBN 80-808400-18-0

**Language of instruction:**

Slovak Language

**Notes:****Course evaluation:**

Assessed students in total: 41

A	B	C	D	E	FX
17.07	34.15	19.51	14.63	12.2	2.44

**Name of lecturer(s):** doc. RNDr. Soňa Hlinková, PhD., RNDr. Lucián Zastko, PhD.

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1003W/22	<b>Course title:</b> Biophysics
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 / 2 <b>hours per semester:</b> 24 / 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 2	<b>Working load:</b> 50 hours
<b>Recommended semester/trimester:</b> 1.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During the semester: Attendance at lectures. The final evaluation: Written exam. Subject evaluation: A – 100%-91% B – 92%-85% C – 84%-77% D – 76%-69% E – 68%-60% FX – 59%- 0%	
<b>Learning outcomes of the course:</b> The aim of the subject: To know basic physical processes within organism, to know the importance of environmental biophysics for diagnostics of particular diseases, to gain knowledge about the risks connected with the use of ionizing and non-ionizing radiation in diagnostics and therapy. Theoretical knowledge: The student defines, distinguishes, describes, identifies, divides basic terms, phenomenons and processes in biophysics.	
<b>Course contents:</b> 1. Biophysics of the cell 2. Biophysics of the muscle contraction 3. Biophysics of the heart and blood vessel 4. Biophysics of the breathing. 5. Biophysics of the sense perception 6. Environmental biophysics and biophysics of the ionising radiation 7. CT and RTG 8. Magnetic resonance 9. Ultrasound 10. Nuclear medicine	

**Recommended or required literature:**

1. ŠAJTER, V. a kol.: Biofyzika, biochémia a rádiológia. Martin, Osveta, 2006, 226 s.
2. HRAZDÍRA, I. – MORNSTEIN, V.: Lékařská biofyzika a přístrojová technika. Brno, Neptun 2004, 396 s.
3. Chrapan, J.: Základy biofyziky 1. Ružomberok, KU, 2004, 143s.
4. Chrapan, J.: Základy biofyziky 2. Ružomberok, KU, 2009, 241s.
5. ROSINA, J. - VRÁNOVÁ, J. a kol.: Biofyzika pre zdravotnícké a biomedicínske odbory. Praha, Grada 2013. 224 s.
6. NAVRÁTIL, L. - ROSINA, J. a kol.: Medicínska biofyzika. Praha, GRADA, 2005, 524s.

**Language of instruction:**

Slovak language

**Notes:****Course evaluation:**

Assessed students in total: 42

A	B	C	D	E	FX
35.71	35.71	16.67	7.14	2.38	2.38

**Name of lecturer(s):** doc. MUDr. Pavol Dubinský, PhD., RNDr. Lucián Zastko, PhD., RNDr. Andrea Tvarožná

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54L1019W/22		<b>Course title:</b> Clinical Practice 1			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> <b>hours per semester:</b> 144s <b>Teaching method:</b> on-site					
<b>Credits:</b> 3		<b>Working load:</b> 75 hours			
<b>Recommended semester/trimester:</b> 1.					
<b>Level of study:</b> I.					
<b>Prerequisites:</b>					
<b>Requirements for passing the course:</b> During the semester: 100% participation					
<b>Learning outcomes of the course:</b> Course objective: To deepen theoretical knowledge about work and diagnostic procedures used in the field of biochemistry, hematology, immunology, pathology and microbiology, while acquiring practical skills Theoretical knowledge: students gradually gain an overview of the scope of work of individual workplaces, the spectrum of their diagnostics and at the same time learn the principles of individual methodologies Practical skills: students repeatedly practice some selected methodologies under the supervision of a lecturer					
<b>Course contents:</b> Gradually get acquainted with all workplaces: 1. with their daily operation, 2. with safety, fire and hygiene regulations 3. with documentation related to their work, 4. with current laboratory equipment, 5. with some selected examination methods of their routine diagnosis					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 40					
A	B	C	D	E	FX
95.0	2.5	0.0	0.0	0.0	2.5

<b>Name of lecturer(s):</b> PhDr. Helena Habiňáková, RNDr. Ivana Turzová, Mgr. Miriam Tupá, doc. RNDr. Jaroslav Timko, PhD., RNDr. Lucián Zastko, PhD.
<b>Last modification:</b> 11.09.2022
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54L1020W/22		<b>Course title:</b> Clinical Practice 2			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> <b>hours per semester:</b> 144s <b>Teaching method:</b> on-site					
<b>Credits:</b> 3		<b>Working load:</b> 75 hours			
<b>Recommended semester/trimester:</b> 2.					
<b>Level of study:</b> I.					
<b>Prerequisites:</b> KLVM/54L1019W/22					
<b>Requirements for passing the course:</b> During the semester: 100% participation					
<b>Learning outcomes of the course:</b> Course objective: To deepen theoretical knowledge about work and diagnostic procedures used in the field of biochemistry, hematology, immunology, pathology and microbiology, while acquiring practical skills Theoretical knowledge: students gradually gain an overview of the scope of work of individual workplaces, the spectrum of their diagnostics and at the same time learn the principles of individual methodologies Practical skills: students repeatedly practice some selected methodologies under the supervision of a lecturer					
<b>Course contents:</b> Gradually get acquainted with all workplaces: 1. with their daily operation, 2. with safety, fire and hygiene regulations 3. with documentation related to their work, 4. with current laboratory equipment, 5. with some selected examination methods of their routine diagnosis					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 38					
A	B	C	D	E	FX
97.37	0.0	0.0	0.0	0.0	2.63

<b>Name of lecturer(s):</b> PhDr. Helena Habiňáková, Mgr. Iveta Čučvarová, doc. RNDr. Jaroslav Timko, PhD., RNDr. Lucián Zastko, PhD.
<b>Last modification:</b> 11.09.2022
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54L1045W/22		<b>Course title:</b> Clinical Practice 3			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> <b>hours per semester:</b> 144s <b>Teaching method:</b> on-site					
<b>Credits:</b> 3		<b>Working load:</b> 75 hours			
<b>Recommended semester/trimester:</b> 3.					
<b>Level of study:</b> I.					
<b>Prerequisites:</b> KLVM/54L1020W/22					
<b>Requirements for passing the course:</b> During the semester: 100% participation					
<b>Learning outcomes of the course:</b> Course objective: To deepen theoretical knowledge about work and diagnostic procedures used in the field of biochemistry, hematology, immunology, pathology and microbiology, while acquiring practical skills Theoretical knowledge: students gradually gain an overview of the scope of work of individual workplaces, the spectrum of their diagnostics and at the same time learn the principles of individual methodologies Practical skills: students repeatedly practice some selected methodologies under the supervision of a lecturer					
<b>Course contents:</b> Gradually get acquainted with all workplaces: 1. with their daily operation, 2. with safety, fire and hygiene regulations 3. with documentation related to their work, 4. with current laboratory equipment, 5. with some selected examination methods of their routine diagnosis					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 24					
A	B	C	D	E	FX
70.83	25.0	0.0	0.0	0.0	4.17



<b>Name of lecturer(s):</b> PhDr. Helena Habiňáková, Mgr. Iveta Čučvarová, doc. RNDr. Jaroslav Timko, PhD., RNDr. Lucían Zastko, PhD., MUDr. Adrian Kališ, PhD.
<b>Last modification:</b> 11.09.2022
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54L1046W/22		<b>Course title:</b> Clinical Practice 4			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> <b>hours per semester:</b> 144s <b>Teaching method:</b> on-site					
<b>Credits:</b> 3		<b>Working load:</b> 75 hours			
<b>Recommended semester/trimester:</b> 4.					
<b>Level of study:</b> I.					
<b>Prerequisites:</b> KLVM/54L1045W/22					
<b>Requirements for passing the course:</b> During the semester: 100% participation					
<b>Learning outcomes of the course:</b> Course objective: To deepen theoretical knowledge about work and diagnostic procedures used in the field of biochemistry, hematology, immunology, pathology and microbiology, while acquiring practical skills Theoretical knowledge: students gradually gain an overview of the scope of work of individual workplaces, the spectrum of their diagnostics and at the same time learn the principles of individual methodologies Practical skills: students repeatedly practice some selected methodologies under the supervision of a lecturer					
<b>Course contents:</b> Gradually get acquainted with all workplaces: 1. with their daily operation, 2. with safety, fire and hygiene regulations 3. with documentation related to their work, 4. with current laboratory equipment, 5. with some selected examination methods of their routine diagnosis					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 22					
A	B	C	D	E	FX
95.45	0.0	0.0	0.0	0.0	4.55

<b>Name of lecturer(s):</b> PhDr. Helena Habiňáková, Mgr. Iveta Čučvarová, doc. RNDr. Jaroslav Timko, PhD., RNDr. Lucián Zastko, PhD.
<b>Last modification:</b> 11.09.2022
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54L1059W/22		<b>Course title:</b> Clinical Practice 5			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> <b>hours per semester:</b> 144s <b>Teaching method:</b> on-site					
<b>Credits:</b> 3		<b>Working load:</b> 75 hours			
<b>Recommended semester/trimester:</b> 5.					
<b>Level of study:</b> I.					
<b>Prerequisites:</b> KLVM/54L1046W/22					
<b>Requirements for passing the course:</b> During the semester: 100% participation					
<b>Learning outcomes of the course:</b> Course objective: To deepen theoretical knowledge about work and diagnostic procedures used in the field of biochemistry, hematology, immunology, pathology and microbiology, while acquiring practical skills Theoretical knowledge: students gradually gain an overview of the scope of work of individual workplaces, the spectrum of their diagnostics and at the same time learn the principles of individual methodologies Practical skills: students repeatedly practice some selected methodologies under the supervision of a lecturer					
<b>Course contents:</b> Gradually get acquainted with all workplaces: 1. with their daily operation, 2. with safety, fire and hygiene regulations 3. with documentation related to their work, 4. with current laboratory equipment, 5. with some selected examination methods of their routine diagnosis					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 13					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0

<b>Name of lecturer(s):</b> RNDr. Ivana Turzová, RNDr. Katarína Ondrášiková, Mgr. Miriam Tupá, doc. RNDr. Jaroslav Timko, PhD., RNDr. Lucián Zastko, PhD.
<b>Last modification:</b> 11.09.2022
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1016W/22	<b>Course title:</b> Communication
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 / 2 <b>hours per semester:</b> 24 / 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 4	<b>Working load:</b> 100 hours
<b>Recommended semester/trimester:</b> 2.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During the semester: students are actively involved in the teaching process (presentations, practice of verbal and nonverbal communication) in the practical mastery of the subject, participation in seminars must be - 100%, students will prepare a seminar paper with a presentation, where they will meet at least 60% criteria (formal page, content page, absence of errors in verbal and non-verbal expression, adherence to the time horizon of 5 minutes, method of submission). At the end of the presentation, the pros and cons, self-reflection are evaluated. If the criteria are not met, the student will not be admitted to the written part of the final exam. Final assessment: will be based on the fulfillment of the criteria within the exercises and the overall score obtained from the written form of the final exam.	
<b>Learning outcomes of the course:</b> Objective of the course - aims of the course unit: To acquire knowledge, skills in the field of interpersonal communication, to lead to communication skills in mutual interaction so that the student acquires competencies in the field of interpersonal communication. Point out mistakes that affect perception and communication. Training in solving problem situations in practice. Theoretical knowledge: The student defines communication, the basic division of concepts within communication. It characterizes the types of communication, masters the structure and principles of conversation, eliminates communication bad habits, acquires elements of empathy, describes the attributes of assertive communication. Practical skills: the student applies the acquired knowledge during theoretical teaching within the exercises, applies the acquired knowledge in the field of nonverbal and verbal communication, paralinguistic aspects of communication, assertiveness, empathy, evaluation and devaluation in practice.	
<b>Course contents:</b> 1. Characteristics of social communication, types and functions of communication 2. Nonverbal communication 3. Paralinguistic aspects of communication. 4. Verbal communication - characteristics 5. Rules of proper listening and understanding 6. Verbal expressions	

7. Interview - characteristics, structure of the interview
8. Questions in interviews
9. Forms and types of interviews
10. Empathy
11. Evaluation and devaluation
12. Assertiveness

**Recommended or required literature:**

1. CHALUPA, R. 2012. Efektivní krízová komunikace. Praha, Grada 2012, 169 s. ISBN 978-80-247-4234-2
2. PTÁČEK, R. 2011. Etika a komunikace v medicíně. Praha, Grada 2011, 528 s. ISBN 978-80-247-3976-2
3. HUMENÍK IVAN, SZANISZLÓ M. 2012. Biomedicínsky výskum, právne, etiky, filozoficky. Bratislava, Eurokódex, 2012 336 s. ISBN 978-80-89447-73-2
4. JEMELKA PETER, 2013. Kapitoly z aplikovanej etiky III. Úvod do bioetiky, Michal Vaško, 2013, 92.s. ISBN 978-80-7165-905-1
5. LITTVÁ, V a kol. 2019. Profesijsná aplikovaná etika vo verejnom zdravotníctve, Verbum, Ružomberok, 2019, 174 s. ISBN 978-80-561-0694-5
6. LITTVÁ, V. a kol. 2020. Profesijsná aplikovaná etika v urgentnej zdravotnej starostlivosti, Verbum, Ružomberok, 2020, 281 s. ISBN 978-80-561-0835-2
7. VÁCHA MAREK, 2012. Základy moderní lékařské etiky, Portál 2012, 302 s. ISBN 978-80-7367-780-0

**Language of instruction:**

slovak language

**Notes:**

The course is taught only in the summer semester and is evaluated only in the relevant examination period of the summer semester of the academic year.

**Course evaluation:**

Assessed students in total: 28

A	B	C	D	E	FX
64.29	14.29	7.14	3.57	7.14	3.57

**Name of lecturer(s):** doc. PhDr. Mgr. Vladimír Littva, PhD., MPH, PhDr. Mária Lehotská, PhD., PhDr. Marcela Ižová, PhD.

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1008Y/22	<b>Course title:</b> English Language 1
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 <b>hours per semester:</b> 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 1	<b>Working load:</b> 25 hours
<b>Recommended semester/trimester:</b> 1.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During semester: At the beginning of every seminar a short test from the previous lesson will take place. If a student will get A from all these tests (except one other mark than A (not FX) or one absence) the seminar will be automatically registered in the university system. The students, who will not meet this condition, must pass an oral exam in the exam period. The participation in the final exam is conditioned by a maximum of two absences during the semester or two FX from the tests. Course evaluation: A – 100 %-93 % B – 92 %-85 % C – 84 %-77 % D – 76 %-69 % E – 68 %-60 % FX – 59 %- 0 %	
<b>Learning outcomes of the course:</b> The aim of the course: To head the students towards individual work with the english text, to command the translation of an english medical text, to develop the students communication skills. Theoretical knowledge: The student is able to use grammar correctly during the conversation on the medical topic. Practical knowledge: The student can actively and promptly communicate in the hospital.	
<b>Course contents:</b> Vocabulary: The hospital team, hospital jobs. Verbs for describing jobs. Listening 1: An admission. Job interview. Language spot: Present simple and present continuous. The physiotherapist profession. Vocabulary: Hospital departments. Language spot: Prepositions of place and movement. Listening 1: Directions. Listening 2: The porter's office. Reading: The wheelchair. Vocabulary: The admissions procedure. Reading: It's my job - hospital receptionist. Vocabulary and Listening 1: Patient record form. Language spot: Past Simple versus Past Continuous. Writing: Patient summary	
<b>Recommended or required literature:</b> 1. Grice, T.: Nursing 1, Oxford English for Careers, Oxford University Press, 2012 2. Džuganová, B.: Angličtina pre lekárov a pracovníkov v zdravotníctve. Easton Books, Bratislava, 2014 3. Džuganová, B.: Medical English in Use, Martin, Osveta, 2010 4. Glendinning, E.H.: Professional English in Use Medicine, Cambridge University Press, Cambridge 2007	



<b>Language of instruction:</b> Slovak, English language					
<b>Notes:</b> This course is taught during the winter semester and is evaluated during the exam period of the winter semester.					
<b>Course evaluation:</b> Assessed students in total: 41					
A	B	C	D	E	FX
70.73	9.76	9.76	2.44	4.88	2.44
<b>Name of lecturer(s):</b> RNDr. PaedDr. Mária Nováková, PhD., MBA, PaedDr. Martin Pinkoš, doc. PhDr. Mgr. Vladimír Littva, PhD., MPH, doc. RNDr. Soňa Hlinková, PhD.					
<b>Last modification:</b> 11.09.2023					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1017Y/22	<b>Course title:</b> English Language 2
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 <b>hours per semester:</b> 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 1	<b>Working load:</b> 25 hours
<b>Recommended semester/trimester:</b> 2.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b> KLVM/54L1008Y/22	
<b>Requirements for passing the course:</b> Determined courses: English language 1 During semester: At the beginning of every lesson a short test will take place. If a student will get A from all these tests (except one other mark than A (not FX) or one absence) the seminar will be automatically registered in the university information system. The students, who will not meet this condition, must pass an oral exam in the exam period. The participation in the final exam is conditioned by a maximum of two absences during the semester or two FX from the tests. Course evaluation: A – 100 %-93 % B – 92 %-85 % C – 84 %-77 % D – 76 %-69 % E – 68 %-60 % FX – 59 %- 0 %	
<b>Learning outcomes of the course:</b> The aim of the course: To head the students towards individual work with the english text, to command the translation of an english medical text, to develop the students communication skills. Theoretical knowledge: The student is able to use grammar correctly during the conversation on the medical topic. Practical knowledge: The student can actively and promptly communicate in the hospital.	
<b>Course contents:</b> Vocabulary: First aid. Language spot: Instructions. Speaking: Giving instructions. Listening: Instructions. Reading: A surprise passenger. It's my job - Jeff Oliver. Signs and symptoms: Shock. Information poster: First aid for motorists. Pain and describing pain. Listening: A pain chart. Language spot: Making comparisons. Reading: Pain. Patient care: Questions to assess pain. Speaking: communication about pain. Listening: Symptoms. Language spot: Question forms. Reading: Night coughing and Mystery syndromes	
<b>Recommended or required literature:</b> 5. Grice, T.: Nursing 1, Oxford English for Careers, Oxford University Press, 2012 6. Džuganová, B.: Angličtina pre lekárov a pracovníkov v zdravotníctve. Easton Books, Bratislava, 2014 7. Džuganová, B.: Medical English in Use, Martin, Osveta, 2010 8. Glendinning, E.H.: Professional English in Use Medicine, Cambridge University Press, Cambridge 2007	

<b>Language of instruction:</b> English language, Slovak language					
<b>Notes:</b> This course is taught during the summer semester and is evaluated during the exam period of the summer semester.					
<b>Course evaluation:</b> Assessed students in total: 21					
A	B	C	D	E	FX
66.67	9.52	14.29	0.0	4.76	4.76
<b>Name of lecturer(s):</b> RNDr. PaedDr. Mária Nováková, PhD., MBA, PaedDr. Martin Pinkoš, doc. PhDr. Mgr. Vladimír Littva, PhD., MPH, doc. RNDr. Soňa Hlinková, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1032Y/22	<b>Course title:</b> English Language 3
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 <b>hours per semester:</b> 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 1	<b>Working load:</b> 25 hours
<b>Recommended semester/trimester:</b> 3.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b> KLVM/54L1017Y/22	
<b>Requirements for passing the course:</b> Determined courses: English language 2 During semester: At the beginning of every seminar a short test from the previous lesson will take place. If a student will get A from all these tests (except one other mark than A (not FX) or one absence) the seminar will be automatically registered in the university system. The students, who will not meet this condition, must pass an oral exam in the exam period. The participation in the final exam is conditioned by a maximum of two absences during the semester or two FX from the tests. Course evaluation: A – 100 %-93 % B – 92 %-85 % C – 84 %-77 % D – 76 %-69 % E – 68 %-60 % FX – 59 %- 0 %	
<b>Learning outcomes of the course:</b> The aim of the course: To head the students towards individual work with the english text, to command the translation of an english medical text, to develop the students communication skills. Theoretical knowledge: The student is able to use grammar correctly during the conversation on the medical topic. Practical knowledge: The student can actively and promptly communicate in the hospital.	
<b>Course contents:</b> Blood. Vocabulary: Testing blood. Listening 1: Blood types. Writing: Describing blood types. Listening 2: A blood test. Language spot: Zero and first conditional. Body bits: The heart. Reading: Blood pattern analysis. Hygiene. Vocabulary: Hygiene equipment. Listening 1: Hygiene report. Language spot: Talking about obligation. Writing: Notice. Listening 2: Test results. Reading: Ask the nurse. Monitoring the patient – taking vital signs. Vocabulary: Describing readings, Coma patient and hypothermia. Language spot: The Passive. Reading: General Anaesthetic. Listening 2: A scan.	
<b>Recommended or required literature:</b> 1. Grice, T.: Nursing 1, Oxford English for Careers, Oxford University Press, 2012 2. Džuganová, B.: Angličtina pre lekárov a pracovníkov v zdravotníctve. Easton Books, Bratislava, 2014 3. Džuganová, B.: Medical English in Use, Martin, Osveta, 2010 4. Glendinning, E.H.: Professional English in Use Medicine, Cambridge University Press, Cambridge 2007	

<b>Language of instruction:</b> Slovak, English language					
<b>Notes:</b> This course is taught during the winter semester and is evaluated during the exam period of the winter semester.					
<b>Course evaluation:</b> Assessed students in total: 24					
A	B	C	D	E	FX
75.0	8.33	8.33	0.0	0.0	8.33
<b>Name of lecturer(s):</b> RNDr. PaedDr. Mária Nováková, PhD., MBA, PaedDr. Martin Pinkoš, doc. PhDr. Mgr. Vladimír Littva, PhD., MPH, doc. RNDr. Soňa Hlinková, PhD.					
<b>Last modification:</b> 13.09.2023					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1043Y/22	<b>Course title:</b> English Language 4
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 <b>hours per semester:</b> 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 1	<b>Working load:</b> 25 hours
<b>Recommended semester/trimester:</b> 4.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b> KLVM/54L1032Y/22	
<b>Requirements for passing the course:</b> Determined courses: English language 3 During semester: At the beginning of every lesson a short test will take place. If a student will get A from all these tests (except one other mark than A (not FX) or one absence) the seminar will be automatically registered in the university information system. The students, who will not meet this condition, must pass an oral exam in the exam period. The participation in the final exam is conditioned by a maximum of two absences during the semester or two FX from the tests. Course evaluation: A – 100 %-93 % B – 92 %-85 % C – 84 %-77 % D – 76 %-69 % E – 68 %-60 % FX – 59 %- 0 %	
<b>Learning outcomes of the course:</b> The aim of the course: To head the students towards individual work with the english text, to command the translation of an english medical text, to develop the students communication skills. Theoretical knowledge: The student is able to use grammar correctly during the conversation on the medical topic. Practical knowledge: The student can actively and promptly communicate in the hospital.	
<b>Course contents:</b> Medication. Vocabulary: Types and forms of medication. Listening: Patient medication. Patient care: Dosages. Language spot: be going to and Present continuous for future. Reading: Pandemic and Tamiflu. Infectious diseases – vocabulary and diagnostics.	
<b>Recommended or required literature:</b> 13. Grice, T.: Nursing 1, Oxford English for Careers, Oxford University Press, 2012 14. Džuganová, B.: Angličtina pre lekárov a pracovníkov v zdravotníctve. Easton Books, Bratislava, 2014 15. Džuganová, B.: Medical English in Use, Martin, Osveta, 2010 16. Glendinning, E.H.: Professional English in Use Medicine, Cambridge University Press, Cambridge 2007	
<b>Language of instruction:</b> English language, Slovak language	

**Notes:**

This course is taught during the summer semester and is evaluated during the exam period of the summer semester.

**Course evaluation:**

Assessed students in total: 7

A	B	C	D	E	FX
71.43	14.29	14.29	0.0	0.0	0.0

**Name of lecturer(s):** RNDr. PaedDr. Mária Nováková, PhD., MBA, PaedDr. Martin Pinkoš, doc. PhDr. Mgr. Vladimír Littva, PhD., MPH, doc. RNDr. Soňa Hlinková, PhD.

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1038W/22	<b>Course title:</b> Examination Methods in Biochemistry
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 / 1 <b>hours per semester:</b> 24 / 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 4	<b>Working load:</b> 100 hours
<b>Recommended semester/trimester:</b> 4.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During the semester: there will be 3 written test at the lectures, for each of which it is possible to obtain a maximum of 20 points. To sit the exam, it is necessary to obtain at least 40 points from the written tests. At the final oral exam, the student can get max. 90 points. Presence min. at 10 lectures and at all practical sessions. The final evaluation will be based on the total number of points obtained from the tests and the oral exam. Course evaluation: A - 100% -90% B - 89% -80% C - 79% -70% D - 69% -60% E - 59% -45% FX - 44% -	
<b>Learning outcomes of the course:</b> Course objective: to provide theoretical knowledge and practical skills for mastering the examination of common analytes in the clinical biochemistry laboratory and at the same time to provide basic common knowledge of LEM for mastering selected laboratory methods in hematology, microbiology. Theoretical knowledge: bioanalytical chemistry in laboratory medicine and clinical biochemistry in particular, expression of analytical results, preanalytical phase and influence of possible interferences, basic principles of photometry, electromigration, separation, immunochemical methods; basic knowledge for the use of molecular biological methods. Information system in the laboratory, accreditation, certification Practical skills: theoretical background and their application for the determination of basic clinical-biochemical analytes	
<b>Course contents:</b> A. Theoretical background 1. Bioanalytical chemistry in laboratory medicine and clinical biochemistry in particular 2. Expression of laboratory analytical results.	



3. Pre-analytical phase, collection, transport, and storage of samples.
  4. Work safety in laboratories of laboratory medicine disciplines
  5. Quality management control, certification, accreditation, process maps.
  6. Refractometry, osmometry, examination of urine with strips manually and using urine analyzer
  7. Optical spectral methods, absorption and emission spectral methods, spectra, detection, division of instrumentation, automation,
  8. Buffers in bioanalytics, preparation, work with scales and analytical ones.
  9. Indicator reactions
  10. Enzymes in bioanalytics
  11. Immunochemical analyzes
  12. Biochemical analyzers
  13. Selected separation methods,
  14. Immunoanalytical methods especially turbidimetry, ELISA, chemiluminescence
- B. Practical application and selection or the possibility of using bioanalytical methods in the determination of common analytes with a more detailed description of the methodology

**Recommended or required literature:**

1. Pullmann, R, Pavlovič M: Laboratórne nálezy a ich klinická aplikácia, RAABE Slovensko, 2008-2014-vybrané kapitoly
2. Stern et al.: Klinická a obecná biochemie, KU Praha, 2011
3. Meško D, Pullmann R, Nosálová G: Vademekum klinickej biochémie, Osveta Martin, 2005

**Language of instruction:**

**Notes:**

**Course evaluation:**

Assessed students in total: 9

A	B	C	D	E	FX
33.33	11.11	33.33	0.0	22.22	0.0

**Name of lecturer(s):** doc. MUDr. Ivan Solovič, CSc., Mgr. Anton Vaňuga, PhD.

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1049W/22	<b>Course title:</b> Examination Methods in Biochemistry 2
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 / 3 <b>hours per semester:</b> 12 / 36 <b>Teaching method:</b> on-site	
<b>Credits:</b> 4	<b>Working load:</b> 100 hours
<b>Recommended semester/trimester:</b> 5.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b> KLVM/54L1038W/22	
<b>Requirements for passing the course:</b> During the semester: there will be 4 written test at the lectures, for each of which it is possible to obtain a maximum of 20 points. To sit the exam, it is necessary to obtain at least 40 points from the written tests. At the final oral exam, the student can get max. 90 points. Presence min. at 10 lectures and at all practical sessions. The final evaluation will be based on the total number of points obtained from the tests and the oral exam. Course evaluation: A - 100% -90% B - 89% -80% C - 79% -70% D - 69% -60% E - 59% -45% FX - 44% -	
<b>Learning outcomes of the course:</b> Course objective: 1-to provide theoretical knowledge and practical skills for the evaluation of examinations of common analytes in the clinical biochemistry laboratory and at the same time to provide basic common knowledge of LEM for the evaluation of laboratory work in hematology, microbiology. Information system in the laboratory, accreditation, certification, basics of chemometrics, 2-basic and selected more demanding laboratory procedures in molecular-biological diagnostics. Theoretical knowledge: theory of reference values, basics of chemometrics, Practical skills: application of selected statistical methods for the determination of basic clinical-biochemical analytes, mastering the principles of certification and accreditation of the laboratory and application to selected analytes	
<b>Course contents:</b> A. Basics of molecular genetics important for clinical practice 1. Analytical methods used in clinical molecular genetic diagnostics - an overview 2. Isolation of nucleic acids	

3. Actual analytical procedures, reverse transcription, electrophoretic procedures, amplification methods, hybridization methods 4. Basic instrumentation - thermocyclers, instruments for RT-PCR 5. Methods of restriction fragment analysis, PCR and RT-PCR 6. Overview of clinically significant and currently investigated polymorphisms B. Basics of chemometrics: 7. Basic statistical concepts, averages, 8. Theory of errors, distribution of random variables, frequency functions, exploratory analysis of one-dimensional data, quantiles, sample size, 9. Hypothesis testing, correlation, and regression analysis. 10. Theory of reference values and an example of a practical approach to their creation (supplied data) statistical processing of epidemiological studies. 11. Quality control, statistical programs in the daily routine activities of laboratories C. Accreditation processes, certification and process map 12. Preparation of the laboratory for accreditation and re-accreditation					
<b>Recommended or required literature:</b> . Pullmann, R, Pavlovič M: Laboratórne nálezy a ich klinická aplikácia, RAABE Slovensko, 2008-2014-vybrané kapitoly 2. Stern et al.: Klinická a obecná biochemie, KU Praha, 2011 3. Meško D, Pullmann R, Nosálová G: Vademekum klinickej biochémie, Osveta Martin, 2005					
<b>Language of instruction:</b> Slovak					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 13					
A	B	C	D	E	FX
30.77	38.46	23.08	7.69	0.0	0.0
<b>Name of lecturer(s):</b> doc. MUDr. Ivan Solovič, CSc., Mgr. Anton Vaňuga, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1037W/22	<b>Course title:</b> Examination Methods in Haematology and Transfusion
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 / 2 <b>hours per semester:</b> 12 / 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 4	<b>Working load:</b> 100 hours
<b>Recommended semester/trimester:</b> 4.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During the semester: there will be two written examinations / practical exams in the lectures (a maximum of 25 points can be obtained for each). To participate in the exam, it is necessary to obtain at least 25 points from the examinations and practical exams. At the final written exam, the student can get max. 50 points. Final evaluation: will be based on the total number of points obtained from examinations, practical tests and a written test. Course evaluation: A - 100% -93% B - 92% -85% C - 84% -77% D - 76% -69% E - 68% -60% FX - 59% - 0%	
<b>Learning outcomes of the course:</b> Course objective: Acquisition of basic knowledge in the field of laboratory hematology and transfusiology with emphasis on the pre-analytical and analytical phase of blood sampling and examination. Ability to prepare and microscopic evaluation of peripheral blood and bone marrow smears with the possibility of using special cytochemical examinations. Application of complex knowledge in the evaluation of laboratory tests. Theoretical knowledge: The student defines and identifies the individual phases of the laboratory examination. It describes the possibilities of counting blood cells using cytochemical examinations. It evaluates aspects of additional examinations, analyzes and compares theoretical knowledge with the achieved examinations. Practical skills: Performs basic blood tests, microscopic and special cytochemical tests. Addresses interferences and discrepancies in laboratory tests. Comprehensively demonstrates knowledge in diagnostic units.	
<b>Course contents:</b>	

1. Lectures: Quality control in the hematology laboratory - internal and external quality control  
Exercises: Practical application of SI units in the laboratory.
2. Lectures: Pre-analytical phase of the examination - blood collection, transport of material, preparation and processing of biological material before the examination. Anticoagulant solutions.  
Exercises: Pre-analytical, analytical and post-analytical phase in the hematology laboratory, ensuring identification and traceability during the entire laboratory process, preparation of samples for analysis, centrifugation and sorting. Collection, transport, processing and storage of blood samples. Blood sampling.
3. Lectures: Blood count, Possibilities of counting blood cells (microscopic determination, electronic counting of blood cells, automatic analyzers. Parameters of blood cells.  
Exercises: General principles of blood cell counting. Counting erythrocytes, leukocytes, platelets, eosinophils, reticulocytes. Counting in chambers (Burker, Neubauer and Nageotte chambers).
4. Lectures: Differential leukocyte budgeting.  
Exercises: Technique of paint determination, paint evaluation.
5. Lectures: Interferences in hemograms.  
Exercises: examples of interferences and their evaluation.
6. Seminar: Interpretation of hematological results. Written examination and practical exam.
7. Lectures: Cytochemical examination (phosphatases, esterases, peroxidases, glucuronidases), iron staining, PAS reaction, Sudan black.  
Exercises: practical laboratory diagnostics.
8. Lectures: Cytology and histology of bone marrow, lumbar puncture, punctures from other organs and body fluids. Other morphological examinations (Heinz bodies, basophilic erythrocyte spotting, schistocytes, non-segmented granulocytes, L.E. cells, lymphocytes in phase contrast).  
Exercises: practical laboratory diagnostics.
9. Seminar: Interpretation of peripheral blood and bone marrow smears. Written examination.
10. Lectures: Tests for the diagnosis of anemia - basic examination for hemolytic anemia (general tests, tests for the detection of abnormal hemoglobin, tests for the detection of enzyme deficiency, examination for osmotic resistance).  
Exercises: practical laboratory diagnostics.
11. Lectures: flow cytometry, cytogenetic and molecular genetic examination methods.  
Exercises: practical aspects of flow cytometry, cytogenetic and molecular genetic examinations.
12. Seminar: Interpretation of laboratory results Written examination and practical exam.

**Recommended or required literature:**

15. Vydra J., Novák J., Lauermannová M. a kol. Hematologie v kostce, Mladá fronta, 2019
16. Sakalová A., Bátorová A., Mistrík M., Hrubíško M. a kol. Klinická hematológia, Osveta, 2010
17. Indrák K. a kol. Hematologie a transfuzní lékařství. Triton, 2014
18. Pecka M. Laboratorní hematologie v přehledu . [2. díl] , Fyziologie a patofyziologie krevní buňky. Český Těšín: FINIDR, 2006
19. Penka M., Tesařová E. Hematologie a transfuzní lékařství I, Grada, 2011
20. Penka M., Tesařová E. Hematologie a transfuzní lékařství II, Grada, 2012
21. Adam Z., Krejč M., Vorlíček J. a kol. Hematologie : přehled maligních hematologických nemocí. Grada ,2008.

**Language of instruction:**

Slovak language.

**Notes:**

<b>Course evaluation:</b>					
Assessed students in total: 10					
A	B	C	D	E	FX
10.0	30.0	30.0	20.0	10.0	0.0
<b>Name of lecturer(s):</b> doc. RNDr. Jaroslav Timko, PhD., MUDr. Jaromír Tupý, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1050W/22	<b>Course title:</b> Examination Methods in Haematology and Transfusion 2
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 / 2 <b>hours per semester:</b> 12 / 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 4	<b>Working load:</b> 100 hours
<b>Recommended semester/trimester:</b> 5.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b> KLVM/54L1037W/22	
<b>Requirements for passing the course:</b> During the semester: there will be two written examinations / practical exams in the lectures (a maximum of 25 points can be obtained for each). To participate in the exam, it is necessary to obtain at least 25 points from the examinations and practical exams. At the final written exam, the student can get max. 50 points. Final evaluation: will be based on the total number of points obtained from examinations, practical tests and a written test. Course evaluation: A - 100% -93% B - 92% -85% C - 84% -77% D - 76% -69% E - 68% -60% FX - 59% - 0%	
<b>Learning outcomes of the course:</b> Course objective: Acquisition of basic knowledge from the field of laboratory hematology and transfusiology with emphasis on immunohematological examinations of patients and blood donors. Ability to test the blood group of anti-erythrocyte antibodies and to examine compatibility. Theoretical knowledge: The student defines the issues of immunohematology. It identifies the group system of erythrocytes and describes the possibilities of antibody screening. Evaluates compatibility testing, defines the need for examination of blood donors. Analyzes and compares theoretical knowledge with the achieved examinations. Practical skills: Performs immunohematological examinations of blood groups and antibody screening. Identifies specific antigens and evaluates compatibility tests. Addresses interferences and discrepancies in laboratory tests. Comprehensively demonstrates knowledge in diagnostic units.	
<b>Course contents:</b> 1. Lectures: examination of platelet function and biochemistry. Exercises: practical laboratory	

<p>diagnostics.</p> <p>2. Lectures: systems and methods for examination of hemostasis. Exercises: practical laboratory diagnostics.</p> <p>3. Lectures: coagulation examination for diagnostic purposes I. Exercises: principles of coagulation examinations.</p> <p>4. Lectures: coagulation examination for diagnostic purposes II. Exercises: special coagulation examinations.</p> <p>5. Seminar: Interpretation of hemostasisological examinations.</p> <p>6. Lectures: Immunohematological examinations - determining the blood group of patients. Antibody screening. Exercises: practical laboratory diagnostics.</p> <p>7. Lectures: Immunohematological examinations - determining the blood group of blood donors. Antibody screening. Exercises: practical laboratory diagnostics.</p> <p>8. Lectures: direct and indirect antiglobulin test. Exercises: practical laboratory diagnostics.</p> <p>9. Lectures: compatibility test, Immunohematological examination of newborns and children up to 4 months of age. Exercises: practical laboratory diagnostics.</p> <p>10. Lectures: Documentation ("Request for Blood Preparation and Pre-Transfusion Examination", "Transfusion Record", "Transfusion Response Report", "Questionnaire for Blood, Plasma and Blood Cell Donors". Exercises and Seminar: Documentation blood product and pre-transfusion examination ", " Transfusion record ", " Transfusion response report ", " Questionnaire for blood, plasma and blood cell donors ".</p> <p>11. Lectures: serological examination of a blood donor. Immunohematology of leukocytes and platelets. Exercises: practical laboratory diagnostics.</p> <p>12. Seminar: Interpretation of immunohematological laboratory results Written examination and practical examination.</p>
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**Recommended or required literature:**

22. Vydra J., Novák J., Lauermannová M. a kol. Hematologie v kostce, Mladá fronta, 2019
23. Sakalová A., Bátorová A., Mistřík M., Hrubíško M. a kol. Klinická hematológia, Osveta, 2010
24. Indrák K. a kol. Hematologie a transfuzní lékařství. Triton, 2014
25. Pecka M. Laboratorní hematologie v přehledu . [2. díl] , Fyziologie a patofyziologie krevní buňky. Český Těšín: FINIDR, 2006
26. Penka M., Tesařová E. Hematologie a transfuzní lékařství I, Grada,2011
27. Penka M., Tesařová E. Hematologie a transfuzní lékařství II, Grada, 2012
28. Adam Z., Krejč M., Vorlíček J. a kol. Hematologie : přehled maligních hematologických nemocí. Grada ,2008.

**Language of instruction:**

Slovak language.

**Notes:**



<b>Course evaluation:</b>					
Assessed students in total: 13					
A	B	C	D	E	FX
15.38	38.46	46.15	0.0	0.0	0.0
<b>Name of lecturer(s):</b> doc. RNDr. Jaroslav Timko, PhD., MUDr. Jaromír Tupý, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1051W/22	<b>Course title:</b> Examination Methods in Histology and Cytology
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 / 3 <b>hours per semester:</b> 12 / 36 <b>Teaching method:</b> on-site	
<b>Credits:</b> 4	<b>Working load:</b> 100 hours
<b>Recommended semester/trimester:</b> 5.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During the semester: Active participation in lectures. To participate in the exams, it is necessary to attend for min. 10 lectures and successful completion of 1 continuous written evaluation. Final evaluation: based on the evaluation of the number of these points obtained from the written exam (test) Course evaluation: A - 100% -91% B - 92% - 85% C - 84% - 77% D - 76% -69% E - 68% - 60% FX - 59% - 0%	
<b>Learning outcomes of the course:</b> Objective of the course - aims of the course unit: To teach various methods of histological processing of tissues and special examinations, including immunohistochemical methods and methods of molecular biology, in order to identify structural abnormalities. Also acquaintance with cytological methods, identifying functional and structural changes of cells, especially by detecting early stages of cancer and interpretation of cell elements. Theoretical knowledge: student defines, distinguishes, describes and identifies the basic concepts in the subject of examination methods in histopathology and cytology with their subsequent synthesis and application of knowledge in other professional subjects Practical skills: The student acquires the acquired theoretical knowledge in practice and gains practical experience in the implementation of examination methods in histopathology and cytology.	
<b>Course contents:</b> 1. Material processing, including fixation, basic staining methods 2. Methods for imaging connective tissue 3. Methods for representation of inorganic substances and pigments 4. Methods in neurohistology	

5. Methods for the detection of carbohydrates, lipids, enzymes 6. Methods of fluorescence microscopy 7. Methods of immunohistochemistry and molecular biology 8. Gynecological cytology 9. Non-gynecological cytology - nervous system, gastrointestinal system 10. Non-gynecological cytology - genitourinary system, respiratory system 11. Non-gynecological cytology - mammary gland, lymph nodes 12. Non-gynecological cytology - body fluids					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 14					
A	B	C	D	E	FX
57.14	35.71	7.14	0.0	0.0	0.0
<b>Name of lecturer(s):</b> prof. MUDr. Anton Lacko, CSc., MUDr. Adrian Kališ, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1024W/22	<b>Course title:</b> Examination Methods in Microbiology
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 / 2 <b>hours per semester:</b> 24 / 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 3	<b>Working load:</b> 75 hours
<b>Recommended semester/trimester:</b> 3.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During the semester, there will be two written examinations within the lectures. It is possible to obtain a maximum of 20 points from each. To participate in the final written exam, it is necessary to obtain at least 20 points from the examinations. The final evaluation will be based on the total number of points obtained from the written exam. Course evaluation: A - 100% -93% B - 92% -85% C - 84% -77% D - 76% -69% E - 68% -60% FX - 59% - 0%	
<b>Learning outcomes of the course:</b> Aims of the course: To provide students with basic knowledge of medical microbiology, to clarify the interdisciplinary meaning of the course Theoretical knowledge: students will learn selected parts of special microbiology. Practical skills: students will learn the basic diagnostics of gram-negative and gram-positive bacteria, mycobacteria, anaerobic bacteria and become familiar with the principles of basic serological diagnostics.	
<b>Course contents:</b> <ol style="list-style-type: none"> <li>1. Gram-negative bacteria 1</li> <li>2. Gram-negative bacteria 2</li> <li>3. Gram-positive bacteria</li> <li>4. Acid-resistant bacteria</li> <li>5. Anaerobic bacteria</li> <li>6. Spirochetes</li> <li>7. Other groups of bacteria</li> <li>8. Medically important viruses 1</li> <li>9. Medically important viruses 2</li> <li>10. Medically important viruses 3</li> </ol>	
<b>Recommended or required literature:</b> <ol style="list-style-type: none"> <li>39. TIMKO, J.: Mikrobiológia, epidemiológia, Verbum, Ružomberok 2009</li> <li>40. VOTAVA, M. a kol.: Lékařská mikrobiologie (obecná, speciální). Neptun, Brno 2003</li> <li>41. VOTAVA, M. a kol.: Lékařská mikrobiologie (vyšetřovací metody). Neptun, Brno 2010</li> <li>42. BEDNÁŘ, M. a kol.: Lékařská mikrobiologie, Marvil, Praha, 1996</li> </ol>	

<b>Language of instruction:</b> English language					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 25					
A	B	C	D	E	FX
16.0	48.0	20.0	8.0	4.0	4.0
<b>Name of lecturer(s):</b> doc. RNDr. Jaroslav Timko, PhD., RNDr. Igor Porvazník, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1031W/22	<b>Course title:</b> First Aid
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 / 1 <b>hours per semester:</b> 12 / 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 2	<b>Working load:</b> 50 hours
<b>Recommended semester/trimester:</b> 3.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During semester: During semester there will be a written test in exercises, the student can gain 40 pts maximum. To participate in the exam, it is necessary to gain at least 20 pts from test. In the final exam, the student can gain 60 pts maximum. Final evaluation: The final evaluation will be based on the total points gained from test and oral exam. The subject evaluation: A – 100 % - 93 % B – 92 % - 85 % C – 84 % - 77 % D – 76 % - 69 % E – 68 % - 61 % FX – 60 % - 0 %	
<b>Learning outcomes of the course:</b> To analyse system, organisation, law aspects of the first aid, to know the general principles of the first aid and to develop professional knowledge and skills of the students of the study programme and to use the modern methods of work in this field. Theoretical knowledge: The student has a knowledge of the urgent medicine, masters cardiopulmonary resuscitation, is able to orientate oneself in providing of the first aid and in case of the other acute conditions. Practical skills: to master procedures, the algorithm of the first aid in the sudden states and special situations. To know the law aspects, system and organisation of the first aid.	
<b>Course contents:</b> 1. The introduction of the subject, the basic terms of the first aid. 2. Pre-hospital urgent healthcare. 3. The system, organisation, law aspects, and general principles of the first aid. 4. The organisation, technique and protocols of the first aid in case of the mass accidents and special situations (material equipment and show). 5. History, phases, grades and procedures of urgent cardiopulmocerebral resuscitation. 6. Algorithms of the urgent resuscitation of adults and children. 7. The first aid in case of sudden states and training of first aid providing. 8. The first aid in the gynecology and obstetrics. 9. The complications in the CPR. 10. Ethic problems in the resuscitations. 11. The most common types of poisoning and the first aid in these cases. 12. The antidote and tools.	

**Recommended or required literature:**

6. BYDŽOVSKÝ, J.: První pomoc. Praha: Grada Publishing, 2011.
7. DOBIÁŠ, V. a kol.: Prednemocničná urgentná medicína. Martin: Osveta, 2007.
8. DOBIÁŠ, V.: Urgentná zdravotná starostlivosť. Martin: Osveta, 2007.
9. KELNAROVÁ, J. a kol.: První pomoc I. Praha: Grada, 2012.
10. KELNAROVÁ, J. a kol.: První pomocII. Praha: Grada, 2007.
11. LEJSEK, J. a kol.: První pomoc. Praha: Karolinum, 2013.
12. PLAVKOVÁ, M.: Prvá predlekárska pomoc. Bratislava: Josef Raabe Slovensko, 2013.
13. PIŠTEJOVÁ, M., KRAUS, D.: Prvá pomoc v praxi I. Prešov: Rokus, 2017.

**Language of instruction:**

Slovak

**Notes:****Course evaluation:**

Assessed students in total: 24

A	B	C	D	E	FX
91.67	4.17	4.17	0.0	0.0	0.0

**Name of lecturer(s):** doc. MUDr. Milan Minarik, PhD., Ing. Bc. Michal Sekerák, MPH

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:

doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> DEKZ/54Z2001W/22	<b>Course title:</b> Focus on Spirituality - Spirituality of Truth
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 <b>hours per semester:</b> 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 1	<b>Working load:</b> 25 hours
<b>Recommended semester/trimester:</b> 1.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> a) active participation of the student during the spirituality concentration program, participating in discussions, working in groups, participating in cultural, spiritual formation and volunteer activities (60-100%). b) final assessment: Elaboration of an essay on 1 standard page of A4 format and its presentation at a personal colloquium (60-100%). The final assessment of the subject corresponds to the verbal assessment: Passed/Not passed. Credit is awarded to a student who obtained a minimum of 60 out of 100% from the subject for fulfilling the specified conditions.	
<b>Learning outcomes of the course:</b> <ul style="list-style-type: none"> <li>• Knowledge: The student has knowledge about the true meaning of life and human identity.</li> <li>• Skills: The student can identify the true meaning of life and characterize sin and its consequences.</li> <li>• Competencies: The student is ready to transform the knowledge of the meaning of life into bearing witness to the truth.</li> </ul>	
<b>Course contents:</b> What it is about - the meaning of life. Human identity. God's love as the reason for creation and the principle of new life. Knowledge and consequences of sin. Jesus Christ as the way, the truth and the life. The importance of bearing witness to the truth.	
<b>Recommended or required literature:</b> <ol style="list-style-type: none"> <li>1. Encyklika pápeža Benedikta XVI. CARITAS IN VERITATE. 2009. Trnava: Spolok sv. Vojtecha, 2009, 118 s. ISBN 978-80-7162-786-9.</li> <li>2. Posynodálna apoštolská exhortácia Svätého Otca Františka CHRISTUS VIVIT mladým a celému Božiemu ľudu. 2019. Trnava: Spolok sv. Vojtecha, 2019, 125 s. ISBN 978-80-8161-368-5.</li> <li>3. ŠPIDLÍK, T. 2000. Pramene svetla: príručka kresťanskej dokonalosti. Trnava: Spolok sv. Vojtecha, 2000, 558 s. ISBN 80-7162-323-7.</li> <li>4. YOUCAT Katechizmus katolíckej cirkvi pre mladých. 2011. Bratislava: Karmelitánske nakladateľstvo, 2011, 301 s. ISBN 978-80-89231-99-7.</li> </ol>	



<b>Language of instruction:</b> Slovak language	
<b>Notes:</b> One study group consists of a maximum of 30 students, so that a personal approach to the students is possible and also so that the students can be divided into small groups with the number of 6 members for the purpose of effective communication.	
<b>Course evaluation:</b> Assessed students in total: 160	
ABSOL	NEABS
98.75	1.25
<b>Name of lecturer(s):</b> doc. PhDr. Mgr. Vladimír Littva, PhD., MPH, PaedDr. Martin Pinkoš	
<b>Last modification:</b> 11.09.2022	
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.	

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> DEKZ/54Z2004W/22	<b>Course title:</b> Focus on Spirituality - Spirituality of Good
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 <b>hours per semester:</b> 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 1	<b>Working load:</b> 25 hours
<b>Recommended semester/trimester:</b> 4.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> a) active participation of the student during the spirituality concentration program, participating in discussions, working in groups, participating in cultural, spiritual formation and volunteer activities (60-100%). b) final assessment: Elaboration of an essay on 1 standard page of A4 format and its presentation at a personal colloquium (60-100%). The final assessment of the subject corresponds to the verbal assessment: Passed/Not passed. Credit is awarded to a student who obtained a minimum of 60 out of 100% from the subject for fulfilling the specified conditions.	
<b>Learning outcomes of the course:</b> <ul style="list-style-type: none"> <li>• Knowledge: The student has knowledge about distinguishing between sin and virtue in human behavior and actions.</li> <li>• Skills: The student can distinguish between good and evil in human behavior and actions.</li> <li>• Competencies: The student is able to experience the Christian faith more personally through a truer distinction between good and evil and through a more concrete motivation to do good in the life of an adult Christian.</li> </ul>	
<b>Course contents:</b> Good and evil, sin and virtue. Good as an answer to evil. Virtues in the life of a Christian. "Modern sins" and "modern virtues". Sacramental Reconciliation.	
<b>Recommended or required literature:</b> <ol style="list-style-type: none"> <li>1. Encyklika Jána Pavla II. EVANGELIUM VITAE o hodnote a nenarušiteľnosti ľudského života. 1995. Trnava: Spolok sv. Vojtecha, 1995, 195 s. ISBN: 80-7162-097-1.</li> <li>2. Encyklika Jána Pavla II. VERITATIS SPLENDOR o základných otázkach cirkevnej náuky o mravnosti. 1994. Trnava: Spolok sv. Vojtecha, 1994, 180 s. ISBN 80-7162-057-2.</li> <li>3. YOUCAT Katechizmus katolíckej cirkvi pre mladých. 2011. Bratislava: Karmelitánske nakladateľstvo, 2011, 301 s. ISBN 978-80-89231-99-7.</li> </ol>	
<b>Language of instruction:</b> Slovak language	

**Notes:**

One study group consists of a maximum of 30 students, so that a personal approach to the students is possible and also so that the students can be divided into small groups with the number of 6 members for the purpose of effective communication.

**Course evaluation:**

Assessed students in total: 80

ABSOL	NEABS
92.5	7.5

**Name of lecturer(s):** PaedDr. Martin Pinkoš, doc. PhDr. Mgr. Vladimír Littva, PhD., MPH, RNDr. PaedDr. Mária Nováková, PhD., MBA

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1040W/22	<b>Course title:</b> Genetics
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture <b>Recommended study range:</b> <b>hours weekly:</b> 2 <b>hours per semester:</b> 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 2	<b>Working load:</b> 50 hours
<b>Recommended semester/trimester:</b> 4.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During the semester, there will be two written examinations within the lectures. It is possible to obtain a maximum of 20 points from each. To participate in the final written exam, it is necessary to obtain at least 20 points from the examinations. The final evaluation will be based on the total number of points obtained from the written exam. Course evaluation: A - 100% -93% B - 92% -85% C - 84% -77% D - 76% -69% E - 68% -60% FX - 59% - 0%	
<b>Learning outcomes of the course:</b> Aims of the course: To provide knowledge of basic genetic concepts, basics of human genetics, genetic diseases and ethical principles in genetics. Theoretical knowledge: students will learn selected parts of general genetics and get acquainted with the pathogenesis, diagnosis, genetic prognosis of genetic pathological conditions	
<b>Course contents:</b> 1. Genetics as a discipline, basic concepts, 2. Molecular basis of genetics 3. Mutations 4. Genetically determined pathological conditions (monogenic diseases) 5. Genetically determined pathological conditions (chromosomal aberrations) 6. Pathological conditions with multifactorial type of inheritance 7. Genetic disorders of somatic cells 8. Genetic testing methods 9. Prenatal genetic diagnostics (indications, methods) 10. Screening of genetic diseases 11. Prevention of genetic diseases 12. Ethical problems in genetics	
<b>Recommended or required literature:</b> Sršeň, Š., Sršňová, K.: Základy klinickej genetiky a jej molekulárna podstata, Martin, Osveta, 2005	
<b>Language of instruction:</b>	
<b>Notes:</b>	

<b>Course evaluation:</b>					
Assessed students in total: 9					
A	B	C	D	E	FX
88.89	0.0	0.0	11.11	0.0	0.0
<b>Name of lecturer(s):</b> RNDr. Igor Porvazník, PhD., doc. RNDr. Soňa Hlinková, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1018Y/22	<b>Course title:</b> German Language
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 <b>hours per semester:</b> 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 1	<b>Working load:</b> 25 hours
<b>Recommended semester/trimester:</b> 2.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b> KLVM/54L1009Y/22	
<b>Requirements for passing the course:</b> Conditional subject: German language 1 During semester: At the beginning of every seminar a short test from the previous lesson will take place. If a student will get A from all these tests (except one other mark than A (not FX) or one absence) the seminar will be automatically registered in the university system. The students, who will not meet this condition, must pass an oral exam in the exam period. The participation in the final exam is conditioned by a maximum of two absences during the semester or two FX from the tests. Course evaluation: A – 100 %-93 % B – 92 %-85 % C – 84 %-77 % D – 76 %-69 % E – 68 %-60 % FX – 59 %- 0 %	
<b>Learning outcomes of the course:</b> The aim of the subject: To head the students towards individual work with the german text, to command the translation of a german medical text, to develop the students communication skills. Theoretical knowledge: The student is able to use grammar correctly during the conversation on the medical topic. Practical knowledge: The student can actively and promptly communicate in the hospital.	
<b>Course contents:</b> 1. The Body parts. 2. Treatment interview and methods. 3. Health problems. The pain interview. 4. Grammar: subordinate clauses. 5. The digestive system. 6. Medicine history: Wilhelm Conrad Röntgen. 7. Medical history: Jan Jesenius. 8. The cells and the tissues. 9. Grammar: modal verbs. 10. Measurement. The numbers 1-1000. Use of measuring instruments. 11. Documentation in the hospital. 12. Abdominal organs.	

**Recommended or required literature:**

28. HANÁKOVÁ, A. 2021. Němčina pro nelekářské zdravotnické obory. Praha: Grada, 2021, 232 s. ISBN 978-80-271-1717-8..

29. MOKROŠOVÁ, I. – BAŠTOVÁ, L. 2020. Němčina pro lékaře. Praha: Grada, 2004, 416 s. ISBN 978-80-247-2127-9.

30. DŽUGANOVÁ, B. – BARNAU, A. 2017. Nemčina pre lekárov a pracovníkov v zdravotníctve. Praha: Easton Books, 2017, 288 s. ISBN 978-80-810-9319-7.

**Language of instruction:**

German language, Slovak language

**Notes:**

This subject is taught during the summer semester and is evaluated during the exam period of the summer semester.

**Course evaluation:**

Assessed students in total: 1

A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0

**Name of lecturer(s):** RNDr. PaedDr. Mária Nováková, PhD., MBA, PaedDr. Martin Pinkoš, doc. PhDr. Mgr. Vladimír Littva, PhD., MPH, doc. RNDr. Soňa Hlinková, PhD.

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1009Y/22	<b>Course title:</b> German Language 1
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 <b>hours per semester:</b> 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 1	<b>Working load:</b> 25 hours
<b>Recommended semester/trimester:</b> 1.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During semester: At the beginning of every seminar a short test from the previous lesson will take place. If a student will get A from all these tests (except one other mark than A (not FX) or one absence) the seminar will be automatically registered in the university system. The students, who will not meet this condition, must pass an oral exam in the exam period. The participation in the final exam is conditioned by a maximum of two absences during the semester or two FX from the tests. The course evaluation: A – 100 %-93 % B – 92 %-85 % C – 84 %-77 % D – 76 %-69 % E – 68 %-60 % FX – 59 %- 0 %	
<b>Learning outcomes of the course:</b> The aim of the subject: To head the students towards individual work with the german text, to command the translation of a german medical text, to develop the students communication skills. Theoretical knowledge: The student is able to use grammar correctly during the conversation on the medical topic. Practical knowledge: The student can actively and promptly communicate in the hospital.	
<b>Course contents:</b> 1. First day in the hospital job. Expectations and wishes. 2. Hierarchy in the hospital. Introducing to the colleagues. 3. The hospital, the department. 4. In the hospital, in the lab. 5. Graduation of the adjectives. 6. Verbs with additions. Personal pronouns.	



7. Ordinal numbers. 8. Requests and Imperative. 9. Respiratory system. 10. The blood. 11. From healing potions to transfusions. 12. Separable verbs. Reflexive pronouns. Verbs with accusative and dative.					
<b>Recommended or required literature:</b> 25. HANÁKOVÁ, A. 2021. Němčina pro nelekářské zdravotnické obory. Praha: Grada, 2021, 232 s. ISBN 978-80-271-1717-8.. 26. MOKROŠOVÁ, I. – BAŠTOVÁ, L. 2020. Němčina pro lékaře. Praha: Grada, 2004, 416 s. ISBN 978-80-247-2127-9. 27. DŽUGANOVÁ, B. – BARNAU, A. 2017. Nemčina pre lekárov a pracovníkov v zdravotníctve. Praha: Easton Books, 2017, 288 s. ISBN 978-80-810-9319-7.					
<b>Language of instruction:</b> Slovak language, German language					
<b>Notes:</b> This subject is taught during the winter semester and is evaluated in the exam period of the winter semester.					
<b>Course evaluation:</b> Assessed students in total: 1					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
<b>Name of lecturer(s):</b> PaedDr. Martin Pinkoš, RNDr. PaedDr. Mária Nováková, PhD., MBA, doc. PhDr. Mgr. Vladimír Littva, PhD., MPH, doc. RNDr. Soňa Hlinková, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1033Y/22	<b>Course title:</b> German Language 3
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 <b>hours per semester:</b> 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 1	<b>Working load:</b> 25 hours
<b>Recommended semester/trimester:</b> 3.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b> KLVM/54L1018Y/22	
<b>Requirements for passing the course:</b> During the term: Active participation in lessons. During the lessons the students are expected to show the knowledge about current medical issues in foreign language as acquired from media or Internet and compare such information with topics specified in the brief subject curriculum. Students pay attention to grammar reference and write grammar exercises as required by the teacher. Subject marking: A – 100 %-93 % B – 92 %-85 % C – 84 %-77 % D – 76 %-69 % E – 68 %-60 % FX – 59 %- 0 %	
<b>Learning outcomes of the course:</b> Aim of the subject: The aim of the subject is to guide students to acquiring the capability to understand the text in foreign language without outside help, to master the rules of correct translating and to gain communicative skills. Students are to learn professional vocabulary and apply communicative skills when talking about topics determined in brief subject curriculum. Theoretical achievement: Students are able to apply grammar references specified in brief subject curriculum correctly when talking about individual topics. Practical achievement: Students are able to communicate actively in foreign language with the patient and are able to distinguish the differences between local environment and the environment abroad.	
<b>Course contents:</b> Messen und notieren die Zahlen, Messgeräte. Zu hohe und zu niedrige Werte. Kurvendokumentation. Die Bauchorgane. Die Grammatik: Positionen im Satz. Das Aufnahmegespräch. Die Pflegeanamnese, die Hilfsmittel. Das Anamnesegespräch. Die Erkrankungen. Die Grammatik: Perfekt und Satzklammer. Die Atmungsorgane. Die Vorbereitung zur Operation. Die Operation. Die Übergabe aus dem OP. Die erste postoperative Visite. Die Grammatik: Zeitangaben.	

**Recommended or required literature:**

31. FIRNHABER-SENSEN, U. – RODI, M. 2013. Deutsch im Krankenhaus. München : Klett-Langenscheidt GmbH, 2013, 128 s. ISBN 978-3-12-606179-7
32. DŽUGANOVÁ, B. – BARNAU, A. 2017. Nemčina pre lekárov a pracovníkov v zdravotníctve. Bratislava : Eastone Books, 2017, 274 s. ISBN 978-80-8109-319-7.
33. HANÁKOVÁ, A. 2021. Nemčina: pro nelékařské zdravotnické obory. Praha : Grada Publishing, 2021, 231 s. ISBN 978-80-271-1717-8.
34. DŽUGANOVÁ, B. – GEREISS, K. 2003. Deutsch für Mediziner. Martin : Osveta, 2003, 369 s. ISBN 80-8063-129-8.

**Language of instruction:**

Slovak language, German language

**Notes:**

The subject is being taught only in the winter term and tested in determined examination period of the winter term of academic year.

**Course evaluation:**

Assessed students in total: 1

A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0

**Name of lecturer(s):** RNDr. PaedDr. Mária Nováková, PhD., MBA, PaedDr. Martin Pinkoš, doc. PhDr. Mgr. Vladimír Littva, PhD., MPH, doc. RNDr. Soňa Hlinková, PhD.

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1044Y/22	<b>Course title:</b> German Language 4
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 <b>hours per semester:</b> 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 1	<b>Working load:</b> 25 hours
<b>Recommended semester/trimester:</b> 4.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b> KLVM/54L1033Y/22	
<b>Requirements for passing the course:</b> During the term: Active participation in lessons. During the lessons the students are expected to show the knowledge about current medical issues in foreign language as acquired from media or Internet and compare such information with topics specified in the brief subject curriculum. Students pay attention to grammar reference and write grammar exercises as required by the teacher. Subject marking: A – 100 %-93 % B – 92 %-85 % C – 84 %-77 % D – 76 %-69 % E – 68 %-60 % FX – 59 %- 0 %	
<b>Learning outcomes of the course:</b> Aim of the subject: The aim of the subject is to guide students to acquiring the capability to understand the text in foreign language without outside help, to master the rules of correct translating and to gain communicative skills. Students are to learn professional vocabulary and apply communicative skills when talking about topics determined in brief subject curriculum. Theoretical achievement: Students are able to apply grammar references specified in brief subject curriculum correctly when talking about individual topics. Practical achievement: Students are able to communicate actively in foreign language with the patient and are able to distinguish the differences between local environment and the environment abroad.	
<b>Course contents:</b> Die Visite, die Diagnostik und die Pflegemaßnahmen. Anordnungen von Untersuchungen, Therapien und Eingriffen. Die Übergabe. Pflegeberichte verfassen. Wunde beschreiben. Wundversorgung. Grammatik: Passiv. Das Kreislaufsystem. Die Medikamente, Der Beipackzettel. Anordnung von Medikamenten, Darreichungsformen. Grammatik: Nebensätze mit <i>wil</i> und <i>wenn</i> . Die Wirbelsäule. Wortschatz erarbeiten. Wunddokumentation. Allgemeine Infektionslehre. Grammatik: Vergleiche: Adjektive im Komparativ.	

**Recommended or required literature:**

35. FIRNHABER-SENSEN, U. – RODI, M. 2013. Deutsch im Krankenhaus. München : Klett-Langenscheidt GmbH, 2013, 128 s. ISBN 978-3-12-606179-7
36. DŽUGANOVÁ, B. – BARNAU, A. 2017. Nemčina pre lekárov a pracovníkov v zdravotníctve. Bratislava : Eastone Books, 2017, 274 s. ISBN 978-80-8109-319-7.
37. HANÁKOVÁ, A. 2021. Nemčina: pro nelékařské zdravotnické obory. Praha : Grada Publishing, 2021, 231 s. ISBN 978-80-271-1717-8.
38. DŽUGANOVÁ, B. – GEREISS, K. 2003. Deutsch für Mediziner. Martin : Osveta, 2003, 369 s. ISBN 80-8063-129-8.

**Language of instruction:**

Slovak language, German language

**Notes:**

The subject is being taught only in the summer term and tested in determined examination period of the summer term of academic year.

**Course evaluation:**

Assessed students in total: 1

A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0

**Name of lecturer(s):** RNDr. PaedDr. Mária Nováková, PhD., MBA, PaedDr. Martin Pinkoš, doc. PhDr. Mgr. Vladimír Littva, PhD., MPH, doc. RNDr. Soňa Hlinková, PhD.

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1025W/22	<b>Course title:</b> Haematology and Transfusion Study 1
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture <b>Recommended study range:</b> <b>hours weekly:</b> 3 <b>hours per semester:</b> 36 <b>Teaching method:</b> on-site	
<b>Credits:</b> 4	<b>Working load:</b> 100 hours
<b>Recommended semester/trimester:</b> 3.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During the semester: the lectures will include two written examinations (for each it is possible to obtain a maximum of 15 points) and a presentation of the topic prepared by the students (at the end of the semester - a maximum of 10 points can be obtained). To participate in the exam, it is necessary to obtain at least 20 points from the exams and presentation. At the final written exam, the student can get max. 60 points. Final evaluation: will be based on the total number of points obtained from the examinations, presentation and written exam. Course evaluation: A - 100% -93% B - 92% -85% C - 84% -77% D - 76% -69% E - 68% -60% FX - 59% - 0%	
<b>Learning outcomes of the course:</b> Course objective: Acquisition of basic knowledge in the field of hematology and transfusiology with emphasis on the physiology of hematopoiesis, red and white blood cells - development, division, metabolism, quantitative and qualitative non-oncological and oncological disorders. Theoretical knowledge: The student defines hematopoiesis, identifies individual stages and developmental boards. It describes the cellular elements of the blood, determines the individual features, distinguishes developmental successions. Identifies physiological functions, breakdowns and compares pathological units.	
<b>Course contents:</b> 1. Physiology of hematopoiesis (origin and development of hematopoiesis, development of blood cells - red, white blood cells, platelets 2. Red blood cells (erythrocyte) - development, structure, metabolism, shape changes 3. Anemia from disorders of erythrocyte formation, iron metabolism	

4. Anemia from increased erythrocyte loss, acute posthemorrhagic anemia. 5. Written examination. White blood cell (leukocyte) development, division, function 6. Quantitative and qualitative disorders of the leukocyte system 7. Acute leukemia 8. Myelodysplastic syndrome, Myeloproliferative neoplasia, Polyglobulia 9. Hodgkin's lymphoma, NHL part 1 10. NHL part 2 (CLL, plasmacytoma). 11. Written examination. Seminar: Elaboration and presentation of set topics I. 12. Seminar: Elaboration and presentation of set topics II.					
<b>Recommended or required literature:</b> 1. Vydra J., Novák J., Lauermannová M. a kol. Hematologie v kostce, Mladá fronta, 2019 2. Sakalová A., Bátorová A., Mistrík M., Hrubíško M. a kol. Klinická hematológia, Osveta, 2010 3. Indrák K. a kol. Hematologie a transfúzní lékařství. Triton, 2014 4. Pecka M. Laboratorní hematologie v přehledu . [2. díl] , Fyziologie a patofyziologie krevní buňky. Český Těšín: FINIDR, 2006 5. Penka M., Tesařová E. Hematologie a transfúzní lékařství I, Grada, 2011 6. Penka M., Tesařová E. Hematologie a transfúzní lékařství II, Grada, 2012 7. Adam Z., Krejč M., Vorlíček J. a kol. Hematologie : přehled maligních hematologických nemocí. Grada ,2008.					
<b>Language of instruction:</b> Slovak language.					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 22					
A	B	C	D	E	FX
18.18	36.36	22.73	22.73	0.0	0.0
<b>Name of lecturer(s):</b> doc. RNDr. Jaroslav Timko, PhD., MUDr. Jaromír Tupý, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1036W/22	<b>Course title:</b> Haematology and Transfusion Study 2
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture <b>Recommended study range:</b> <b>hours weekly:</b> 2 <b>hours per semester:</b> 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 3	<b>Working load:</b> 75 hours
<b>Recommended semester/trimester:</b> 4.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b> KLVM/54L1025W/22	
<b>Requirements for passing the course:</b> During the semester: the lectures will include two written examinations (for each it is possible to obtain a maximum of 15 points) and a presentation of the topic prepared by the students (at the end of the semester - a maximum of 10 points can be obtained). To participate in the exam, it is necessary to obtain at least 20 points from the exams and presentation. At the final written exam, the student can get max. 60 points. Final evaluation: will be based on the total number of points obtained from the examinations, presentation and written exam. Course evaluation: A - 100% -93% B - 92% -85% C - 84% -77% D - 76% -69% E - 68% -60% FX - 59% - 0%	
<b>Learning outcomes of the course:</b> Course objective: Acquisition of basic knowledge in the field of hematology and transfusiology with emphasis on the issue of platelets, physiology and pathology of blood clotting. Gaining knowledge of immunohematology of blood cells, blood donation and purposeful hemotherapy. Theoretical knowledge: The student defines platelets, identifies the various stages of blood clotting and its disorders. It describes the immunological aspects of blood elements, determines individual features, distinguishes clinical consequences. It identifies the problem of blood donation, breaks down and compares individual transfusion drugs, determines the effectiveness of hemotherapy and its side effects.	
<b>Course contents:</b> 1. Platelets (platelets) - development, composition, function, 2. Quantitative and qualitative platelet disorders. 3. Physiology of blood clotting (vessels and vascular system, primary hemostasis, system of	



- coagulation factors, system of natural inhibitors, fibrinolytic system)
4. Disorders of primary hemostasis - quantitative and qualitative disorders, drug hemostatic treatment. Congenital bleeding conditions
  5. Congenital thrombophilia, acquired blood clotting disorders.
  6. Written examination. Erythrocyte immunology (general immunology, blood groups)
  7. Hemolytic disease of the newborn, autoimmune and alloimmune hemolytic anemia
  8. HLA system, leukocyte and platelet immunology, stem cell transplantation
  9. Production of transfusion drugs (blood donation, donor, autotransfusion, principles of production of transfusion drugs, basic division of transfusion drugs, quality control in transfusion service facilities)
  10. Hemotherapy (history of blood treatment, transfusion drugs, treatment with transfusion drugs, complications of hemotherapy, hemovigilance, crisis blood policy)
  11. Written examination. Seminar: Elaboration and presentation of set topics I.
  12. Seminar: Elaboration and presentation of set topics II.

**Recommended or required literature:**

8. Vydra J., Novák J., Lauermannová M. a kol. Hematologie v kostce, Mladá fronta, 2019
9. Sakalová A., Bátorová A., Mistrík M., Hrubíško M. a kol. Klinická hematológia, Osveta, 2010
10. Indrák K. a kol. Hematologie a transfúzní lékařství. Triton, 2014
11. Pecka M. Laboratorní hematologie v přehledu . [2. díl] , Fyziologie a patofyziologie krevní buňky. Český Těšín: FINIDR, 2006
12. Penka M., Tesařová E. Hematologie a transfúzní lékařství I, Grada, 2011
13. Penka M., Tesařová E. Hematologie a transfúzní lékařství II, Grada, 2012
14. Adam Z., Krejč M., Vorlíček J. a kol. Hematologie : přehled maligních hematologických nemocí. Grada ,2008.

**Language of instruction:**

Slovak language.

**Notes:**

**Course evaluation:**

Assessed students in total: 8

A	B	C	D	E	FX
12.5	25.0	25.0	25.0	12.5	0.0

**Name of lecturer(s):** doc. RNDr. Jaroslav Timko, PhD., MUDr. Jaromír Tupý, PhD.

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:

doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1027W/22	<b>Course title:</b> Histological Techniques 1
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 / 2 <b>hours per semester:</b> 12 / 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 2	<b>Working load:</b> 50 hours
<b>Recommended semester/trimester:</b> 3.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> Conditions for completing the course: During the semester: Active participation in lectures. To participate in the exam, it is necessary to participate for min. 10 lectures and successful completion of 1 continuous written evaluation. Final evaluation: will be based on the evaluation of the total number of points obtained from the written exam (test) Course evaluation: A - 100% -93% B - 92% -85% C - 84% -77% D - 76% -69% E - 68% -60% FX - 59% - 0%	
<b>Learning outcomes of the course:</b> Objective of the course - aims of the course unit: To teach the basics of histological technique and to learn to know tissues practically. a) Basic histological technique: histological laboratory equipment. b) Processing of biological material for histological purposes. Fixation - principle and types of fixation. Basic paraffin technique. Practical preparation of paraffin histological sections. Theoretical knowledge: student defines, distinguishes, describes and identifies the basic concepts in the subject of histological techniques with their subsequent synthesis and application of knowledge in other professional subjects Practical skills: The student acquires the acquired theoretical knowledge in practice and gains practical experience in the operation of the histological laboratory and basic histological techniques	
<b>Course contents:</b> 1. Department of pathological anatomy - basic division 2. Laboratory part of the department of pathological anatomy 3. Biopsy laboratory part	

4. Biopsy material - types of material, methods of collection 5. Receipt of biopsy material 6. Excision of biopsy material 7. Pouring the material into paraffin 8. Cutting histological specimens 9. Staining of histological specimens (basic staining of HE) 10. Completion of histological specimens 11. Errors arising in the process of processing biopsy material 12. Information bringing biopsy examination					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 22					
A	B	C	D	E	FX
45.45	36.36	18.18	0.0	0.0	0.0
<b>Name of lecturer(s):</b> MUDr. Adrian Kališ, PhD., doc. RNDr. Soňa Hlinková, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1035W/22	<b>Course title:</b> Histological Techniques 2
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 / 2 <b>hours per semester:</b> 12 / 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 2	<b>Working load:</b> 50 hours
<b>Recommended semester/trimester:</b> 4.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b> KLVM/54L1027W/22	
<b>Requirements for passing the course:</b> Conditions for completing the course: During the semester: Active participation in lectures. To participate in the exam, it is necessary to participate for min. 10 lectures and successful completion of 1 continuous written evaluation. Final evaluation: will be based on the evaluation of the total number of points obtained from the written exam (test) Course evaluation: A - 100% -93% B - 92% -85% C - 84% -77% D - 76% -69% E - 68% -60% FX - 59% - 0%	
<b>Learning outcomes of the course:</b> Objective of the course - aims of the course unit: To learn the system and methodical procedure of material processing during perioperative biopsy, processing of cytological material, dispatch of results from the department of pathological anatomy, acquaintance with NIS. Theoretically master the processes of staining of biopsy and cytological material and get acquainted with the essence of immunohistochemical methods. Theoretical knowledge: student defines, distinguishes, describes and identifies the basic concepts in the subject of histological techniques with their subsequent synthesis and application of knowledge in other professional subjects Practical skills: The student acquires the acquired theoretical knowledge in practice and gains practical experience in basic and special histological techniques	
<b>Course contents:</b> 1. Perioperative biopsy I. part 2. Perioperative biopsy II. section 3. Cytological material - types of material, methods of sampling	

4. Receipt of cytological material 5. Processing of cytological material 6. Errors arising in the process of processing cytological material 7. Dispatch of results of biopsy and cytological examinations 8. NIS 9. Basic biopsy and cytological staining 10. Special biopsy staining I. part 11. Special biopsy staining II. section 12. Immunohistochemical methods in pathology					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b>					
Assessed students in total: 9					
A	B	C	D	E	FX
88.89	11.11	0.0	0.0	0.0	0.0
<b>Name of lecturer(s):</b> MUDr. Adrian Kališ, PhD., doc. RNDr. Soňa Hlinková, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b>					
Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1026W/22	<b>Course title:</b> Histology and Cytology 1
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture <b>Recommended study range:</b> <b>hours weekly:</b> 2 <b>hours per semester:</b> 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 3	<b>Working load:</b> 75 hours
<b>Recommended semester/trimester:</b> 3.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> Conditions for passing the course: During the semester: Active participation in lectures. To participate in the exam, it is necessary to participate for min. 10 lectures and successful completion of 1 continuous written evaluation. Final evaluation: will be based on the evaluation of the total number of points obtained from the written exam (test) Course evaluation: A - 100% -93% B - 92% -85% C - 84% -77% D - 76% -69% E - 68% -60% FX - 59% - 0%	
<b>Learning outcomes of the course:</b> Objective of the course - aims of the course unit: Thorough knowledge and skills about the basic histological structure of tissues in the body. To know the conceptual apparatus of the subject, the use of acquired knowledge in further study and professional activities. Theoretical knowledge: student defines, distinguishes, describes and identifies the basic concepts in the subject of general histology with their subsequent synthesis and application of knowledge in other professional subjects	
<b>Course contents:</b> 1. Cell I. part 2. Cell II. section 3. Cell nucleus 4. Cell cycle, mitosis 5. Cell cycle regulation, stem cells 6. Tissue, division of tissues 7. Epithelial tissue 8. Covering epithelium I. part	

9. Covering epithelium II. section 10. Glandular epithelium 11. Connective tissue - ligament, cartilage 12. Connective tissue - bone, muscle tissue					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 23					
A	B	C	D	E	FX
69.57	26.09	0.0	4.35	0.0	0.0
<b>Name of lecturer(s):</b> MUDr. Adrian Kališ, PhD., doc. RNDr. Soňa Hlinková, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1034W/22	<b>Course title:</b> Histology and Cytology 2
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 / 1 <b>hours per semester:</b> 12 / 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 3	<b>Working load:</b> 75 hours
<b>Recommended semester/trimester:</b> 4.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b> KLVM/54L1026W/22	
<b>Requirements for passing the course:</b> During the semester: Active participation in lectures. To participate in the exam, it is necessary to participate for min. 10 lectures and successful completion of 1 continuous written evaluation. Final evaluation: will be based on the evaluation of the total number of points obtained from the written exam (test) Course evaluation: A - 100% -93% B - 92% -85% C - 84% -77% D - 76% -69% E - 68% -60% FX - 59% - 0%	
<b>Learning outcomes of the course:</b> Objective of the course - aims of the course unit: Thorough knowledge and skills about the basic histological structure of tissues in the body. To know the conceptual apparatus of the subject, the use of acquired knowledge in further study and professional activities. Theoretical knowledge: student defines, distinguishes, describes and identifies the basic concepts in the subject of general histology with their subsequent synthesis and application of knowledge in other professional subjects	
<b>Course contents:</b> 1. Cardiovascular system 2. Digestive system Part I 3. Digestive system II. section 4. Respiratory system 5. Urinary system 6. Male reproductive system 7. Female reproductive system 8. Nervous system 9. Endocrine glands	



10. Sensory organs 11. Lymphatic system 12. Leather					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 22					
A	B	C	D	E	FX
36.36	31.82	18.18	4.55	4.55	4.55
<b>Name of lecturer(s):</b> MUDr. Adrian Kališ, PhD., doc. RNDr. Soňa Hlinková, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1028W/22	<b>Course title:</b> Immunology and Examination Methods in Immunology 1
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 / 2 <b>hours per semester:</b> 24 / 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 3	<b>Working load:</b> 75 hours
<b>Recommended semester/trimester:</b> 3.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> Conditions for completing the course: During the semester: Students will present, in the form of a Powerpoint, one independently processed topic related to the lectured issues, for which it is possible to obtain a maximum of 10 points. They will also write 1 written test for which it is possible to obtain a maximum of 20 points. To participate in the final exam, it is necessary to obtain at least 15 points in this way. At the final exam, the student can get max. 70 points. The final evaluation will be based on the total number of points obtained from the examination, presentation and oral examination. Course evaluation: A – 100 %-92 % B – 91 %-85 % C – 84 %-77 % D – 76 %-69 % E – 68 %-60 % FX – 59 %-0 %	
<b>Learning outcomes of the course:</b> Learning outcomes: Course objective: Acquisition of basic knowledge of general and clinical immunology Theoretical knowledge: Students are able to analyze and synthesize the acquired knowledge so that their activities help clinical and therapeutic activities for the benefit of the patient.	
<b>Course contents:</b> Contents of the course 1. Introduction to immunology. Function and importance of the immune system (IS). IS morphology - organs, tissues, cells and IS molecules. 2. Types of immune mechanisms. Comparison of non-specific and specific immunity. Non-specific components of the immune system. Phagocytosis. 3. Complement. Complement activation pathways. Cytokines - functions, properties and	

distribution. Inflammation - involved cells and molecules (inflammatory mediators).  
 4. Antigens - properties, functional characteristics, the most important human antigens. Antigens blood groups.  
 5. The major histocompatibility complex – structure, biological and medical significance. Differential antigens. Apoptosis - programmed cell death.  
 6. Specific immune response. B lymphocytes and antibody production. Immunoglobulins – structure and properties. B-cell subpopulations. Monoclonal antibodies.  
 7. T cells of key cell specific cellular immunity. Presentation of antigens. Cells with non-specific cytotoxic activity.  
 8. Mucosal and cutaneous immune system. Anti-infective immunity.  
 9. Hypersensitivity Reactions (Types I, II, III, IV)  
 10. Autoimmunization and autoimmune diseases.  
 11. Primary and secondary immunodeficiencies. Antitumor immunity.  
 12. Tissue and organ transplantation.

**Recommended or required literature:**

BUC, M. 2012. Základná a klinická imunológia, Bratislava : Veda, 2012, 831 s. ISBN 978-80-224-1235-3  
 JÍLEK, P. 2019. Imunologie. Stručně, jasně, přehledně. Praha : Grada, 2019, 104 s. ISBN 978-80-271-0595-3

**Language of instruction:**

Language, knowledge of which is necessary to complete the course: Slovak language

**Notes:**

Notes: the course is provided in the winter semester

**Course evaluation:**

Assessed students in total: 23

A	B	C	D	E	FX
39.13	17.39	26.09	8.7	8.7	0.0

**Name of lecturer(s):** doc. RNDr. Jaroslav Timko, PhD., RNDr. Ivana Turzová

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
 doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1039W/22	<b>Course title:</b> Immunology and Examination Methods in Immunology 2
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 / 2 <b>hours per semester:</b> 12 / 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 3	<b>Working load:</b> 75 hours
<b>Recommended semester/trimester:</b> 4.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b> KLVM/54L1028W/22	
<b>Requirements for passing the course:</b> Conditions for completing the course: During the semester: Students will present one independently processed topic related to the lectured issues (in the form of a Powerpoint), for which it's possible to obtain a maximum of 10 points. They will also write 1 written test for which it is possible to obtain a maximum of 20 points. To be able to participate in the final exam, it is necessary to obtain at least 15 points in this way. At the final exam, the student can get max. 70 points. The final evaluation will be based on the total number of points obtained from the written examination, presentation and oral examination. Course evaluation: A – 100 %-92 % B – 91 %-85 % C – 84 %-77 % D – 76 %-69 % E – 68 %-60 % FX – 59 %-0 %	
<b>Learning outcomes of the course:</b> Learning outcomes: Objective of the course—become acquainted with: 1. Basic and special examination procedures and laboratory methods used in clinical immunology and allergology in practice. 2. Examination algorithms in the diagnosis of immunopathological conditions. 3. Quality control, with the management and economics of immuno-allergological laboratories. 4. Laboratory information systems. Theoretical knowledge: 1. The graduate will understand the basic principles and concepts of laboratory medicine in the field of immuno-allergology. 2. Gain knowledge of factors that may affect the reliability of immuno-allergological examination methods in the indicative pre-analytical and interpretive phase of the examination. 3. Gain knowledge of safety measures and health protection when working with biological	

material in laboratories.

4. Acquire theoretical knowledge necessary for quality control management, basic knowledge in connection with the management and economics of immuno-allergological laboratories, with the application of laboratory and hospital information.

**Practicals skills:**

1. The graduate is able to work independently in the laboratories of clinical immunology and allergology.
2. He/She will gain practical knowledge of working with devices that are used in immuno-allergol. lab. - such as flowcytometer, fluorescence microscope, ELISA reader, nephelometer, immunoanalyzers.
3. He/She has the ability to organize work in the laboratory, to cooperate with clinical workplaces in solving diagnostic and therapeutic problems within treatment and prevention process.

**Course contents:**

**Course contents**

1. Methods used to investigate components of humoral immunity (principle of methods, their pitfalls, application, instrumentation and economic balance sheet).  
General principles of antigen-antibody reaction. Electrophoresis and immuno electrophoresis, radial immunodiffusion, nephelometry and turbidimetry, agglutination and hemagglutination.
2. Complement fixation tests. Immunoreactions with labeled antibodies - RIA, ELISA, EIA.
3. Immunoblotting, immunofluorescence, determination of antibodies and antigens by flow cytometry.
4. Methods used to investigate the components of cellular immunity (principle of methods, their pitfalls, application, instrumentation and economic balance sheet). Cell isolation techniques, flowcytometry.
5. Rosette tests, lymphocyte proliferation, ELISPOT, cytotoxic tests.
6. Phagocytosis, bactericidal test, oxidative flare tests: NBT, INT, chemiluminescence.
7. Immunohistochemical methods, methods of molecular biology.
8. Possibilities of investigation of components of immunity.  
Examination of humoral immunity parameters - antibodies, monoclonal proteins, cryoglobulins, immunocomplexes, acute phase proteins, complement and its components, autoantibodies.
9. Examination of cellular immunity parameters. Determination of surface features of lymphocytes, functional lymphocyte tests, cytotoxicity of NK cells and T lymphocytes, determination of cytokines. Phagocytosis, chemotaxis, oxidative metabolism, phagocyte microbicides. Basophil activation test, examination of apoptosis, HLA typing.
10. Investigation algorithms at diagnosis of immunopathological conditions.  
Diagnosis of immunodeficiencies.  
Diagnosis of autoimmune diseases.  
Diagnosis of allergic diseases.
11. Quality system in the immunological laboratory.

**Recommended or required literature:**

1. BARTŮŇKOVÁ, J. - PAULÍK, M. a kol. 2011. Vyšetřovací metody v imunologii; 2. prepracované vydanie. Praha : Grada Publishing, 2011, 164 s. ISBN 978-80-247-3533-7
2. BLAŽÍČKOVÁ, S. – KRÁL, V. – STIBOROVÁ, I. 2019. Vyšetřovací metody v imunológii pre poslucháčov FZSP. Trnava : Veda, 2019. 144 s. ISBN 978-80-568-0379-0

**Language of instruction:**

Language, knowledge of which is necessary to complete the course: Slovak language

<b>Notes:</b> Notes: the course is provided in the summer semester					
<b>Course evaluation:</b> Assessed students in total: 8					
A	B	C	D	E	FX
25.0	37.5	25.0	12.5	0.0	0.0
<b>Name of lecturer(s):</b> prof. MUDr. Anton Lacko, CSc., RNDr. Ivana Turzová					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54L22S/22		<b>Course title:</b> Laboratory Examination Methods - Practical Part			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> <b>Recommended study range:</b> <b>hours weekly:</b> <b>hours per semester:</b> <b>Teaching method:</b> on-site					
<b>Credits:</b> 6		<b>Working load:</b> 150 hours			
<b>Recommended semester/trimester:</b> 5., 6..					
<b>Level of study:</b> I.					
<b>Prerequisites:</b>					
<b>Requirements for passing the course:</b>					
<b>Learning outcomes of the course:</b>					
<b>Course contents:</b>					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 6					
A	B	C	D	E	FX
33.33	50.0	0.0	0.0	16.67	0.0
<b>Name of lecturer(s):</b>					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54L23S/22		<b>Course title:</b> Laboratory Examination Methods in Biochemistry and Microbiology			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> <b>Recommended study range:</b> <b>hours weekly:</b> <b>hours per semester:</b> <b>Teaching method:</b> on-site					
<b>Credits:</b> 6		<b>Working load:</b> 150 hours			
<b>Recommended semester/trimester:</b> 5., 6..					
<b>Level of study:</b> I.					
<b>Prerequisites:</b>					
<b>Requirements for passing the course:</b>					
<b>Learning outcomes of the course:</b>					
<b>Course contents:</b>					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 6					
A	B	C	D	E	FX
33.33	33.33	16.67	0.0	16.67	0.0
<b>Name of lecturer(s):</b>					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					



## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54L24S/22		<b>Course title:</b> Laboratory Examination Methods in Hematology and Transfusion, Histopathology and Cytology			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> <b>Recommended study range:</b> <b>hours weekly:</b> <b>hours per semester:</b> <b>Teaching method:</b> on-site					
<b>Credits:</b> 6		<b>Working load:</b> 150 hours			
<b>Recommended semester/trimester:</b> 5., 6..					
<b>Level of study:</b> I.					
<b>Prerequisites:</b>					
<b>Requirements for passing the course:</b>					
<b>Learning outcomes of the course:</b>					
<b>Course contents:</b>					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 6					
A	B	C	D	E	FX
16.67	16.67	16.67	33.33	16.67	0.0
<b>Name of lecturer(s):</b>					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1013W/22	<b>Course title:</b> Laboratory Techniques
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 / 2 <b>hours per semester:</b> 12 / 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 4	<b>Working load:</b> 100 hours
<b>Recommended semester/trimester:</b> 2.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> Conditions for the course: There will be two written examinations in the exercises, a maximum of 20 points for each. The final evaluation: will be based on the total number of points obtained from the examinations and the ongoing evaluation of the activity at each laboratory exercise.	
<b>Learning outcomes of the course:</b> Students will be introduced to the main theoretical principles and the practical way of performing individual laboratory operations and methods. They will learn the principles of safety at work in a chemical laboratory, familiarize themselves with the materials used in the laboratory and their use. They are able to clarify theoretical aspects of basic laboratory operations, operations and principles of laboratory methods of synthesis and chemical analysis. They will also acquire basic, skill and habits in the chemical laboratory, practicing basic chemical operations in general and inorganic chemistry, physical chemistry, organic matter synthesis, and analytical chemistry.	
<b>Course contents:</b> Course contents: 1. Introduction and organization of exercise. Principles of safety at work with chemical substances. 2. Chemical laboratory equipment and fire protection Materials used in the laboratory and basic laboratory tools. 3. Nature of chemical substances used in chemical laboratory. Working with gases. 4. Measurement of weight, volume and density. Calibration of measuring containers. 5. Solubility, effect of temperature on solubility, dissolution, preparation of solutions, saturated solution solubility curve. 6. Preparation of insoluble matter, precipitation, decantation, filtration, drying. 7. Working with glass, measuring temperature, heating, cooling, phase conversion, determination of melting point, boiling point. 8. Principles of construction of laboratory apparatuses. 9. Crystallization, sublimation 10. Distillation, fractional distillation and boiling point. 11. Determination of acid-base equivalence point, acid-base indicators, solution preparation and pipetting.	

12. Determination of water in crystalline hydrates, heating and annealing.					
<b>Recommended or required literature:</b> 1. Durdiak, J. a kol.: Laboratórna technika 1, Ružomberok: Verbum - vydavateľstvo Katolíckej univerzity v Ružomberku, Ružomberok 2005. 2. ŠTERN et al: Obecná a klinická biochemie pro bakalárske odb.studia, Univezita Karlova,Praha, 2011 3. D.M. VASUDEVAN, S. SREEKUMARI, K. VAIDYANATHAN: Základy všeobecnej a klinickej biochémie, Balneotherma, Bratislava, 2014, strán 665. slov. preklad 6. vyd. Textbook of Biochemistry, 2011, ISBN 978-93-5025-016-7					
<b>Language of instruction:</b> Slovak					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 26					
A	B	C	D	E	FX
30.77	11.54	15.38	15.38	15.38	11.54
<b>Name of lecturer(s):</b> doc. Ing. Eva Culková, PhD., Ing. Jaroslav Durdiak, PhD., Ing. Zuzana Lukáčová, PhD., doc. MUDr. Ivan Solovič, CSc., RNDr. Lucián Zastko, PhD., JUDr. Zuzana Lukáčová, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1007W/22	<b>Course title:</b> Latin Language
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 <b>hours per semester:</b> 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 1	<b>Working load:</b> 25 hours
<b>Recommended semester/trimester:</b> 1.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During the semester: Individual or group work on exercises with active solution of model situations and practical mastery of the subject. Final assessment: The written form of the final exam includes the curriculum of the whole semester, in which students demonstrate the level of their knowledge. At the written final exam, the student can get max. 60 points. 100% active participation in the exercises is required for admission to the exam, any non-participation must be justified or replaced at another date of the exercise in parallel disciplines. Course evaluation: A - 100% -93% B - 92% -85% C - 84% -77% D - 76% -69% E - 68% -60% FX - 59% - 0%	
<b>Learning outcomes of the course:</b> Objective of the course - aims of the course unit: To obtain a minimum of Latin grammar, which is a condition for mastering the basics of Latin medical terminology. Theoretical knowledge:: The student has to demonstrate knowledge of medical terminology in Latin-Greek form with an inner understanding of its structure. Practical skills: The student should be able to use the acquired knowledge in practical professional activities, in the study of professional literature and in parallel professional subjects, to use medical terminology accurately and linguistically in oral and written form.	
<b>Course contents:</b> 1. Historical and linguistic introduction to medical Latin, Latin and Greek in medical nomenclature, structure of multiword terms. 2. Latin pronunciation, basic grammatical terms, practice of correct reading of Latin medical terms. 3. Declension of nouns with a focus on the frequency of the genitive, the accusative and the ablative. 4. Adjectives, their declension and connection with nouns, use of degrees.	

5. Adverbs, use of prepositions in medical terminology and their connection with nouns in accusative and ablative.
6. Numerals, their use and declension, expression of quantity.
7. Verbs in pharmaceutical terminology, recipe.
8. Latin and Greek prefixes and suffixes, terms with Latin and Greek basis.
9. Greek equivalents of basic anatomical terms and terminology used in the clinic. Advocacy of suffixes.
10. Compound words. Principles of composite formation. Simple diagnoses.
11. Latin sentences still valid today. Active work with terminological expressions.
12. Practical exercises and tasks, creating multiword terms and automation of common connections.
13. Systematization and verification of acquired knowledge.

**Recommended or required literature:**

1. ŠIMON, F.-BUJALKOVÁ, M. 2012. Latinský jazyk premedikov. Košice :Knihy Hanzlúvka, 2012. 169s. ISBN 978-80-89546-06-0
2. KÁBRT, J. 2010. Latinský jazyk. Martin: Osveta, 2010. 156s. ISBN 978-80-8063-353-0
3. ŠIMON, F. 1990. Latinská lekárska terminológia. Martin: Osveta, 1990, 184s. ISBN 8021702974.

**Language of instruction:**

Slovak language, Latin language

**Notes:**

The course is taught only in the winter semester.

**Course evaluation:**

Assessed students in total: 43

A	B	C	D	E	FX
25.58	23.26	23.26	13.95	4.65	9.3

**Name of lecturer(s):** PhDr. Mária Macková

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1056W/22	<b>Course title:</b> Law and Legislation
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture <b>Recommended study range:</b> <b>hours weekly:</b> 1 <b>hours per semester:</b> 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 1	<b>Working load:</b> 25 hours
<b>Recommended semester/trimester:</b> 5.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> Prerequisites and co-requisites: During the semester: During the semester active participation in lectures. Within the lectures, students analyze the assigned topics. Final assessment: In the final oral exam, the student can get a maximum of 60 points - answers 3 questions from three topics - general health legislation, competencies of a health worker and a case study. Course evaluation: A - 100% - 93% B - 92% - 85% C - 84% - 77% D - 76% - 69% E - 68% - 60% FX - 59% - 0%	
<b>Learning outcomes of the course:</b> Objective of the course - aims of the course unit: Importance of social and health legislation, rights and their function in society, their application to health care, acquisition of basic concepts, rights and competences, legal responsibility of a health worker and definition of his competence. Theoretical knowledge: To teach students to understand the basics of law, social and health legislation, legal aspects and competencies of health professionals. The student will gain comprehensive knowledge and skills in accessing case studies from clinical practice.	
<b>Course contents:</b> Basic legal concepts. Fundamental human rights and freedoms. Labor law of health professionals. Labor liability for damage. Criminal liability for damage. Legal aspects of health care. Legal status of a healthcare professional. Health standards, patients' rights and medical records. Protection and promotion of public health. Health and safety at work. Administrative procedure - legal aspects. Case clinical studies.	

**Recommended or required literature:**

1. SIMOČKOVÁ, V. PEŘINA, J. 2019. Legislatíva verzus zdravotníci. Martin : Osveta, 2019. 159 s. 978-80-8063-483-4.
2. SIMOČKOVÁ, V. 2019. Minimum pracovného práva pre zdravotníkov : učebné texty sú zamerané na pracovnoprávne ustanovenia. Košice : Multiprint. 2019, 75 s. 978-80-89551-33-0.
3. TÓTH, K. a kol. 2008. Právo a zdravotníctvo. Bratislava: Herba. 2008. 388 s. ISBN 978-80-89171-57-6.
4. TÓTH, K. a kol. 2013. Právo a zdravotníctvo II. Bratislava: Herba. 2013. 432 s. ISBN 978-80-89631-08-7.
5. VLČEK, R., HRUBEŠOVÁ, Z. 2007. Zdravotnícke právo. Bratislava: Epos. 2007. 319 s. ISBN 978-80-8057-705-6.
6. VONDŘÁČEK, L. 2005. Právní předpisy nejen pro hlavní, vrchní, staniční sestry. Praha: Grada. 2005. 100 s. ISBN 80-247-1198-2.

**Language of instruction:**

Slovak and Czech language

**Notes:****Course evaluation:**

Assessed students in total: 14

A	B	C	D	E	FX
92.86	7.14	0.0	0.0	0.0	0.0

**Name of lecturer(s):** doc. MUDr. Ivan Solovič, CSc.

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1011W/22	<b>Course title:</b> Microbiology 1
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 / 2 <b>hours per semester:</b> 24 / 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 5	<b>Working load:</b> 125 hours
<b>Recommended semester/trimester:</b> 2.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During the semester there will be two written tests. A student may get a maximum of 20 points on each test (total of 40 points). To be allowed to take the final exam, a student must earn a minimum of 20 points (cumulative from both tests). The final mark will be determined by the number of points received on the final exam. Course grade scale: A – 100%-93% B – 92%-85% C – 84%-77% D – 76%-69% E – 68%-60% FX – 59%- 0%	
<b>Learning outcomes of the course:</b> Course objectives: (i) to give students basic knowledge in the field of medical microbiology; (ii) to clarify the inter-disciplinary character of the course Theoretical knowledge: students will master the basics of general microbiology as well as other selected chapters from the special bacteriology Practical skills: students will (i) learn the principles and proper procedures for collecting clinical samples and transporting infectious substances to the lab, (ii) master basic processing and inoculation of infectious substances, (iii) learn how to prepare samples and analyse the results of microscopic examination	
<b>Course contents:</b> Course contents: 1. Introduction to Microbiology 2. Taxonomy, bacterial cell structure 3. Pathogenicity and virulency, infection 4. Normal bacterial flora 5. Diagnostic microbiology 1 6. Diagnostic microbiology 2 7. Antimicrobial substances	



8. Nosocomial infections 9. General epidemiology 10. Special epidemiology of bacterial infections 1 11. Special epidemiology of bacterial infections 2 12. Special epidemiology of bacterial infections 3					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 20					
A	B	C	D	E	FX
55.0	10.0	0.0	20.0	5.0	10.0
<b>Name of lecturer(s):</b> doc. RNDr. Jaroslav Timko, PhD., RNDr. Igor Porvazník, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1052W/22	<b>Course title:</b> Microbiology 2
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 / 2 <b>hours per semester:</b> 24 / 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 4	<b>Working load:</b> 100 hours
<b>Recommended semester/trimester:</b> 5.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b> KLVM/54L1011W/22	
<b>Requirements for passing the course:</b> During the semester, there will be two written examinations within the lectures. It is possible to obtain a maximum of 20 points from each. To participate in the final written exam, it is necessary to obtain at least 20 points from the examinations. The final evaluation will be based on the total number of points obtained from the written exam. Course evaluation: A - 100% -93% B - 92% -85% C - 84% -77% D - 76% -69% E - 68% -60% FX - 59% - 0%	
<b>Learning outcomes of the course:</b> Aims of the course: To provide students with basic knowledge of medical microbiology, to clarify the interdisciplinary meaning of the course. Theoretical knowledge: students will learn selected parts of parasitology and mycology. Practical skills: students will learn basic parasitological and mycological diagnostics.	
<b>Course contents:</b> Course contents: 1. Methods of molecular biology 2. Methods of molecular biology 3. Methods of molecular biology 4. General parasitology - definition, classification, diagnostics 5. Special parasitology - blood and intestinal parasites 6. Special parasitology - other parasites 7. Special parasitology - arthropods 8. General mycology - taxonomy, morphology, pathogenicity 9. Characteristics and diagnostics of yeasts 10. Characteristics and diagnostics of filamentous fungi 11. Microbiology of the environment	

12. Infections caused by biological weapons.					
<b>Recommended or required literature:</b> TIMKO, J.: Mikrobiológia, epidemiológia, Verbum, Ružomberok 2009 VOTAVA, M. a kol.: Lékařská mikrobiologie (obecná, speciální). Neptun, Brno 2001, 2003 VOTAVA, M. a kol.: Lékařská mikrobiologie (vyšetřovací metody). Neptun, Brno 2010 BEDNÁŘ, M. a kol.: Lékařská mikrobiologie, Marvil, Praha, 1996					
<b>Language of instruction:</b> English language					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 13					
A	B	C	D	E	FX
46.15	15.38	23.08	7.69	7.69	0.0
<b>Name of lecturer(s):</b> RNDr. Igor Porvazník, PhD., doc. RNDr. Jaroslav Timko, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1029W/22	<b>Course title:</b> Nuclear Medicine
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 / 1 <b>hours per semester:</b> 12 / 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 2	<b>Working load:</b> 50 hours
<b>Recommended semester/trimester:</b> 3.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During the semester: Attendance at lectures. The final evaluation: Oral exam. Subject evaluation: A – 100% - 91% B – 92% - 85% C – 84% - 77% D – 76% - 69% E – 68% - 60% Fx – 59% - 0%	
<b>Learning outcomes of the course:</b> The objective of course: To characterize the nuclear medicine. To explain the basic diagnostic and therapeutic methods of nuclear medicine. To characterize the work with the open radioactive emitters, with radiopharmaceuticals. The student get knowledge about the device equipment of nuclear medicine. The use of methods in clinics. Theoretical knowledge: The student defines the principle of diagnostic and therapeutic methods of nuclear medicine.	
<b>Course contents:</b> Charakteristika odboru nukleárna medicína. Rozdelenie diagnostických a liečebných metód nukleárnej medicíny. Rádiofarmaká, výroba rádionuklidov, zásady práce v rádiofarmaceutickom laboratóriu. Príprava rádiofarmák, kalibrácia dávok. Rádiosaturačné metódy. Rádioimunoanalýza v onkológii. Delenie nádorových markerov, nádorové markery pri jednotlivých karcinómoch, využitie nádorových markerov v skriningu u zdravých jedincov, na monitorovanie liečby, na stanovenie prognózy. Prístrojová technika v nukleárnej medicíne, scintilačný detektor, súpravy na in vivo a na in vitro meranie vzoriek. Gamakamera-SPECT –jednofotónová emisná počítačová tomografia. PET- pozitronová emisná tomografia. Ochrana pred ionizujúcim žiarením. Choroba z ožiarenia. Využitie SPECT a PET vyšetrenia v medicíne (v onkológii, v kardiológii, v neurológii a pod.).	
<b>Recommended or required literature:</b> 1. LACKO, A. et al.: Nové trendy v nukleárnej medicíne. Turany: vyd. P+M, 200780 s. ISBN 978-80-968742-8-6.	
<b>Language of instruction:</b> Slovak language	
<b>Notes:</b>	

<b>Course evaluation:</b>					
Assessed students in total: 23					
A	B	C	D	E	FX
95.65	0.0	4.35	0.0	0.0	0.0
<b>Name of lecturer(s):</b> prof. MUDr. Anton Lacko, CSc.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1012W/22	<b>Course title:</b> Pathology and Pathological Physiology
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 / 3 <b>hours per semester:</b> 24 / 36 <b>Teaching method:</b> on-site	
<b>Credits:</b> 3	<b>Working load:</b> 75 hours
<b>Recommended semester/trimester:</b> 2.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During the semester: Active participation in lectures. To participate in the exam, it is necessary to participate for min. 10 lectures and successful completion of 1 continuous written evaluation. Final evaluation: will be based on the evaluation of the total number of points obtained from the written exam (test) Course evaluation: A - 100% -93% B - 92% -85% C - 84% -77% D - 76% -69% E - 68% -60% FX - 59% - 0%	
<b>Learning outcomes of the course:</b> Objective of the course - aims of the course unit: Thorough knowledge and skills about basic pathomorphological changes of disease processes in the organism. To know the conceptual apparatus of the field, the use of acquired knowledge in further study and professional activities. Theoretical knowledge: student defines, distinguishes, describes and identifies basic concepts in the subjects of pathological anatomy and pathological physiology with their subsequent synthesis and application of knowledge in other professional subjects	
<b>Course contents:</b> 1. Introduction, history, disease, material collection - principles. a. Introduction, history of the field, disease, pain. 2. Tissue damage and adaptive changes. a. Pathology of pain. 3. Inflammation definition and division. a. Fever, stress. 4. Disorders of local circulation. a. Pathophysiology of inflammation, inflammatory mediators. 5. Environmental influence, genetics, immunity, nutrition, age changes, infections.	

a. Disorders of body fluid volume, electrolytes, minerals and acid-base balance. 6. Characterization and division of tumors. a. Tumor cell transformation, benign and malignant tumors. 7. Diseases of the heart and blood vessels. a. Pathogenesis of hypertension and atherosclerosis. 8. Diseases of the kidneys, genitals. a. Mechanisms of action of hormones. 9. Diseases of the respiratory system. a. Pathophysiology of the respiratory system. 10. Diseases of the musculoskeletal system. a. Pathophysiology of the excretory system. 11. Diseases of the GIT. a. Pathophysiology of the digestive system. 12. Diseases of the endocrine system and skin. a. Pathophysiology of pregnancy.					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 20					
A	B	C	D	E	FX
50.0	15.0	10.0	10.0	5.0	10.0
<b>Name of lecturer(s):</b> prof. MUDr. Anton Lacko, CSc., MUDr. Adrian Kališ, PhD., MUDr. Libor Danihel, PhD.					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1015W/22	<b>Course title:</b> Pedagogy, psychology, and sociology
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 3 / 0 <b>hours per semester:</b> 36 / 0 <b>Teaching method:</b> on-site	
<b>Credits:</b> 3	<b>Working load:</b> 75 hours
<b>Recommended semester/trimester:</b> 2.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During semester: Active participation in the lectures (50% minimum) and exercises (100%); 3 successful continuous tests (100-65% to pass). Final evaluation will be based on the total points gained from the final written exam. The subject evaluation: A – 100 % - 93 % B – 92 % - 85 % C – 84 % - 77 % D – 76 % - 69 % E – 68 % - 60 % Fx – 59 % - 0 %.	
<b>Learning outcomes of the course:</b> The course objective: To provide the students the theoretical basis of psychology, which can apply in the healthcare practice. Theoretical knowledge: The student characterize the psychological natural relations, acquire the basic terms of general, cognitive and developmental psychology, psychology of personality and understands the psychical regulation of behavior of health and ill human. The aim of the course is to lead the students to apply the knowledge of psychology in healthcare practice.	
<b>Course contents:</b> 1. The subject of psychology, main directions and methods. Psyche as a function of brain and its two levels. The characteristics of the field, historical development, interdisciplinary position. 2. Cognitive processes - perception, consciousness. Memory and learning. Thinking and speech. Activation-motivational processes. Emotions. The will and attention. 3. Psychology of personality - the basic factors of personality development, psychological properties and abilities, theories of personality, character, personality of ill human. 4. The subject and content of development psychology - psychological development and its determinants, the characteristics of the development periods, prenatal, perinatal, postnatal period of development, neonatal period, breastfed period, toddler period, preschool period, younger school age, older school age, adolescence, adult age, old age. 5. Psychohygiene - prevention of burnout syndrome, anti-stress programmes, Johari window.	



**Recommended or required literature:**

1. FRANZENOVÁ, I. 2014. Sociológia výchovy, Verbum, KU Ružomberok, 2014, 111 s. ISBN 978-80-561-0121-6
2. LABUDOVÁ, J. 2012. Teória zdravia a podpora zdravia, UK Bratislava, 2012, 177 s. ISBN 978-80-223-3264-4
3. ZACHAROVÁ, E., ČÍŽKOVÁ, J., LITTVA, V. 2010. Aplikovaná psychologie ve zdravotnické praxi, Tribun EU, Brno 2010. 224 s. ISBN 978-80-7368-703-8.
4. MEAD, G.H. 2017. Mysl, já a společnost, Portál, Praha, 2017, 247s. ISBN 978-80-262-1180-8
5. MOREE, D. 2015. Základy interkulturního soužití, Portál, Praha, 2015, 204 s. ISBN 978-80-262-0915-7
6. OZOROVSKÝ, V. A KOL 2011. Sociálne lekárstvo Bratislava : Asklepios, 2011. ISBN 978-7167-158-9
7. PALA, G. a kol. 2014. Vízie a perspektívy kvality života, Prešovská univerzita, Prešov, 2014, 257 s. ISBN 978-80-555-1147-4
8. SALOŇ, Ľ. 2021. Kvalita života a životný štýl rodiny v kontexte migrácie jej žiteľov za prácou, Verbum, Ružomberok, 2021, 153 s. ISBN 978-80-561-0875-8
9. KASSIN, S. Psychologie. 1. vyd. Brno : Computer Press, a. s., 2007. 771 s. ISBN 978-80-251-1716-3.
10. KONČEKOVÁ, Ľ. Vývinová psychológia. 4. aktualizované vydanie. Prešov : Vydavateľstvo Michala Vaška, 2014. ISBN 978-80-7165-945-7.
11. KOŠČ, M. Základy psychológie. 7. vyd. Bratislava : SPN, 2009. 118 s. ISBN 978-80-10-01677-8.
12. KŘIVOHLAVÝ, J. Psychologie nemoci. 1. vyd. Praha : Grada, 2002. 200 s. ISBN 80-247-0179-0.
13. KŘIVOHLAVÝ, J. Psychologie zdraví. 2. vyd. Praha : Portál, 2003. 278 s. ISBN 80-7178-774-4.
14. NAKONEČNÝ, M. Psychologie osobnosti. 2. vyd., rozšířené a přepracované. Praha : Academia, 2009. 620 s. ISBN 978-80-200-1680-5.
15. SIMOČKOVÁ, V. Základy psychológie pre zdravotnícke odbory. 2. aktualizované a doplnené vydanie – dotlač. Ružomberok : Verbum, 2021. 148 s. ISBN 978-80-561-0550-4.
16. ZACHAROVÁ, E. Zdravotnická psychologie : teorie a praktická cvičení. 2. aktualiz. a dopl. vyd. Praha : Grada, 2017. ISBN 978-80-271-0155-9.
17. ZACHAROVÁ, E. et al. Základy psychologie pro zdravotnické obory. Praha : Grada, 2011. ISBN 978-80-247-4062-1.

**Language of instruction:**

Slovak language

**Notes:**

The course is taught in summer semester and is evaluated only in the corresponding examination period of the summer semester of the academic year.

**Course evaluation:**

Assessed students in total: 22

A	B	C	D	E	FX
9.09	45.45	27.27	13.64	0.0	4.55

**Name of lecturer(s):** doc. PhDr. Mgr. Vladimír Littva, PhD., MPH, doc. PhDr. PaedDr. Viera Simočková, PhD.

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1014W/22	<b>Course title:</b> Pharmacology
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture <b>Recommended study range:</b> <b>hours weekly:</b> 1 <b>hours per semester:</b> 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 3	<b>Working load:</b> 75 hours
<b>Recommended semester/trimester:</b> 2.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> 100% active participation in lectures. The student takes control tests during the semester. The test will focus on the issues that were covered in the previous lectures. To successfully pass the control test, it is necessary for the student to achieve a minimum of 6 points from a maximum of 10 points. The result of the control test will be announced to the student one day before the of next lecture at latest. If the student gets less than 6 points, they are evaluated Fx. Each student, who failed in control test, has to retake the test from the same topic in the term given by teacher. If a student obtains two times Fx from control tests during the semester, they will not be admitted to the final exam due to the theoretical failure of the subject. The results of control tests will make 20% of the final overall evaluation of the student. At the end of the semester and the fulfillment of all conditions given by the teacher, each student passes a final written examination, which is aimed to verify the theoretical knowledge acquired during the semester. To successfully complete the final written examination, the student must obtain at least 75% of points. The results of final written examination will make 60% of overall points. The overall evaluation of the student will consist of the evaluation of control tests (40%), and the evaluation of the final written examination (60%). The student has the right to correction term in accordance with the study regulations of Faculty of Health, CU Ružomberok. Subject evaluation: A – 100 % - 93% B – 92 % - 85% C – 84 % - 77% D – 76 % - 69% E – 68 % - 60% FX – 59 % - 0%	
<b>Learning outcomes of the course:</b> To gain knowledge of the history of the field, definitions, characteristics and tasks of pharmacology, mechanism of action of drugs, pharmacokinetics and pharmacodynamics of drugs, their resorption, transport, biotransformations, excretion, their interrelationships and interactions, side effects, types of treatment, placebo therapy, research of new drugs, drug forms. The student will gain knowledge of basic terminology in pharmacology, routes and methods of drug administration, drug dosing, principles of drug handling and administration, and mathematics in pharmacology. The student will acquire knowledge of general and special pharmacology. The student acquire the specifics of contrast media application, the ways of their preparation, application, risks, potential allergic reactions and the possible solution from the radiological technician point of view. Theoretical knowledge: The student gains knowledge of main effects of drugs, side effects of drugs, storage, ordering, distribution and marking of drugs. To know the particular pharmacotherapeutic groups	

and their profile. Practical skills: Based on gained knowledge, the student has to know to apply particular drugs without any harm on patient.					
<b>Course contents:</b> 1. History, definition and tasks of pharmacology, mechanism of drug effects, drug interrelationships, pharmacokinetics, pharmacodynamics, agonism, antagonism, 2. Side effect of the drug, types of treatment, placebo therapy, new drugs, drug forms, resorption, transport, biotransformation, excretion 3. Basic terminology in pharmacology, routes of drug application, drug dosing, principles and methods of drug administration, mathematics in pharmacology 4. Pharmacology of the nervous system 5. Pharmacology of the circulatory system 6. Pharmacology of the respiratory system 7. Pharmacology of the digestive system 8. Pharmacology of endocrine system 9. Pharmacology of blood and hematopoietic organs 10. Pharmacology of enzymes and vitamins 11. Pharmacology of antibiotics and chemotherapeutics, antihistamines, antiseptics and disinfectants 12. Pharmacology of chemotherapy, principles of administration					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 22					
A	B	C	D	E	FX
59.09	22.73	13.64	4.55	0.0	0.0
<b>Name of lecturer(s):</b> prof. MUDr. Anna Lesňáková, PhD., MUDr. Mária Gadušová, PhD., PharmDr. Pavol Púčať					
<b>Last modification:</b> 11.09.2022					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1005W/22	<b>Course title:</b> Physiology
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 / 2 <b>hours per semester:</b> 24 / 24 <b>Teaching method:</b> on-site	
<b>Credits:</b> 3	<b>Working load:</b> 75 hours
<b>Recommended semester/trimester:</b> 1.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> Conditions for completing the course: During the semester: Attendance at lectures. The final evaluation: Written test before the oral exam, obtaining 60% of points from the test is a condition of the oral exam. Subject evaluation: A – 100% - 91% B – 92% - 85% C – 84% - 77% D – 76% - 69% E – 68% - 60% Fx – 59% - 0%	
<b>Learning outcomes of the course:</b> Learning outcomes: Objective of the course: Getting acquainted with the functions of organ systems of the human body. Understanding the organism as a dynamic whole. Changes in the body during movement and physical exercise. Theoretical knowledge: The student masters professional terminology, defines the basic physiological principles of homeostasis of the internal environment of the organism. It describes the physiological activity of organ systems, illustrates the essence of individual physiological processes. It defines the basic differences between non-specific and specific immunity, between enzyme and hormone, between autonomic and somatic nervous system and the like. Can interpret physiological changes at work and exercise. Practical skills: The student demonstrates the application of theoretical knowledge to clinical practice. He orients himself in organizing his theoretical knowledge into individual clinical disciplines, such as examination of blood elements, blood transfusion, active and passive immunization, measurement of blood pressure, evaluation of heart activity according to heart sounds and ECG curves, functional	

examination of lungs using spirometry examination. enzymes, hormones, examination of urine and kidney function, principles of proper nutrition, the effect of stress on the body, etc.

**Course contents:**

Course contents:

1. Characteristics of the subject, cell physiology, internal environment.
2. Physiology of blood.
3. Physiology of the cardiovascular and lymphatic system.
4. Physiology of respiration.
5. Physiology of the digestive system and nutrition.
6. Physiology of the excretory system.
7. Physiology of the endocrine system.
8. Physiology of the autonomic and somatic nervous system.
9. Physiology of thermoregulation, muscles and skin.
10. Physiology of the immune system and reproduction.
11. Physiology of nutrition and sensory organs.
12. Physiology of work and physical exercises.

**Recommended or required literature:**

1. LACKO, A. a kol. 2021. Vybrané kapitoly z fyziológie pre ošetrovateľstvo, verejné zdravotníctvo a nelekárske zdravotnícke vedy. Ružomberok: KU Verbum, 2021, 138 s. ISBN 978-80-561-0908-3..
2. KITTNAR, O. a kol. 2021. Přehled lékařské fyziologie. Praha: Grada, 2021, 336 s. ISBN 978-80-271-1025-4.
3. ROKYTA, R. a kol. 2015. Fyziologie a patologická fyziologie pro klinickou praxi. Praha: Grada, 2015. 680 s. ISBN 978-80-247-4867-2.
4. ČALKOVSKÁ, A. a kol. 2010. Fyziológia človeka pre nelekárske študijné programy. Martin: Osveta, 2010, 220s. ISBN 978-80-8063-344-8.

**Language of instruction:**

slovak language

**Notes:****Course evaluation:**

Assessed students in total: 41

A	B	C	D	E	FX
63.41	9.76	9.76	7.32	4.88	4.88

**Name of lecturer(s):** prof. MUDr. Anton Lacko, CSc., MUDr. Libor Danihel, PhD.

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:

doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1030W/22	<b>Course title:</b> Preventive Medicine and Hygiene
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture <b>Recommended study range:</b> <b>hours weekly:</b> 3 <b>hours per semester:</b> 36 <b>Teaching method:</b> on-site	
<b>Credits:</b> 2	<b>Working load:</b> 50 hours
<b>Recommended semester/trimester:</b> 3.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> During semester: There will be at least one written test during semester where students can get a maximum of 20 points. At the final exam (written/oral) student can get a maximum of 80 points. Students can obtain together 100 points. During the lectures student will analyse assigned topics. Final evaluation: Final marking will be on the basis of the points obtained from the tests during semester and in exam period. Course evaluation: A – 100 %-93 % B – 92 %-85 % C – 84 %-77 % D – 76 %-69 % E – 68 %-60 % FX – 59 %- 0 %	
<b>Learning outcomes of the course:</b> The aim of the course: Through the acquired knowledge and skills to create a comprehensive and conceptual view of prevention, preventive medicine and hygiene in the public health complex, individual sections of public health - their characteristics, content and methods of work, be able to act conceptually and preventively and think about preventive medicine, hygiene and public health in terms of preventive health care and the overall goal. Theoretical knowledge: To know the general and specific principles of health prevention, the scope and objectives of hygiene and public health, be able to act preventively and think about the management of the health team, department and the whole facility in terms of health care, prevention and hygiene, providing education and training of health care workers, use of prevention in individual areas of health care. Practical knowledge: To be able to use knowledge from individual areas of preventive medicine and hygiene departments, to be able to ensure the quality of preventive health services in the field of environment, nutrition,	

hygiene of children and adolescents and preventive occupational medicine, their evaluation, including the importance of health for individuals and society.

**Course contents:**

The structure of the course:

1. Preventive medicine, hygiene - public health, characteristics, position, development
2. Characteristics of individual branches of public health - hygiene
3. Determinants of health and factors influencing health
4. General epidemiology and prevention of communicable diseases
5. Epidemiology of non-infectious diseases of civilization
6. Environmental hygiene - air, soil, water, noise, housing and settlements
7. Hygiene of medical facilities
8. Preventive occupational medicine man and work environment
9. Nutritional hygiene - rational nutrition, food evaluation, eating together, food production.
10. Hygiene of children and youth
11. Protection against ionizing radiation
12. National health promotion program, the state of public health in Slovakia

**Recommended or required literature:**

1. Rovný I.: Verejné zdravotníctvo, 125 s., Herba 2009
2. Šulcová, M., Čižnár, I., Fabiánová, E.: Verejné zdravotníctvo, Bratislava, veda 2012
3. Legáth L. a kol.: Pracovné lekárstvo, Osveta 2020
4. Domenik, J.: Preventívne lekárstvo a hygiena, učebné texty, FZ KU, 2019
5. Šagát, T. a kol.: Organizácia zdravotníctva, Osveta Martin, 2010

**Language of instruction:**

Slovak language

**Notes:**

This course is taught during the winter semester and is evaluated during the exam period of the winter semester.

**Course evaluation:**

Assessed students in total: 23

A	B	C	D	E	FX
43.48	17.39	21.74	13.04	4.35	0.0

**Name of lecturer(s):** doc. MUDr. Jozef Domenik, PhD., MPH

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.



## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54L1021W/22		<b>Course title:</b> Professional Practice 1			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> <b>hours per semester:</b> 80s <b>Teaching method:</b> on-site					
<b>Credits:</b> 3		<b>Working load:</b> 75 hours			
<b>Recommended semester/trimester:</b> 1.					
<b>Level of study:</b> I.					
<b>Prerequisites:</b>					
<b>Requirements for passing the course:</b> During the semester: 100% participation					
<b>Learning outcomes of the course:</b> Course objective: To deepen theoretical knowledge about work and diagnostic procedures used in the field of biochemistry, hematology, immunology, pathology and microbiology, while acquiring practical skills Theoretical knowledge: students gradually gain an overview of the scope of work of individual workplaces, the spectrum of their diagnostics and at the same time learn the principles of individual methodologies Practical skills: students repeatedly practice some selected methodologies under the supervision of a lecturer					
<b>Course contents:</b> Gradually get acquainted with all workplaces: 1. with their daily operation, 2. with safety, fire and hygiene regulations 3. with documentation related to their work, 4. with current laboratory equipment, 5. with some selected examination methods of their routine diagnostics (elaborated in detail for each workplace in the Scope of Professional Practice).					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 40					
A	B	C	D	E	FX
92.5	5.0	0.0	0.0	0.0	2.5

**Name of lecturer(s):** RNDr. Katarína Ondrášiková, RNDr. Ivana Turzová, Mgr. Iveta Čučvarová, doc. RNDr. Jaroslav Timko, PhD., RNDr. Lucián Zastko, PhD., MUDr. Adrian Kališ, PhD.

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:

doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54L1022W/22		<b>Course title:</b> Professional Practice 2			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> <b>hours per semester:</b> 160s <b>Teaching method:</b> on-site					
<b>Credits:</b> 3		<b>Working load:</b> 75 hours			
<b>Recommended semester/trimester:</b> 2.					
<b>Level of study:</b> I.					
<b>Prerequisites:</b> KLVM/54L1021W/22					
<b>Requirements for passing the course:</b> During the semester: 100% participation					
<b>Learning outcomes of the course:</b> Course objective: To deepen theoretical knowledge about work and diagnostic procedures used in the field of biochemistry, hematology, immunology, pathology and microbiology, while acquiring practical skills Theoretical knowledge: students gradually gain an overview of the scope of work of individual workplaces, the spectrum of their diagnostics and at the same time learn the principles of individual methodologies Practical skills: students repeatedly practice some selected methodologies under the supervision of a lecturer					
<b>Course contents:</b> Gradually get acquainted with all workplaces: 1. with their daily operation, 2. with safety, fire and hygiene regulations 3. with documentation related to their work, 4. with current laboratory equipment, 5. with some selected examination methods of their routine diagnostics (elaborated in detail for each workplace in the Scope of Professional Practice).					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 19					
A	B	C	D	E	FX
84.21	10.53	0.0	0.0	5.26	0.0

<b>Name of lecturer(s):</b> RNDr. Ivana Turzová, Mgr. Miriam Tupá, doc. RNDr. Jaroslav Timko, PhD., RNDr. Lucían Zastko, PhD.
<b>Last modification:</b> 11.09.2022
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54L1047W/22		<b>Course title:</b> Professional Practice 3			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> <b>hours per semester:</b> 80s <b>Teaching method:</b> on-site					
<b>Credits:</b> 3		<b>Working load:</b> 75 hours			
<b>Recommended semester/trimester:</b> 3.					
<b>Level of study:</b> I.					
<b>Prerequisites:</b> KLVM/54L1022W/22					
<b>Requirements for passing the course:</b> During the semester: 100% participation					
<b>Learning outcomes of the course:</b> Course objective: To deepen theoretical knowledge about work and diagnostic procedures used in the field of biochemistry, hematology, immunology, pathology and microbiology, while acquiring practical skills Theoretical knowledge: students gradually gain an overview of the scope of work of individual workplaces, the spectrum of their diagnostics and at the same time learn the principles of individual methodologies Practical skills: students repeatedly practice some selected methodologies under the supervision of a lecturer					
<b>Course contents:</b> Gradually get acquainted with all workplaces: 1. with their daily operation, 2. with safety, fire and hygiene regulations 3. with documentation related to their work, 4. with current laboratory equipment, 5. with some selected examination methods of their routine diagnostics (elaborated in detail for each workplace in the Scope of Professional Practice).					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 24					
A	B	C	D	E	FX
62.5	12.5	16.67	4.17	0.0	4.17

<b>Name of lecturer(s):</b> RNDr. Katarína Ondrášiková, RNDr. Ivana Turzová, Mgr. Miriam Tupá, doc. RNDr. Jaroslav Timko, PhD., RNDr. Lucián Zastko, PhD.
<b>Last modification:</b> 11.09.2022
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54L1048W/22		<b>Course title:</b> Professional Practice 4			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> <b>hours per semester:</b> 160s <b>Teaching method:</b> on-site					
<b>Credits:</b> 3		<b>Working load:</b> 75 hours			
<b>Recommended semester/trimester:</b> 4.					
<b>Level of study:</b> I.					
<b>Prerequisites:</b> KLVM/54L1047W/22					
<b>Requirements for passing the course:</b> During the semester: 100% participation					
<b>Learning outcomes of the course:</b> Course objective: To deepen theoretical knowledge about work and diagnostic procedures used in the field of biochemistry, hematology, immunology, pathology and microbiology, while acquiring practical skills Theoretical knowledge: students gradually gain an overview of the scope of work of individual workplaces, the spectrum of their diagnostics and at the same time learn the principles of individual methodologies Practical skills: students repeatedly practice some selected methodologies under the supervision of a lecturer					
<b>Course contents:</b> Gradually get acquainted with all workplaces: 1. with their daily operation, 2. with safety, fire and hygiene regulations 3. with documentation related to their work, 4. with current laboratory equipment, 5. with some selected examination methods of their routine diagnostics (elaborated in detail for each workplace in the Scope of Professional Practice).					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 8					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0

**Name of lecturer(s):** RNDr. Ivana Turzová, Mgr. Miriam Tupá, MUDr. Adrian Kališ, PhD., doc. RNDr. Jaroslav Timko, PhD., RNDr. Lucián Zastko, PhD.

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:

doc. RNDr. Jaroslav Timko, PhD.



## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54L1060W/22		<b>Course title:</b> Professional Practice 5			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> <b>hours per semester:</b> 80s <b>Teaching method:</b> on-site					
<b>Credits:</b> 3		<b>Working load:</b> 75 hours			
<b>Recommended semester/trimester:</b> 5.					
<b>Level of study:</b> I.					
<b>Prerequisites:</b> KLVM/54L1048W/22					
<b>Requirements for passing the course:</b> During the semester: 100% participation					
<b>Learning outcomes of the course:</b> Course objective: To deepen theoretical knowledge about work and diagnostic procedures used in the field of biochemistry, hematology, immunology, pathology and microbiology, while acquiring practical skills Theoretical knowledge: students gradually gain an overview of the scope of work of individual workplaces, the spectrum of their diagnostics and at the same time learn the principles of individual methodologies Practical skills: students repeatedly practice some selected methodologies under the supervision of a lecturer					
<b>Course contents:</b> Gradually get acquainted with all workplaces: 1. with their daily operation, 2. with safety, fire and hygiene regulations 3. with documentation related to their work, 4. with current laboratory equipment, 5. with some selected examination methods of their routine diagnostics (elaborated in detail for each workplace in the Scope of Professional Practice).					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 13					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0

<b>Name of lecturer(s):</b> RNDr. Ivana Turzová, doc. RNDr. Jaroslav Timko, PhD., RNDr. Lucián Zastko, PhD.
<b>Last modification:</b> 11.09.2022
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54L1061W/22		<b>Course title:</b> Professional Practice 6			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> <b>hours per semester:</b> 400s <b>Teaching method:</b> on-site					
<b>Credits:</b> 3		<b>Working load:</b> 75 hours			
<b>Recommended semester/trimester:</b> 6.					
<b>Level of study:</b> I.					
<b>Prerequisites:</b> KLVM/54L1060W/22					
<b>Requirements for passing the course:</b> During the semester: 100% participation					
<b>Learning outcomes of the course:</b> Course objective: To deepen theoretical knowledge about work and diagnostic procedures used in the field of biochemistry, hematology, immunology, pathology and microbiology, while acquiring practical skills Theoretical knowledge: students gradually gain an overview of the scope of work of individual workplaces, the spectrum of their diagnostics and at the same time learn the principles of individual methodologies Practical skills: students repeatedly practice some selected methodologies under the supervision of a lecturer					
<b>Course contents:</b> Gradually get acquainted with all workplaces: 1. with their daily operation, 2. with safety, fire and hygiene regulations 3. with documentation related to their work, 4. with current laboratory equipment, 5. with some selected examination methods of their routine diagnostics (elaborated in detail for each workplace in the Scope of Professional Practice).					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 14					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0

**Name of lecturer(s):** RNDr. Ivana Turzová, PhDr. Helena Habiňáková, RNDr. Katarína Ondrášiková, Mgr. Iveta Čučvarová, MUDr. Adrian Kališ, PhD., Mgr. Miriam Tupá, doc. RNDr. Jaroslav Timko, PhD., RNDr. Lucián Zastko, PhD.

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1041W/22	<b>Course title:</b> Research in Health Care
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 / 1 <b>hours per semester:</b> 12 / 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 2	<b>Working load:</b> 50 hours
<b>Recommended semester/trimester:</b> 4.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> Active participation in exercises. The student takes control tests during the semester. The test will focus on the issues that were covered in the last exercises. To successfully pass the control test, it is necessary for the student to achieve a minimum of 6 points from a maximum of 10 points. The result of the control test will be announced to the student after the end of the exercises or one day before the start of next exercises. If the student gets less than 6 points, he/she is evaluated Fx. If a student obtains two times Fx from control tests during the semester, he/she will not be admitted to the final exam due to the theoretical failure of the subject. The results of control tests will be part of the final overall evaluation of the student. During the semester, each student prepares a semester work on a predetermined topic, which he is obliged to submit according to the instructions of the teacher. After the end of the semester and the fulfillment of all conditions given by the teacher, each student passes a final written examination, which is aimed to verify the theoretical knowledge acquired during the semester. To successfully complete the final written examination, the student must obtain at least 80% of points. The overall evaluation of the student will consist of the evaluation of control tests, evaluation of the semester work, evaluation of the final written examination and evaluation of the activity in the exercises. The teacher has the right to change the written examination to oral, which he must inform in advance. The student has the right to correction term in accordance with the study regulations of Faculty of Health, CU Ružomberok.	
<b>Learning outcomes of the course:</b> Objective of the course - aims of the course unit: to acquire basic knowledge about research, research methods - quantitative and qualitative. Master the stages of research and be able to publish research results. Theoretical knowledge: to master the theory of research in emergency health care, basic terminology in research, ethics in research, basics of qualitative and quantitative research, stages and phases of research, research methodology, principles of presentation of research results. Practical skills: to master the application of ethical and legal aspects in research, prepare the final thesis, compile a research on the topic of semester and final work, critically assess their own and acquired documents, be able to present the methodology of their own work, be able to compile individual research methods of data collection (questionnaire, survey, interview, case study,	

observation, document analysis), prepare the obtained data for statistical evaluation, process the results of the final work, prepare a presentation and present the final work, research results.

**Course contents:**

1. Research theory, research process and its stages - conceptual phase of research - definition of research problem
2. Research process and its stages - conceptual phase of research - overview of sources, theoretical framework, hypotheses
3. Work with literature, research sources and databases
4. Research process and its stages - design and planning phase - empirical phase
5. Research process and its stages - analytical phase - dissemination phase
6. Methods of empirical data collection - questionnaire, observation, experiment, Case Study / case study
7. Measurement and measuring tools
8. Statistical methods - deductive statistics
9. Statistical research methods - inductive statistics
10. Qualitative research
11. Publication of results and their presentation
12. Final thesis - Rector's directive of KU no. č. VP-KU-35

**Recommended or required literature:**

10. HANÁČEK, J, JAVORKA, K. Vedecká príprava. Martin: Osveta, 2010. 220 s.
11. HOVORKA, D. a kol. Ako písať a komunikovať. Martin: Osveta, 2011. 247 s.
12. KATUŠČÁK, D. Ako písať vysokoškolské a kvalifikačné práce. Nitra: Enigma, 2009. 162 s.
13. KEITH F. PUNCH. Základy kvantitatívneho šetrení. Praha: Portál, 2008. 152 s.
14. LAJČIAKOVÁ, P. Ako spracovať výskum. Ružomberok: Verbum, 2010. 180 s.
15. MEŠKO, D., KATUŠČÁK, D., FINDRA, J. a kol. Akademická príručka. Martin: Osveta, 2005. 496 s.
16. SILVERMAN, D. Ako robiť kvalitatívny výskum. Bratislava: Ikar, 2005. 327 s.
17. Smernica dekana FZ o ukončení štúdia
18. Smernica rektora KU č. č. VP-KU-35
19. STAROŇOVÁ, K. Vedecké písanie. Martin: Osveta, 2011. 246 s.

**Language of instruction:**

Slovak

**Notes:****Course evaluation:**

Assessed students in total: 10

A	B	C	D	E	FX
10.0	30.0	0.0	30.0	30.0	0.0

**Name of lecturer(s):** doc. PhDr. Mgr. Vladimír Littva, PhD., MPH, PhDr. Bc. Marek Šichman, PhD., MPH, MBA, DPH, DSc., Ing. Martin Bereta, PhD., doc. RNDr. Ľudmila Lysá, PhD., PhDr. Katarína Zrubáková, PhD.

**Last modification:** 28.01.2023

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1042W/22	<b>Course title:</b> Seminar to Final Thesis
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 3 <b>hours per semester:</b> 36 <b>Teaching method:</b> on-site	
<b>Credits:</b> 2	<b>Working load:</b> 50 hours
<b>Recommended semester/trimester:</b> 4.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> Active participation in exercises. The student takes control tests during the semester. The test will focus on the issues that were covered in the last exercises. To successfully pass the control test, it is necessary for the student to achieve a minimum of 6 points from a maximum of 10 points. The result of the control test will be announced to the student after the end of the exercises or one day before the start of next exercises. If the student gets less than 6 points, he/she is evaluated Fx. If a student obtains two times Fx from control tests during the semester, he/she will not be admitted to the final exam due to the theoretical failure of the subject. The results of control tests will be part of the final overall evaluation of the student. During the semester, each student prepares a semester work on a predetermined topic, which he is obliged to submit according to the instructions of the teacher. After the end of the semester and the fulfillment of all conditions given by the teacher, each student passes a final written examination, which is aimed to verify the theoretical knowledge acquired during the semester. To successfully complete the final written examination, the student must obtain at least 80% of points. The overall evaluation of the student will consist of the evaluation of control tests, evaluation of the semester work, evaluation of the final written examination and evaluation of the activity in the exercises. The teacher has the right to change the written examination to oral, which he must inform in advance. The student has the right to correction term in accordance with the study regulations of Faculty of Health, CU Ružomberok.	
<b>Learning outcomes of the course:</b> Objective of the course - aims of the course unit: to learn the principles of writing a final thesis and work with literature in accordance with the Rector's Directive KU No. 2/2017 on the requirements of final, rigorous and habilitation theses, their bibliographic registration, control of originality, storage and access. Master the standards, ethical principles and techniques of citation and work with bibliographic references. To master the principles of formal arrangement of the final work, the way of its presentation and publication. Theoretical knowledge: to master the basic theory of writing the final thesis, masters the basic differences between different types of works, rules of work with literature, rules and ethics of citation, paraphrasing, basic principles of formal and content of the final thesis.	

Practical skills: write the final thesis in accordance with the directive of the Rector of KU no. 2/2017, prepare a presentation of the final work, present their work and publish the results of their work in professional periodicals

**Course contents:**

1. Final thesis, definition, types of final theses, final thesis assignment, thesis annotation.
2. Structure and requisites of the final thesis - (cover, title page, assignment of the final thesis, statement on the number of characters).
3. Structure and requisites of the final work - (thanks, abstract in the state language, abstract in a foreign language, content).
4. Structure and requisites of the final work - (list of illustrations and list of tables, list of abbreviations and symbols, dictionary).
5. Main text part of the work - (introduction, core, conclusion, list of used literature).
6. The main text part of the work - (current state of the problem at home and abroad).
7. The main text part of the work - (goal of the work, methodology of research and methods of research, results of work, discussion).
8. Work with literature, citations and bibliographic references.
9. Formal arrangement of the final work.
10. Attachments and list of attachments.
11. Submission of the final work, control of originality.
12. Presentation of the final work and publication of the obtained results.

**Recommended or required literature:**

1. Smernica rektora o náležitostiach záverečných, rigorózných a habilitačných prác, ich bibliografickej registrácii, kontrole originality, uchovávaní a sprístupňovaní na Katolíckej univerzite v Ružomberku č. VP-KU-35
2. HANÁČEK, J. - JAVORKA, K. Vedecká príprava. Martin : Osveta, 2010. .
3. HOVORKA, D. a kol. Ako písať a komunikovať. Martin : Osveta, 2011.
4. KATUŠČÁK, D. Ako písať vysokoškolské a kvalifikačné práce. Nitra : Enigma, 2009.
5. MALÍKOVÁ, K. a kol. Príprava a písanie záverečnej práce. Ružomberok : FZ KU, 2008.
6. MEŠKO, D. - KATUŠČÁK, D. - FINDRA, J. a kol. Akademická príručka. Martin : Osveta, 2005.
7. STAROŇOVÁ, K. Vedecké písanie. Martin : Osveta, 2011.
8. TUREK, I. Ako písať záverečnú prácu. Bratislava : Metodicko-pedagogické centrum, 2005.
9. VYDRA, A. Akademické písanie. Trnava : Filozofická fakulta Trnavskej univerzity, 2010.

**Language of instruction:**

Slovak

**Notes:**

**Course evaluation:**

Assessed students in total: 10

A	B	C	D	E	FX
80.0	10.0	10.0	0.0	0.0	0.0

**Name of lecturer(s):** RNDr. Lucián Zastko, PhD.

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:  
doc. RNDr. Jaroslav Timko, PhD.



## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54L2001Y/22		<b>Course title:</b> Slovenský jazyk 1			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 <b>hours per semester:</b> 24 <b>Teaching method:</b> on-site					
<b>Credits:</b> 1		<b>Working load:</b> 25 hours			
<b>Recommended semester/trimester:</b> 1.					
<b>Level of study:</b> I.					
<b>Prerequisites:</b>					
<b>Requirements for passing the course:</b>					
<b>Learning outcomes of the course:</b>					
<b>Course contents:</b>					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 3					
A	B	C	D	E	FX
66.67	0.0	33.33	0.0	0.0	0.0
<b>Name of lecturer(s):</b> Mgr. Lucia Kravčáková					
<b>Last modification:</b>					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok					
<b>Faculty:</b> Faculty of Health					
<b>Course code:</b> KLVM/54T2002Y/22		<b>Course title:</b> Slovenský jazyk 2			
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 <b>hours per semester:</b> 24 <b>Teaching method:</b> on-site					
<b>Credits:</b> 1		<b>Working load:</b> 25 hours			
<b>Recommended semester/trimester:</b> 2.					
<b>Level of study:</b> I.					
<b>Prerequisites:</b> KLVM/54L2001Y/22					
<b>Requirements for passing the course:</b>					
<b>Learning outcomes of the course:</b>					
<b>Course contents:</b>					
<b>Recommended or required literature:</b>					
<b>Language of instruction:</b>					
<b>Notes:</b>					
<b>Course evaluation:</b> Assessed students in total: 1					
A	B	C	D	E	FX
0.0	100.0	0.0	0.0	0.0	0.0
<b>Name of lecturer(s):</b> Mgr. Lucia Kravčáková					
<b>Last modification:</b>					
<b>Supervisor(s):</b> Person responsible for the delivery, development and quality of the study programme: doc. RNDr. Jaroslav Timko, PhD.					

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> DEKZ/54Z2003W/22	<b>Course title:</b> The Basic Theme of the Bible
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 / 0 <b>hours per semester:</b> 24 / 0 <b>Teaching method:</b> on-site	
<b>Credits:</b> 2	<b>Working load:</b> 50 hours
<b>Recommended semester/trimester:</b> 3.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b> DEKZ/54Z2002W/22	
<b>Requirements for passing the course:</b> a) active participation of the student in classes b) final assessment: written exam - electronic test (60-100%). The final assessment of the subject corresponds to the verbal assessment: Passed/Not passed. Credits will be awarded to a student who obtained at least 60 out of 100% from the subject for fulfilling the specified conditions.	
<b>Learning outcomes of the course:</b> <ul style="list-style-type: none"> <li>• Knowledge: The student knows the basic literary-historical character of the Bible and can reproduce the basic elements of the message of individual books.</li> <li>• Skills: The student is able to read a biblical text with understanding and, on that basis, engage in religious discourse.</li> <li>• Competences: The student combines individual biblical ideas and, based on them, can understand the basic thought vectors of Western culture.</li> </ul>	
<b>Course contents:</b> The Bible - its literary character, basic content lines. The text of the Bible in its genetic and communicative character; hermeneutic starting points. Geographical and historical-cultural context of the Bible. The message of the Old Testament books, literary, historical-theological hermeneutic prerequisites for reading their text with understanding. The person of Jesus Christ as the center of the books of the New Testament. The message of the New Testament books; literary and historical-theological hermeneutic prerequisites for reading their text with understanding.	

**Recommended or required literature:**

1. BIBLIA: Starý a Nový zákon. 2016. Trnava: Spolok Sv. Vojtecha, 2016, 3359 s. ISBN 978-80-8161-220-6.
2. HERIBAN, J. 2020. Sväté písmo: Nový zákon / úvod k jednotlivým spisom a poznámky. Trnava: Spolok Sv. Vojtecha, 2020, 776 s. ISBN 978-80-8161-435-4.
3. LENOX, J. C. 2021. Sedem dní, ktoré rozdeľujú svet: vznik vesmíru podľa Genezis a modernej vedy. Bratislava: Postoj Media, 2021, 215 s. ISBN 978-80-89994-34-2.
4. MACKERLE, A. 2014. Než budete čítať Bibliu podruhé: vybraná témata o Biblii. České Budějovice: Jihočeská univerzita v Českých Budějovicích, 2014, 232 s. ISBN 978-80-7394-450-6.
5. TRSTENSKÝ, F. 2019. Rozprávaj mi o Biblii. Ružomberok: Verbum, 2019, 88 s. ISBN 978-80-8970-138-4.
6. TRSTENSKÝ, F. 2020. Štyri evanjeliá, jeden Kristus. Kežmarok: GG Kežmarok, 2020, 103 s. ISBN 978-80-89701-45-2.

**Language of instruction:**

Slovak Language

**Notes:**

The lectures should take into account the evangelistic nature of the chosen topics.

**Course evaluation:**

Assessed students in total: 127

ABSOL	NEABS
97.64	2.36

**Name of lecturer(s):** doc. PhDr. Mgr. Vladimír Littva, PhD., MPH, PaedDr. Martin Pinkoš

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:

doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> DEKZ/54Z2002W/22	<b>Course title:</b> The Basic Theme of the Theology
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 2 / 0 <b>hours per semester:</b> 24 / 0 <b>Teaching method:</b> on-site	
<b>Credits:</b> 2	<b>Working load:</b> 50 hours
<b>Recommended semester/trimester:</b> 2.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> a) active participation of the student in classes b) final assessment: written exam - electronic test (60-100%). The final assessment of the subject corresponds to the verbal assessment: Passed/Not passed. Credits will be awarded to a student who obtained at least 60 out of 100% from the subject for fulfilling the specified conditions.	
<b>Learning outcomes of the course:</b> <ul style="list-style-type: none"> <li>• Knowledge: The student will acquire basic knowledge about the religious phenomenon and will know the basic attributes of Christianity in the context of other religions.</li> <li>• Skills: The student can distinguish the specifics of Christian identity and apply them in cultural, ecumenical and interreligious dialogue.</li> <li>• Competences: The student can independently reflect on the essential features and truths of Christianity and communicate them.</li> </ul>	
<b>Course contents:</b> The importance of religion in the life of an individual - a person is capable of faith. Religion and the meaning of life, the role of religion in shaping critical thinking. Christianity in the context of other religions (interreligious dialogue). Christianity, its origin and the person of the founder. Basic truths of Christianity and the Catholic faith (ecumenical dialogue). Jesus Christ, the only Savior of mankind.	

**Recommended or required literature:**

1. Katechizmus Katolíckej cirkvi. 2007. Trnava: Spolok sv. Vojtecha, 2007, 918 s. ISBN 978-80-7162-657-2.
2. EGGER, P. 2020. Svetové náboženstvá z kresťanského pohľadu. Nitra: Gorazd, 2020, 143 s. ISBN 978-80-89481-54-5.
3. FUNDA, O.A. 2017. K filozofii náboženství. Praha: Karolinum, 2017, 103 s. ISBN 978-80-246-3748-8.
4. HRABOVECKÝ, P. 2020. Základy fundamentálnej teológie a religionistiky. Ružomberok: Verbum, 2020, 151 s. ISBN 978-80-561-0760-7.
5. SARKA, R. 2010. Teológia náboženstiev kontexte minulosti a súčasnosti. Ružomberok: Verbum 2010, 180 s. ISBN 978-80-8084-578-0.
6. WALDENFELS H. 1999. Fenomén kresťanství. Kresťanská univerzalita v pluralite náboženství. Praha: Vyšehrad, 1999, 144 s. ISBN 80-7021-329-9.
7. RATZINGER, J. 2007. Úvod do kresťanstva. Trnava: Dobrá Kniha, 2007, 305 s. ISBN 978-80-7141-562-6.

**Language of instruction:**

Slovak language

**Notes:****Course evaluation:**

Assessed students in total: 102

ABSOL	NEABS
94.12	5.88

**Name of lecturer(s):** doc. PhDr. Mgr. Vladimír Littva, PhD., MPH, PaedDr. Martin Pinkoš

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:

doc. RNDr. Jaroslav Timko, PhD.

## COURSE INFORMATION SHEET

<b>University:</b> Catholic University in Ružomberok	
<b>Faculty:</b> Faculty of Health	
<b>Course code:</b> KLVM/54L1053W/22	<b>Course title:</b> Toxicology and Examination Methods
<b>Type and range of planned learning activities and teaching methods:</b> <b>Form of instruction:</b> Lecture / Seminar <b>Recommended study range:</b> <b>hours weekly:</b> 1 / 1 <b>hours per semester:</b> 12 / 12 <b>Teaching method:</b> on-site	
<b>Credits:</b> 2	<b>Working load:</b> 50 hours
<b>Recommended semester/trimester:</b> 5.	
<b>Level of study:</b> I.	
<b>Prerequisites:</b>	
<b>Requirements for passing the course:</b> Conditions for passing the course: During the semester: As part of the self- controlled study, elaboration of a semestrial written work, its evaluation makes up 10% of the final evaluation Záverečné hodnotenie: test and oral examination Course evaluation: A – 100%-93% B – 92%-85% C – 84%-77% D – 76%-69% E – 68%-60% FX – 59%- 0%	
<b>Learning outcomes of the course:</b> Learning outcomes: Objective of the course - aims of the course unit: To acquaint students with toxicology and with the effects of chemical substances, mixtures, toxins on the human body. Theoretical knowledge: The student will gain basic theoretical knowledge about toxicology, toxic substances, toxins, pathways and mechanisms of entry into the body, the absorption of toxins and their metabolism, distribution in the body, clinical manifestations of intoxication by individual toxic factors. Knows the symptoms of intoxication with narcotic and psychotropic substances, organic and inorganic substances, the possibility of elimination in prehospital emergency care and hospital care and the possibility of protecting health from intoxication Practical skills: The graduate is able to recognize intoxications according to the clinical manifestations of intoxication. Can take measures to protect health from the risk of exposure to toxic factors and to use elimination options correctly in case of intoxication.	
<b>Course contents:</b> Course contents: 1. Basic concepts in toxicology, Toxicological disciplines and their connection with medical disciplines	

2. The concept of toxic substance. Latent dose. Exposure.
3. General toxicology. Ways and mechanisms of entry of poisons into the organism, gates of entry.
4. Absorption of poisons and their metabolism. Distribution and kinetics of toxic substances in the body and the possibility of elimination of toxic substances from the body.
5. Acute, chronic toxicity and late effects of chemicals and mixtures.
6. Toxic properties of selected inorganic substances and organic substances.
7. Toxicology of pesticides, warfare agents. Radioactive substances. Vitamins.
8. Toxicology of narcotics and psychotropic substances, the most commonly used drugs.
9. Toxicology of animal toxins.
10. Toxicology of plant toxins.
11. Toxicology and drug addiction
12. Regulatory toxicology. Classification of chemical substances and mixtures according to toxicity.

**Recommended or required literature:**

1. TUMOVÁ, I. Toxikológia pre farmaceutov. Bratislava, Herba. 2016. 192 s. ISBN 9788089631568.
2. ŠEVELA K., ŠEVČÍK P. a kol. Akutní intoxikace a léková poškození v intenzivní medicíně, Praha, Grada, 2011. 328 s. ISBN 978-80-247-3146-9.
3. PLAČKOVÁ S., KRESÁNEK J., CAGÁŇOVÁ, B. Intoxikácie hubami, rastlinami a živočíšnymi toxínmi. Bratislava: Herba 2013; 176 s. ISBN 978-80-89631-10-0.
4. Nariadenie Európskeho parlamentu a Rady 1272/2008 . o klasifikácii, balení a označovaní chemických látok a zmesí.
5. LINHART, I. Toxikologie pro chemiky. VŠCHT Praha, 2012; ISBN 978-80-7080-608-1

**Language of instruction:**

Slovak Language

**Notes:**

The subject is taught and evaluated only in the winter semester of the respective academic year.

**Course evaluation:**

Assessed students in total: 14

A	B	C	D	E	FX
64.29	21.43	14.29	0.0	0.0	0.0

**Name of lecturer(s):** doc. MUDr. Eleonóra Fabiánová, PhD., MPH

**Last modification:** 11.09.2022

**Supervisor(s):**

Person responsible for the delivery, development and quality of the study programme:

doc. RNDr. Jaroslav Timko, PhD.