CONTENT

1. 1D & 2D NMR Spectroscopy	2
2. Analysis of Psychotropic and Narcotic Substances	4
3. Analysis of drugs	5
4. Analytical Chemistry	6
5. Analytical Chemistry III	8
6. Ancient Philosophy and Present Times	10
7. Atomic Spectrochemistry	12
8. Basics of electroanalytical methods	14
9. Bioanalytical Chemistry	16
10. Chapters from History of Philosophy of 19th and 20th Centuries (General Introduction)	18
11. Chemometrics.	19
12. Class Project	21
13. Communication and Cooperation	23
14. Diploma Thesis and its Defence	25
15. Electrophoretic Methods	26
16. Environmental Analytical Chemistry	27
17. Forensic and Clinical Analytical Chemistry	29
18. Green analytical chemistry: miniaturization, automation, sensors	31
19. History of Philosophy 2 (General Introduction).	33
20. Hydrochemistry	35
21. Idea Humanitas 2 (General Introduction).	37
22. Liquid Chromatography	39
23. Molecular Spectrometry	40
24. Practical in Bioanalytical Chemistry	42
25. Psychology and Health Psychology (Master's Study)	44
26. Sampling of Analytical Samples.	46
27. Seaside Aerobic Exercise	47
28. Selected chapters of analytical chemistry	49
29. Semestral Project I	51
30. Semestral Project II	53
31. Semestral Project III	54
32. Seminar to Diploma Thesis	55
33. Social-Psychological Training of Coping with Critical Life Situations	57
34. Special Seminar	58
35. Special Seminar	59
36. Sports Activities I	60
37. Sports Activities II	62
38. Sports Activities III.	64
39. Sports Activities IV	66
40. Students Scientific Conference (Presentation)	68
41. Summer Course-Rafting of TISA River	69
42. Water Pretreatment	71

	COURSE INFORMATION LETTER
University: P. J. Šafán	ik University in Košice
Faculty: Faculty of So	cience
Course ID: ÚCHV/ NMR1/00	Course name: 1D & 2D NMR Spectroscopy
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 3 Per s Course method: pre	nd the method: e / Practice rse-load (hours): study period: 28 / 42 sent
Number of ECTS cro	edits: 6
Recommended semes	ster/trimester of the course: 2.
Course level: II.	
Prerequisities:	
 Conditions for cours 1. Attendance at lecture 2. Activity at seminal students for all seminal students for all seminals 3. Elaboration of wr instructions. 4. Passing the final tee 5. Exam (written 25%) 	e completion: res and seminars (this also applies to the online form of teaching) rs (also applies to the online form of teaching) - theoretical preparation of ars is required itten assignments (20% of the total evaluation) according to the teacher's st (30% of the total evaluation). 6 and oral part 25%).
Learning outcomes: The aim of the course the acquired knowled	e is to get acquainted with 1D and 2D NMR methods and the application of ge in solving NMR problems.
Brief outline of the contrast	A methods ents – APT, DEPT nts elation through coupling – COSY, TOCSY elation through space - NOESY elation – HSQC/HMQC/HETCOR, HMBC, H2BC, EXSIDE relation - INADEQUATE
Recommended litera 1. H. Friebolin: Basic 2. T. D. W. Claridge: 2016. 3. Atta-ur-Rahman, N Press 1996.	ture: One- and Two-Dimensional NMR Spectrocopy, 5. Ed., Wiley, 2010. High-Resolution NMR Techniques in Organic Chemistry, 5. Ed., Elsevier, 1. I. Choudhary: Solving Problems with NMR spectroscopy, Academic
Course language:	

Notes:

Teaching is carried out in person or, if necessary, online using the MS Teams or BBB (BigBlueButton) tool. The form of teaching is specified by the teacher at the beginning of the semester, updated continuously.

Course assessment						
Total number o	Total number of assessed students: 190					
A B C D E FX					FX	
39.47 25.79 24.21 8.95 1.58 0.0						
Provides: doc. RNDr. Ján Imrich, CSc.						
Date of last modification: 28.01.2022						
Approved: prof. Dr. Yaroslav Bazel', DrSc.						

University: P. J. Šafárik University in Košice				
Faculty: Faculty of Science				
Course ID: ÚCHV/ Course name: Analysis of Psychotropic and Narcotic Substances APO1/02 Course name: Analysis of Psychotropic and Narcotic Substances				
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present				
Number of ECTS credits: 4				
Recommended semester/trimester of the course: 3.				
Course level: II.				
Prerequisities:				
Conditions for course completion: Examination				
Learning outcomes: Survey of classification, effects/mechanism and properties of psychotropic and narcotic substances, drug dependences and methods used in the (toxicological) analysis of drugs.				
Brief outline of the course: Drug, drug dependence. Psychotropic and narcotic substances - classification, properties and laws. Dose and tolerance, therapy, prevention. Pharmacokinetics of the drug. Biological effects, biotransformations, receptors. The methods used in the analysis of the drugs (clinical, forensic analysis) - opiates, cocaine, amphetamines and their analogues, hallucinogenics, cannabis products, etc.				
 Recommended literature: 1. M. D. Cole: The Analysis of Controlled Substances, Wiley 2003. 2. E. Hodgson: A Textbook of Modern Toxicology, Wiley 2004. 				
Course language:				
Notes:				
Course assessment Total number of assessed students: 252				
A B C D E FX				
94.05 3.97 1.59 0.4 0.0 0.0				
Provides: doc. RNDr. Taťána Gondová, CSc.				
Date of last modification: 15.11.2021				
Annroved prof Dr. Vereglav Pazel' DrSa				

University: P. J. Šafárik University in Košice				
Faculty: Faculty of Science				
Course ID: ÚCHV/ ANAL/18	Course ID: ÚCHV/ Course name: Analysis of drugs			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present				
Number of ECTS cr	Number of ECTS credits: 5			
Recommended seme	ster/trimester of the cours	e:		
Course level: II.				
Prerequisities:				
Conditions for course completion: Assessment, based on 3 prepared presentations on specified topics (3x10 points), a minimum of 20 points is required for completion.				
Learning outcomes: Survey of basic principles, methods and new trends in drugs analysis.				
Brief outline of the course: Analysis of chemical drugs, control and evaluation of drug quality, Slovak and European Pharmacopoeia. Determination of drug content, classical methods of determination - proof reactions of ions, etc. Solid state drug analysis, impurity analysis, drug degradation, stability study. Sample preparation, cleaning and extraction procedures. Methods used in drug analysis, optical and separation methods. Validation of analytical methods				
Recommended literature: Ahuja S., Scypinski S., eds.: Handbook of Modern Pharmaceutical Analysis, Separation Science and Technology, Vol.3, Academic Press, 2001. European Pharmacopoeia, 10th, online.pheur.org/EN/entry.html				
Course language: Slovak language				
Notes:				
Course assessment Total number of assessed students: 31				
abs n				
100.0 0.0				
Provides: doc. RNDr	Provides: doc. RNDr. Taťána Gondová, CSc.			
Date of last modification: 15.11.2021				
Approved: prof. Dr. Yaroslav Bazel', DrSc.				

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	science	
Course ID: ÚCHV/ ACHSP/14/15	Course name: Analytical Chemistry	
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of ECTS cr	redits: 4	
Recommended seme	ester/trimester of the course:	
Course level: II.		
Prerequisities:		
Conditions for cours	se completion:	

Learning outcomes:

Brief outline of the course:

Sampling and processing in analytical chemistry, basic rules of sampling. Representative sample, homogeneous sample. Sample pretreatment, selection of analytical method.

Types of chemical equilibria in solutions. Protolytic equilibria. Oxidation-reduction equilibria. Precipitation equilibria. Complex-forming equilibria. Use of analytical reaction in quantitative analysis. Methods of suppressing adverse reactions. Masking in analytical chemistry.

Basic principles and classification of separation methods. Extraction, principle, classification of extraction methods and their use in sample preparation - LLE, SPE, SPME, etc. Basic principles of chromatography, general description of chromatographic process. Qualitative and quantitative analysis in chromatography. Principles of chromatographic separation in gas chromatography (GC). Theoretical bases of liquid chromatography (LC). Gel permeation chromatography (GPC), ion exchange chromatography (IEC), supercritical fluid chromatography (SCF), principles and applications. UPLC versus HPLC. Electromigration methods, principle, classification and their use. Principles of the most important instrumental analytical methods. Electrochemical analytical methods, typical applications. Voltammetric methods, potentiometric methods, coulometry. Electrochemical dissolution analysis. Electrochemical detectors in flow systems.

Spectral analytical methods. Atomic and molecular spectroscopy: Principles, division. Atomic spectra, origin, analytical use. Basic differences in emission and absorption methods. Excitation sources. Radiation decomposition. Radiation detection. Matrix effects and their elimination. Implementation of analytical calibration. Atomic absorption spectrometry. Molecular spectrophotometry - UV/VIS, IR, MS. Thermal analysis.

Fundamentals of mathematical and statistical methods used in analytical chemistry. Probability distribution of measurement results, classical and robust estimates of mean and variance. Statistical tests and their application. Accuracy, precision, and reliability of results. Calibration in analytical chemistry, linear and nonlinear models.

Recommended literature:

1. Christian G.D.: Analytical Chemistry. John Wiley & Sons, Inc. New York – Chichester – Brisbane – Toronto – Singapore 2004.

- 2. Harvey D.: Modern Analytical Chemistry. McGraw Hill, Boston, 2000.
- 3. Harvey D.: Analytical Chemistry 2.1. LibreText. 2021.
- 4. Labuda J. a kol.: Analytická chémia. Vydavateľstvo STU. Bratislava 2019.
- 5. R. G. Brereton: Chemometrics., Wiley, Chichester, 2003.

6. M. Meloun, J. Militký: Kompendium statistického zpracování dat., Academia, Praha 2006.

Course language:

Slovak

Notes:

The course is implemented by full-time or distance method (MS Team, Google Meet, BBB) or a combined method.

Course assessment

Total number of assessed students: 65

А	В	С	D	Е	FX
50.77	27.69	16.92	4.62	0.0	0.0
D 'I					

Provides:

Date of last modification: 20.01.2022

University: P. J. Šafárik	University	/ in	Košice
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Faculty: Faculty of Science

Course ID: ÚCHV/ **Course name:** Analytical Chemistry III.

ANCH2/06

Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours):

Per week: 2 / 2 Per study period: 28 / 28

Course method: present

Number of ECTS credits: 6

Recommended semester/trimester of the course: 1.

Course level: II.

Prerequisities:

Conditions for course completion:

Active participation in seminars.

Test.

Learning outcomes:

Advanced knowledge of modern analytical chemistry.

Brief outline of the course:

Analytical chemistry. Objects of analysis. Instrumental equipment of a modern analytical laboratory. Relationship between analytical chemistry and other scientific branches. Problems and trends in recent analytical chemistry. Speed and factors affecting the speed of analysis. Validation of analytical methods. Non-destructive methods of analysis, principle, utility. Distance analysis. Automation of analysis, examples. Flow analysis – FIA and SIA. Analytical reaction, chemical equilibrium in solutions. Kinetic analytical methods. Radiochemical analytical methods. Secondary Ion Mass Spectrometry. X-ray Photoelectron spectrometry. Mass pectrometry. Roentgen spectroscopic methods.

Recommended literature:

1. Willard H.H., Merritt L.L., Dean J.A., Settle F.A.: Instrumental Methods of Analysis, Wadsworth Publ. Co., Belmont (CA) 1988.

2. Christian G.D.: Analytical Chemistry. John Wiley & Sons, Inc. New York – Chichester – Brisbane – Toronto – Singapore 2004.

- 3. Harvey D.: Modern Analytical Chemistry. McGraw Hill, Boston, 2000.
- 4. Harvey D.: Analytical Chemistry 2.1. LibreText. 2021.
- 5. Labuda J. a kol.: Analytická chémia. Vydavateľstvo STU. Bratislava 2019.
- 6. Current journal literature.

Course language:

Slovak

Notes:

The course is implemented by full-time or, if necessary, distance method (using the tools of MS Team, Google Meet, BBB) or a combined method. The form of teaching is specified by the teacher at the beginning of the semester and updated continuously.

Course assessment Total number of assessed students: 102					
A B C D E FX					
42.16 33.33 19.61 0.98 2.94 0.98					
Provides: prof. Dr. Yaroslav Bazel', DrSc.					
Date of last modification: 25.01.2022					
Approved: prof. Dr. Yaroslav Bazel', DrSc.					

UDSE INFODMATION I ETTED

	COURSE INFORMATION LETTER				
University: P. J	University: P. J. Šafárik University in Košice				
Faculty: Facult	Faculty: Faculty of Science				
Course ID: KF/ AFS/05	Course na	ame: Ancient Ph	ilosophy and Pre	sent Times	
Course type, sc Course type: 1 Recommended Per week: 2 Pe Course metho	cope and the met Practice d course-load (h er study period: od: present	thod: ours): 28			
Number of EC	TS credits: 2				
Recommended	semester/trimes	ster of the cours	e: 2.		
Course level: II	[.				
Prerequisities:					
When impleme 40% - continuo 60% - final test KF citation star In the case of a philosophical te deadline, will b to the same exte	nting the subject us assessment of , or seminar pape ndard for seminar transition to dis exts and process be assigned point ent as in the face	Student activity er in the range of r and qualification stance education, ing the task in w s (partial assesses -to-face form tea	at seminars, parti 10 A4 standard n papers. students will be vritten form, which nent) and at the e ching.	rm of teaching: ial seminar work pages (with com assigned sub-tas ch must be subm end will prepare	- assignment. pliance with the sks for studying nitted by the set a seminar paper
Learning outco	omes:				
Brief outline of Point out the ro- the 3 pillars of E the interconnec of the issues of society, where the which Europe a and problems of today's form of	the course: ots of Western civ European culture, tedness of ancien thought formation the emergence of and European hun of today if he disc society, thinking	vilization that go reveal the origin nt philosophy an on, the relationsl f mathematical n manity stand. Th covers the founda	back to the Greek s of democracy at d EPISTEME we hip between philo atural science in e student will be ttions and contex- ture.	ks. The ancient C nd critical thinkir ill enable a bette osophy and scien the 17th century able to understan ts leading to serie	Breeks, as one of ng. Emphasizing or understanding nce, and modern v is the pillar on nd the questions ous questions of
Recommended	literature:				
Course languag	ge:				
Notes:					
Course assessm Total number of	1ent f assessed studen	its: 31			
А	В	С	D	Е	FX
80.65	6.45	6.45	0.0	6.45	0.0

Provides: doc. PhDr. Peter Nezník, CSc.

Date of last modification: 24.08.2022

University in Solution University in Rusie
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Faculty: Faculty of Science

Course ID: ÚCHV/	Course name: Atomic Spectrochemistry
AAS1/03	

Course type, scope and the method:

Course type: Lecture / Practice

Recommended course-load (hours): Per week: 2 / 2 **Per study period:** 28 / 28

Course method: present

Number of ECTS credits: 6

Recommended semester/trimester of the course: 1.

Course level: II.

Prerequisities:

Conditions for course completion:

Based on the ongoing evaluation: it means based on the results of laboratory exercises and seminar works with an assessment higher than 51%.

Based on ongoing evaluation, and the final written and oral examination. The exam consists of a written and an oral part and its overall percentage rating must be higher than 51%. (Written and oral exam evaluation: 51-60% - E; 61-70% - D; 71-80% - C; 81-90% - B; 91-100% - A).

Learning outcomes:

After completing the subject, the student will acquire theoretical information and practical experience in the field of spectro-analytical methods.

Brief outline of the course:

Information and the role of atomic absorption and emission spectroscopy in analytical chemistry. History of the development of spectral methods.

Theoretical foundations, principles and classification of optical methods. Experimental foundations of spectral methods. Atomic absorption spectrometry. Atomic emission spectrometry.

Atomic fluorescence spectrometry. X-ray spectrometry. Inorganic mass spectrometry. Molecular absorption spectrometry in the visible, ultraviolet and near-infrared region and its analytical applications.

Recommended literature:

I.Němcová, L. Čermáková, P. Rychlovský: Spektrometrické analytické metódy. Karolinum, Praha, 1997.

D. A. Skoog, J. J. Leary: Instrumental Analytics. Springer, Berlin, 1996.

B. Welz, M. Sperling: Atomic Absorption Spectrometry, Wiley-VCH, Weinheim, 1998.

H. Günzler, A. Wiliams: Handbook of Analytical Techniques. Wiley-VCH, Weinheim, 2001.

G. Gauglitz, T. Vo-Dinh: Handbook of Spectroscopy. Wiley-VCH, Weinheim, 2003.

Course language:

Slovak language

Notes:

Theoretical part of the course can also be carried out by distance learning, using MS Teams or BBB. The form of teaching is always specified at the beginning of the semester, and is continuously updated in accordance with the pandemic situation.

Course assessment						
Total number o	f assessed studen	ts: 104				
A B C D E FX						
41.35	24.04	19.23	11.54	3.85	0.0	
Provides: doc. Ing. Viera Vojteková, PhD.						
Date of last modification: 05.08.2022						
Approved: prof. Dr. Yaroslav Bazel', DrSc.						

	COURSE INFORMATION LETTER
University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚCHV/ ZEM/21	Course name: Basics of electroanalytical methods
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 1 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 28 / 14 esent
Number of ECTS cr	edits: 5
Recommended seme	ster/trimester of the course: 2., 4.
Course level: II.	
Prerequisities:	
Conditions for cours Active participation i 1. Participation in lab the student's absence during the semester assesses the preparati a protocol from each 2. Elaboration of 2 w for participation in th 3. Successful comple The evaluation of th a combination of co examination during t achieve at least 51% Note: Detailed condit (LMS UPJŠ).	e completion: n laboratory exercises and seminars; successful completion of the tests. oratory exercises is required. Assigned teacher who leads exercises justifying (incapacity for work, family reasons, etc.) for a maximum of two exercises without substitute supplying. The assigned teacher, who leads the seminar, on of students and their activity in seminars. The student is obliged to prepare laboratory exercise resp. assignment determined by the teacher. Written test. vritten assignments (or subject project), which will be one of the conditions e exam. tion of the final written test. e student's study results within the study of the subject is carried out by ntinuous control during the teaching part of the semester (50%) with an he examination period (50%). To complete the course it will be necessary to of the total evaluation. tions are updated annually within the repository for digital support materials
Learning outcomes: Getting information a Brief outline of the c Principle of electroa Linear and cyclic volt Amperometry and tit Coulometric titration Electroanalytical me methods. Selected ap of technological pro environment, in diag	bout the electroanalytical methods and application in laboratory practice. ourse: nalytical methods. Electrodes. Potentiometry. Voltammetry. Polarography. ammetry. Pulse voltammetry. Stripping voltammetry. Voltammetric titrations. trations with polarizable electrodes. Coulometry. Potentiostatic coulometry. s. Conductometry. Chronopotentiometry. asurements in flow systems. Miniaturization of electrochemical analytical pplications of electroanalytical methods as quality control in the analysis ducts, in bioanalytical applications, analysis of foreign substances in the nostic and clinical analysis, in forensic science, etc.
Recommended litera 1. J. Labuda a kol. An	alytická chémia, STU, Bratislava 2014.

2. Allen J. Bard, Cynthia G. Zoski. Electroanalytical Chemistry. A Series of Advances: Volume 26. Taylor&Francis, 2015.

3. D. Harvey: Modern Analytical Chemistry. McGraw Hill, Boston, 2000.

Course language:

Slovak

Notes:

The course is implemented by full-time or, if necessary, distance method using the MS Teams or BBB or a combined method. The form of teaching is specified by the teacher at the beginning of the semester and updated continuously.

Course assessment

Total number of assessed students: 5

А	В	С	D	Е	FX
60.0	40.0	0.0	0.0	0.0	0.0

Provides: prof. Dr. Yaroslav Bazel', DrSc., RNDr. Jana Šandrejová, PhD.

Date of last modification: 15.11.2021

Faculty: Faculty of Science

Course ID: ÚCHV/ **Course name:** Bioanalytical Chemistry BACH1/03

Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14

Course method: present

Number of ECTS credits: 5

Recommended semester/trimester of the course: 1.

Course level: II.

Prerequisities:

Conditions for course completion:

Completion of block exercises. Processing and presentation of the assigned topic. Oral examination.

Learning outcomes:

Theoretical knowledge and practical experience regarding application of analytical chemistry and analytical methods to laboratory medicine.

Brief outline of the course:

Introduction to Bioanalytical Chemistry, biological samples classification. Factors affecting analytes in biological samples. Collection, transport and storage of biological samples. Selected procedures of sample pretreatment Control and management of quality in clinical laboratory. Enzymes in bioanalysis. Introduction to Immunochemical methods - basic characteristics of the immune system, antibody, antigen, hapten - definition, basic characteristics. Precipitation and Agglutination methods - principle, definition, use. Immunodiffusional methods. Radioimmunoanalytic methods (RIA). Nonisotopic methods (EIA, ELISA, LIA, FIA). Investigative procedures in medical microbiology. Principles miniaturization of analytical procedures in clinical chemistry, microchips, nanochips, sensors and biosensors.

Recommended literature:

1. Mikkelsen, S. R., Cortón, E.: Bioanalytical Chemistry, Wiley, 2004.

2. Wilson, I.: Bioanalytical Separations 4, (Handbook of Analytical Separations), Elsevier, 2003.

3. Suelter, C. H., Kricka, L. J.: Methods of Biochemical Analysis, Vol.37, Bioanalytical Instrumentation, Wiley, 1994.

4. Rodriguez-Diaz, R., Wehr, T., Tuck, S.: Analytical Techniques for Biopharmaceutical Development, Marcell Dekker, 2005.

Course language:

Slovak

Notes:

The course is implemented by full-time or, if necessary, distance method using the MS Teams or BBB or a combined method. The form of teaching is specified by the teacher at the beginning of the semester and updated continuously

Course assessment Total number of assessed students: 116						
A B C D E FX						
34.48	37.07	17.24	10.34	0.86	0.0	
Provides: doc. RNDr. Katarína Reiffová, PhD.						
Date of last modification: 25.01.2022						
Approved: prof. Dr. Yaroslav Bazel', DrSc.						

University: P. J. Šafárik University in Košice								
Faculty: Facult	y of Science							
Course ID: KF/ KDF/05	Course name: Chapters from History of Philosophy of 19th and 20th Centuries (General Introduction)							
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present								
Number of EC	TS credits: 2							
Recommended	semester/trimes	ster of the cours	e: 2.					
Course level: II	- -							
Prerequisities:								
Conditions for	course completi	ion:						
Learning outco	omes:							
Brief outline of	the course:							
Recommended	literature:							
Course languag	ge:							
Notes:								
Course assessment Total number of assessed students: 10								
А	В	С	D	Е	FX			
50.0	50.0 20.0 10.0 0.0 10.0 10.0							
Provides: PhDr. Dušan Hruška, PhD.								
Date of last modification: 03.05.2015								
Approved: prof	Approved: prof. Dr. Yaroslav Bazel', DrSc.							

	COURSE INFORMATION LETTER						
University: P. J. Šafá	rik University in Košice						
Faculty: Faculty of S	Faculty: Faculty of Science						
Course ID: ÚCHV/ ACM1/06	ourse ID: ÚCHV/ Course name: Chemometrics CM1/06						
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 2 Per Course method: pre	nd the method: ·e / Practice rse-load (hours): study period: 28 / 28 esent						
Number of ECTS cr	edits: 6						
Recommended seme	ster/trimester of the course: 2.						
Course level: II.							
Prerequisities:							
Conditions for cours On the basis of ongo works, and a final wr On the basis of ongo an oral part and its of evaluation: 51-60% -	e completion: bing evaluation, which requires the elaboration of homeworks and seminar itten project with an assessment higher than 51%. bing evaluation, and final examination. The exam consists of a written and overall percentage rating must be higher than 51%. (Written and oral exam E; 61-70% - D; 71-80% - C; 81-90% - B; 91-100% - A).						
Learning outcomes: After completing the based evaluation of a Knowledge about the Knowledge about the practice.	course, the student will acquire knowledge about the correct and theoretically nalytical results and methods. e methods of validation and accreditation of laboratories. e result uncertainties, methods of decision statistics and good laboratory						
Brief outline of the c The principles of the distribution of the me Statistical tests and th of the results. Calibra Evaluation of the ana examples in the frame	ourse: e mathematic- statistical methods used in analytical chemistry. Probability asuring results. Classic and robust estimation of the mean value and variance. eir application. Accuracy, precision, and reliability of the results. Uncertainity ation in the analytical chemistry, linear and nonlinear models. alytical methods, the chosen optimization approaches. Solving of the typical e of the practical lectures.						

Recommended literature:

R. G. Brereton: Chemometrics., Wiley, Chichester, 2003

M. Meloun, J. Militký: Kompendium statistického zpracování dat., Academia, Praha 2006 James N. Miller, Jane C. Miller: Statistics and Chemometrics for Analytical Chemistry, Pearson Education Limited, England, 2010

Course language:

Slovak language

Notes:

The course can be carried out by distance learning, using MS Teams or BBB. The form of teaching is always specified at the beginning of the semester, and is continuously updated in accordance with the pandemic situation.

Course assessment						
Total number o	f assessed studen	ts: 112				
A B C D E FX						
39.29	29.46	21.43	5.36	4.46	0.0	
Provides: doc. Ing. Viera Vojteková, PhD.						
Date of last modification: 05.08.2022						
Approved: prof. Dr. Yaroslav Bazel', DrSc.						

University: P. J. Šafárik University in Košice							
Faculty: Faculty of S	Faculty: Faculty of Science						
Course ID: ÚCHV/ RP/14	e ID: ÚCHV/ Course name: Class Project						
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present							
Number of ECTS cr	edits: 6						
Recommended seme	ster/trimester of the cours	e: 2.					
Course level: II.							
Prerequisities:							
Conditions for cours Submission of a year Its content is experim the obtained experim assigned experiments experiments, success the evaluation "comp	Conditions for course completion: Submission of a year project based on the assignment of the teacher. Its content is experimental laboratory work on a topic assigned by the teacher and evaluation of the obtained experimental results. The condition for successful completion is realization of the assigned experiments and their evaluation in the form of presentation. After the implementation of experiments, successful presentation of results and answering any comments, the teacher will give the avaluation "completed"						
Learning outcomes: Mastering of individ according to available	lual work in the laboratory e literature.	and creative processing of the assigned topic,					
Brief outline of the c	ourse:						
Recommended litera According to the reco Current journal litera	iture: ommendations of project sup ture.	pervisors.					
Course language: Slovak, english.							
Notes:							
Course assessment Total number of assessed students: 218							
	abs n						
99.08 0.92							
Provides: doc. RNDr. Miroslav Almáši, PhD., RNDr. Miroslava Matiková Maľarová, PhD., doc. RNDr. Zuzana Vargová, Ph.D., RNDr. Martin Vavra, PhD., prof. RNDr. Juraj Černák, DrSc., doc. RNDr. Juraj Kuchár, PhD., prof. RNDr. Vladimír Zeleňák, DrSc., doc. RNDr. Ivan Potočňák, PhD., prof. Dr. Yaroslav Bazeľ, DrSc., prof. Mgr. Vasiľ Andruch, DSc., doc. RNDr. Katarína Reiffová, PhD., doc. RNDr. Taťána Gondová, CSc., doc. Ing. Viera Vojteková, PhD., RNDr. Rastislav Serbin, PhD., RNDr. Jana Šandrejová, PhD.							

Date of last modification: 25.01.2022

University: P. J. Šafárik University in Košice						
Faculty: Faculty of S	Faculty: Faculty of Science					
Course ID: KPPaPZ/KK/07	Course name: Communication and Cooperation					
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	nd the method: ce rse-load (hours): dy period: 28 esent					
Number of ECTS cro	edits: 2					
Recommended seme	ster/trimester of the course: 3.					
Course level: II.						
Prerequisities:						
Conditions for cours Evaluation: A condition for stude student will actively solutions. The output for evalu presentation or a vide Learning outcomes: The goal of the subject language and commut The student can dem contexts. The student can d assertiveness, empath The student can apply	e completion: ent evaluation is his active participation in the seminar. It is expected that the participate in the discussions and will express their positions and possible nation will be the development of a project in the form of a Power Point eo on a selected communication topic. et Communication, cooperation is the formation and development of students' nication skills through experiential activities. onstrate an understanding of individual behavior in various communication escribe, explain and evaluate communication techniques (cooperation, ny, negotiation, persuasion) in practical contexts. y these techniques in common communication schemes.					
Brief outline of the c Communication Communication theor Non-verbal communication about active listening Empathy Short conversation communication) Cooperation About the basics of c About types, signs, ty Characteristics of the Small social group (s individual in the grout	ourse: ry ication and its means on (basic components of communication, language means of communication) and effective communication (principles and principles of effective ooperation /pes and factors of cooperation team (positions in the team) tructure, development, characteristics of a small social group, position of the up)					

About leadership (characteristics of the leader, management, leadership styles)

Recommended literature:

Course language:

Notes:

Course assessment

Total number of assessed students: 281

abs	n	Z			
98.22	1.78	0.0			
Provides: Mgr. Ondrej Kalina, PhD., Mgr. Lucia Barbierik, PhD.					
Date of last modification: 31.07.2022					

University: P. J.	Šafárik Univers	sity in Košice				
Faculty: Faculty	of Science					
Course ID: ÚCH DPO/14	Course ID: ÚCHV/ Course name: Diploma Thesis and its Defence					
Course type, sco Course type: Recommended Per week: Per Course methoo	ope and the me course-load (h study period: l: present	thod: iours):				
Number of ECT	S credits: 20					
Recommended	semester/trimes	ster of the cours	e:			
Course level: II.						
Prerequisities:						
Conditions for a	course completi	ion:				
Learning outco	mes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag Slovak, English	e:					
Notes: The course is im BBB or a combi the semester and	plemented by find ned method. Th lupdated contin	ull-time or, if nec e form of teachir uously.	essary, distance r g is specified by	nethod using the the teacher at the	MS Teams or e beginning of	
Course assessm Total number of	Course assessment Total number of assessed students: 185					
Α	В	С	D	Е	FX	
69.19	21.62	5.41	2.7	1.08	0.0	
Provides:						
Date of last mod	lification: 25.01	1.2022				
Approved: prof.	Dr. Yaroslav B	azel', DrSc.				

University: P. J.	Šafá	rik Univers	ity in Košice			
Faculty: Faculty	y of S	cience				
Course ID: ÚC EMST/05	rse ID: ÚCHV/ Course name: Electrophoretic Methods T/05					
Course type, sc Course type: I Recommended Per week: 2 / 1 Course metho	ope a Lectur l cour l Per d: pre	nd the met e / Practice rse-load (h study perio	hod: ours): od: 28 / 14			
Number of EC	ГS cr	edits: 5				
Recommended	seme	ster/trimes	ster of the cours	e: 1., 3.		
Course level: II	•					
Prerequisities:	;					
Conditions for Written control	cours test. V	e completi Written exa	on: mination.			
Learning outco Basic principles	mes: s of el	ectromigrat	tion techniques a	nd their applica	tion in practise.	
Principles and o boundary metho chromatography electric field, the Joule heat, diffi analysis, electro of serum protein	classif od, Fo y (MI e pher usion, phore ns	fication of ocusing me EKC).Capil nomena acco gravity, ac etic separati	electromigration thods, Capillary lary zone electro ompanying separ lsorption, instrur on on a microchip	techniques - Z isotachophores ophoresis (CZI ation in an elect nentation, detec o. Electrophores	Cone electrophores sis (cITP), Micella E). Principle of set tric field - electroos ction, qualitative a sis of nucleic acid,	is, The moving ar electrokinetic eparation in an smotic pressure, and quantitative Elektrophoresis
Recommended 1.Handbook of 2.P.Boček:Basic Chemistry, Czer	litera Capill c cour ch Ac	ture: lary Electro se and Adv ademy of S	phoresis, 2nd Ec anced course of cience, Brno, 19	l., CRC, Boca I Isotachophores 84	Raton, 1997 is,Institute of Anal	lytical
Course languag Slovak	ge:					
Notes:						
Course assessm Total number of	i ent f asses	ssed studen	ts: 20			
А		В	С	D	Е	FX
40.0		60.0	0.0	0.0	0.0	0.0
Provides: doc. I	RNDr.	Katarína F	Reiffová, PhD.		•	·
Date of last mo	difica	tion: 25.01	.2022			
Approved: prof	. Dr. 1	Yaroslav Ba	azel', DrSc.			

University: P. J. Šafá	rik University in Košice				
Faculty: Faculty of S	cience				
Course ID: ÚCHV/ Course name: Environmental Analytical Chemistry AZP1/04					
Course type, scope a Course type: Lectur Recommended cou Per week: 2 / 2 Per Course method: pre	and the method: re / Practice rse-load (hours): study period: 28 / 28 esent				
Number of ECTS cr	edits: 6				
Recommended seme	ester/trimester of the course: 1., 3.				
Course level: II.					
Prerequisities:					

Conditions for course completion:

Active participation in laboratory exercises and seminars; successful completion of the final test. Elaboration of 2 written assignments (or subject project), which will be one of the conditions for participation in the exam. The evaluation of the student's study results within the study of the subject is carried out by a combination of continuous control during the teaching part of the semester (50%) with an examination during the examination period (50%).

Note: Detailed conditions are updated annually within the repository for digital support materials (LMS UPJŠ).

Learning outcomes:

The student acquires knowledge of the methods of environmental analysis.

Brief outline of the course:

Components of the environment: hydrosphere, lithosphere, atmosphere. Analytical methods used in the analysis of environmental samples. Choice of analytical method. Advantages and disadvantages of field methods. Sampling and sample preparation in environmental analysis. Chemical treatment of solid samples. Quality assurance system in environmental analysis laboratories. Good laboratory practice and accreditation of analytical laboratories. Analysis of water, soil, ores, sediments, air and food. Use of spectral, separation and electrochemical methods in environmental analysis. Automatic monitoring. Environmental monitoring.

Recommended literature:

- 1. Tölgyessy J. a kol. Chémia, biológia a toxikológia vody a ovzdušia. Bratislava, VEDA, 1984.
- 2. A.M. Ure, C.M. Davidson, Chemical Speciation in the Environment. Blackie, London 1995.
- 3. J.R. Dean, Extraction Methods for Environmental Analysis. Wiley, 1988.

4. H.D. Belitz, W. Grosch, P. Schieberle, Food Chemistry, Springer Verlag, 2004.

Course language:

Slovak

Notes:

The course is implemented by full-time or, if necessary, distance method using the MS Teams or BBB or a combined method. The form of teaching is specified by the teacher at the beginning of the semester and updated continuously.

Course assessn	ient f assessed studen	ts: 262					
A B C D E FX							
46.18	17.18	18.32	6.87	11.45	0.0		
Provides: prof. Mgr. Vasil' Andruch, DSc., RNDr. Jana Šandrejová, PhD.							
Date of last modification: 22.07.2022							
Approved: prof. Dr. Yaroslav Bazel', DrSc.							

Faculty: Faculty of Science

Course ID: ÚCHV/ **Course name:** Forensic and Clinical Analytical Chemistry SKACH1/06

Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present

Number of ECTS credits: 5

Recommended semester/trimester of the course: 2., 4.

Course level: II.

Prerequisities:

Conditions for course completion:

Elaboration and presentation of a seminar work with an assigned topic. Written examination.

Learning outcomes:

Application of analytical methods in criminology and forensic medicine.

Brief outline of the course:

Criminology section: basic principles and definition of subject. Basic criminalistic categories. Criminalistic track. Criminalistic technology. Criminalistic methods, resources, procedures and operations. Introduction to forensic chemistry. Chemical, physical and physicochemical methods of research tracks and material evidence. Dactyloscopy. Methods of individual identification of persons.

Toxicological part: definition, classification and role of toxicology. Separation methods used in toxicology. Definition of poison. Pharmacokinetics and metabolism. Absorption, distribution, metabolism and elimination. Nox accumulation in the body. Biotransformation of noxy, biotransformation reactions. Poisoning, overdose, toxic levels, nox interaction. General approaches to the treatment of acute poisoning. Laboratory diagnostics of poisoning, drug abuse, sample selection, detection limits and time detection window. Development trends in toxicology - current toxicological methods - advantages and limitations.

Recommended literature:

1.A. Mozayani, C.Noziglia: The Forensic Laboratory Handbook. Procedures and Practice, Springer, 2006

2.H.Duffus, H.G.J.Worth: Fundamental Toxicology, Springer, 2006

3.R.Bertholf, R.Winecker: Chromatographic Methods in Clinical Chemistry and Toxicology, Wiley. 2007

Course language:

Notes:

Course assessm Total number o	nent f assessed studen	ts: 69				
А	В	С	D	Е	FX	
60.87	26.09	13.04	0.0	0.0	0.0	
Provides: doc. RNDr. Katarína Reiffová, PhD.						
Date of last modification: 08.09.2021						
Approved: prof. Dr. Yaroslav Bazel', DrSc.						

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚCHV/ GAC/18	Course name: Green analytical chemistry: miniaturization, automation, sensors
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 1 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 28 / 14 esent
Number of ECTS cr	edits: 5
Recommended seme	ster/trimester of the course:
Course level: II.	
Prerequisities:	
Conditions for cours Active participation is successful completion period. Note: Detailed condit (LMS UPJŠ).	n laboratory exercises or online seminars; elaboration of the subject project; n of the final test. Written test and oral examination during the examination tions are updated annually within the repository for digital support materials
Learning outcomes: Getting information chemistry.	about the green chemistry, miniaturization, and automation in analytical
Brief outline of the c	ourse:
Recommended litera 1. Labuda a kol. Ana Rok vydania: 2014, Počet 2. Current periodical 3. ANASTAS, P., WA University Press. 199 4. KOLEV S.D., Mcl Elsevier Wilson&Wil	hture: lytická chémia. ISBN: 9788022742429, Vydavateľstvo: STU Bratislava, strán: 671 literature. ARNER J. C. Green Chemistry: Theory and Practice. Oxford: Oxford 98. KELVIE I.D. Advences in flow injection analysis and related techniqoues. lson's, USA, 2008.
Course language: Slovak	
Notes: The course is implem BBB or a combined r the semester and upd	nented by full-time or, if necessary, distance method using the MS Teams or method. The form of teaching is specified by the teacher at the beginning of ated continuously.

Course assessm Total number o	nent f assessed studen	ts: 24				
А	В	С	D	Е	FX	
75.0	16.67	8.33	0.0	0.0	0.0	
Provides: prof. Mgr. Vasil' Andruch, DSc.						
Date of last modification: 11.11.2021						
Approved: prof. Dr. Yaroslav Bazel', DrSc.						

University: P. J. Šafárik University in Košice					
Faculty: Faculty of	Science				
Course ID: KF/ DF2p/03	Course name: History of Philosophy 2 (General Introduction)				
Course type, scope Course type: Lectu Recommended cou Per week: 2 / 1 Per Course method: pr	and the method: ure / Practice urse-load (hours): • study period: 28 / 14 resent				
Number of ECTS c	redits: 4				
Recommended sem	ester/trimester of the course:				
Course level: I., II.					

Prerequisities:

Conditions for course completion:

The condition for awarding the evaluation will be the active approach of students to fulfilling their study obligations, independent work with selected philosophical texts in the library, active participation and creative work in seminars. In connection with the possibility of interrupting face-to-face teaching, there will be greater demands on the student's independent study and the processing of professional literature, which will be continuously evaluated, using e-mail to communicate with the teacher, at the end of the semester, preparing and handing in the semester's seminar work by the set date, or also passing a knowledge test - about which the students will be informed in advance in sufficient time.

Learning outcomes:

Deepening knowledge about the development of spiritual culture in the European spiritual space and pointing out the most important sources of this development: (1) ancient philosophy and science, (2) Christianity as the second pillar of Europe, (3) the Renaissance and the emergence of modern science (mathematical natural science) as the third pillar of European development. Development of critical thinking skills, active position in professional (ethics of science), public and private life (ethics of responsibility). Transcending narrowly specialized views of the world.

Brief outline of the course:

Recommended literature:

Antológia z diel filozofov. Predsokratovci a Platon. Zost. J. Martinka. Bratislava: Nakladateľstvo Epocha 1970; Antológia z diel filozofov. Od Aristotela po Plotina. Zost. J. Martinka. Bratislava: Nakladateľstvo Pravda 1972. Predsokratovci a Platon. Antológia z diel filozofov. Zost. J. Martinka. Bratislava: Vydavateľstvo Iris 1998. Od Aristotela po Plotina. Antológia z diel filozofov. Zost. J. Martinka. Bratislava: Vydavateľstvo IRIS 2006. Anzenbacher, A.: Úvod do filozofie. Prel. K. Šprunk. Praha: SPN 1990. Barthes, R.: Mytologie. Prel. J. Fulka. Praha: Dokořán 2004. Bělohradský, V.: Společnost nevolnosti. Eseje z pozdější doby. Praha: SLON 2009. Benjamin, W.: Iluminácie. Prel. A. Bžoch; J. Truhlářová. Bratislava: Kalligram 1999. Borges, J. L.: Borges ústne. Prednášky a eseje. Prel. P. Šišmišová. Bratislava: Kalligram 2005. Cassirer, E.: Esej o človeku. Prel. J. Piaček. Bratislava: Nakladateľstvo Pravda 1977. Debord, G.: Společnost spektáklu. Prel. J. Fulka; P. Siostrzonek. Praha: Nakladatelství :intu: 2007. Farkašová, E.: Na rube plátna. Bratislava: Vydavateľstvo Spolku slovenských spisovateľov 2013.

Feyerabend, P.: Věda jako umění. Prel. P. Kurka. Praha: JEŽEK 2004. Freud, S.: Nepokojenost v kultuře. Prel. L. Hošek. Praha: Hynek 1998. Hadot, P.: Co je antická filosofie. Prel. M. Křížová. Praha: Vyšehrad 2017. Hippokratés: Vybrané spisy. Prel. H. Bartoš; J. Černá; J. Daneš; S. Fischerová. Praha: OIKOYMENH 2012. Husserl, E.: Filosofie jako přísná věda. Prel. A. Novák. Praha: Togga 2013. Kuhn, T. S.: Štruktúra vedeckých revolúcií. Prel. J. Viceník. Bratislava: Nakladateľstvo Pravda 1981. Leško, V., Mihina, F. a kol.: Dejiny filozofie. Bratislava. Iris 1993 Leško, V.: Dejiny filozofie I. Od Tálesa po Galileiho. Prešov: v. n. 2004, 2007. Leško, V.: Dejiny filozofie II. Od Bacona po Nietzscheho. Prešov: v. n. 2008. McLuhan, M.: Jak rozumět médiím. Extenze člověka. Prel. M. Calda. Praha: Mladá fronta 2011. Patočka, J.: Duchovní člověk a intelektuál. In: Patočka, J.: Péče o duši III. Praha: OIKOYMENH 2002, s. 355 - 371. Popper, K. R.: Otevřená společnost a její nepřátelé I. Platónovo zaříkávání. Prel. M. Calda; J. Moural. Praha: OIKOYMENH 2011. Sloterdijk, P.: Kritika cynického rozumu. Prel. M. Szabó. Bratislava: Kalligram 2013. Störig, H.J.: Malé dějiny filozofie. Prel. P. Rezek. Praha: Zvon 1991. Wittgenstein, L.: Filozofické skúmania. Prel. F. Novosád. Bratislava: Nakladateľ stvo Pravda 1979. Wright von, H. G.: Humanizmus ako životný postoj. Prel. M. Žitný. Kalligram 2001. Žižek, S.: Mor fantázií. Prel. M. Gálisová; V. Gális. Bratislava: Kalligram 1998.

Course language:

Notes:								
Course assessment								
Total number o	f assessed studen	ts: 746						
А	В	С	D	Е	FX			
60.59	14.21	12.6	8.58	3.35	0.67			
Provides: doc.]	PhDr. Peter Nezn	ík, CSc.						
Date of last mo	dification: 11.07	.2022						
Approved: prof	f. Dr. Yaroslav Ba	azel', DrSc.						

University: P. J. Šafá	rik University in Košice			
Faculty: Faculty of S	cience			
Course ID: ÚCHV/ Course name: Hydrochemistry CHHS/07				
Course type, scope a Course type: Lectur Recommended cou Per week: 2 / 2 Per Course method: pre	and the method: re / Practice rse-load (hours): study period: 28 / 28 esent			
Number of ECTS cr	edits: 6			
Recommended seme	ster/trimester of the course: 1., 3.			
Course level: II.				

Prerequisities:

Conditions for course completion:

Active participation in laboratory exercises and seminars; successful completion of the final test. Elaboration of 2 written assignments (or subject project), which will be one of the conditions for participation in the exam. The evaluation of the student's study results within the study of the subject is carried out by a combination of continuous control during the teaching part of the semester (50%) with an examination during the examination period (50%).

Note: Detailed conditions are updated annually within the repository for digital support materials (LMS UPJŠ).

Learning outcomes:

The student acquires knowledge of the hydrochemistry.

Brief outline of the course:

European Water Charter. Water consumption. Water supplies. Water cycle in nature. Basics of water chemistry. Water sampling methods. Water analysis strategy. Methods of chemical analysis of water. Test method in water analysis. Automatic monitoring stations and sensors. Physical properties of water. Classification of substances present in natural waters. Types of natural waters and their characteristics. Water quality monitoring in Slovakia. Surface waters, their classification, chemical composition and properties. Pollution and analysis of surface waters. Sediments, their composition and analysis. Mutual influence of waters and sediments. Groundwater, their classification, chemical composition and properties. Groundwater pollution and analysis. Drinking water. Drinking water quality requirements. Physical, sensory and chemical indicators of drinking water quality. Analytical methods used in the analysis of drinking water. Domestic hot water preparation and requirements for its quality. Mineral waters, their classification, chemical composition, properties and analysis. Wastewater, their classification, chemical composition, properties and analysis. Sea water.

Recommended literature:

1. Tölgyessy J. a kol. Chémia, biológia a toxikológia vody a ovzdušia. Bratislava, VEDA, 1984.

2. Kalavská D., Holoubek I. Analýza vôd. Bratislava, Alfa, 1989. 262 s.

3. Handbook of Water and Wastewater Treatment Technologies. Ed. By Nicholas P

Cheremisinoff, Butterworth Heinemann, 2001. 576 p.

4. Principles of Water Quality Control, Ed. by Thy Tebbutt, Butterworth Heinemann, 1997. 288

p.

5. Water Technology. Ed. by N. F. Gray, Butterworth Heinemann, 2005. 600 p.

Course language:

Slovak

Notes:

The course is implemented by full-time or, if necessary, distance method using the MS Teams or BBB or a combined method. The form of teaching is specified by the teacher at the beginning of the semester and updated continuously.

Course assessment

Total number of assessed students: 140

А	В	С	D	Е	FX
32.86	17.14	17.14	16.43	16.43	0.0

Provides: prof. Mgr. Vasil' Andruch, DSc.

Date of last modification: 22.07.2022
University: P. J. Šafárik University in Košice						
Faculty: Faculty of	Faculty: Faculty of Science					
Course ID: KF/ IH2/03	Course name: Idea Humanitas 2 (General Introduction)					
Course type, scope Course type: Prac Recommended co Per week: 2 Per s Course method: p	and the method: tice urse-load (hours): tudy period: 28 resent					
Number of ECTS	eredits: 2					
Recommended sen	nester/trimester of the course: 3.					
Course level: II.						
Prerequisities.						

Conditions for course completion:

100% graded credit: 40% (evaluated participation in seminars, processing of partial seminar work - separate assignment) 60% (final seminar work - student project). In the case of implementation of the classical form of teaching - face-to-face - active participation of the student in the seminar; study and reflection of assigned philosophical texts, attempt to interpret them. In the case of the introduction of distance education (as was the case due to Covid-19), the student will have to actively fulfill tasks of a partial nature, where increased demands will be placed on the student and his independent work with philosophical texts and literature. Tasks will be assigned to the students by the teacher on an ongoing basis. The student must study the assigned philosophical texts, think through and process them, submit them as a seminar paper, i.e. in written form. In both cases, the study of literature is necessary to pass the subject. The conclusion of the subject is the preparation of a seminar paper - the final seminar paper - in the range of at least 10 - 12 pages of A4 (with compliance with the bibliographic standard of the Department of Philosophy (KF) for seminar and qualification papers).

Learning outcomes:

To supplement and expand the interest of natural science students in social science issues related to the issues of the development of philosophy, science and human leadership, which are manifested in the urgent problems of today's world and society. Special emphasis is placed on the formation of humanistic ideas, their origin, transformation and possible pitfalls and risks. In addition to thinking about serious questions of the past and present, it also includes thinking about the present and the current contexts of major topics in philosophy and Western culture in particular. Therefore, the preparation and implementation of a program aimed at cooperation with alternative directions of pedagogy in the conditions of our transforming education system is understood as a practical output.

Brief outline of the course:

The age of the image of the world. Doubt as a principle of philosophy. The emergence of the image of the world (Weltbild); the differences of ancient theoria, medieval scientia, the emergence of mathematical natural science. Science as an operation (Betrieb); institutionalization of science. Philosophy, science and the modern world. The movement of human life: acceptance, defense, freedom as struggle, submission to finitude. The modern world and the search for meaning. Bureaucracy, impersonality, predominance of technocratic approaches. Fatigue as a modern threat

to Europe. The paths to freedom lead through the rediscovery of one's own Self and creativity. The basic condition for the educability of any education is the care of the soul. The crisis of European humanity. Antiquity. Philosophy - the emergence of a special community of people, the beginnings of education - paideia. The winding road of leadership. The origin and birthplace of calculating thinking. Europe and the post-European era. Care of the soul as a basic idea of Patočka's philosophy. The difference in the position of Plato and Democritus in understanding the care of the soul. The idea of caring for the soul and Aristotle.

Recommended literature:

Hadot, P.: What is ancient philosophy. Transl. M. Křížová. Prague: Vyšehrad 2017. Hegel, G.
W. F.: Phenomenology of Spirit. Prague: NČSAV 1960 Husserl, E.: The Crisis of European Humanity and Philosophy. In: Crisis of European sciences and transcendental phenomenology.
Prague: Academie 1996. Mokrejš, A.: Eros as a Theme of Greek Thought. Prague: Triton 2009.
Patočka, J.: Péče o duši I. Prague. OIKOYMENH 1996. Patočka, J.: Care of the soul II. Prague.
OIKOYMENH 1999. Vernant, J.-P.: The beginnings of Greek thought. Prague: OIKOYMENH 1995. Wright von, G.H.: Humanism as a life attitude. Bratislava: Kalligram 2001.

Course language:

Notes:

Course assessment

Total number of assessed students: 12

А	В	С	D	Е	FX
91.67	8.33	0.0	0.0	0.0	0.0

Provides: doc. PhDr. Peter Nezník, CSc.

Date of last modification: 24.08.2022

University: P. J.	Šafárik Univers	ity in Košice							
Faculty: Faculty	of Science								
Course ID: ÚCH KCHR/06	Course ID: ÚCHV/ Course name: Liquid Chromatography KCHR/06								
Course type, sco Course type: L Recommended Per week: 2 / 1 Course method	ope and the met ecture / Practice course-load (h Per study perio l: present	thod: ; ours): od: 28 / 14							
Number of ECT	S credits: 5								
Recommended	semester/trimes	ster of the course	e: 1.						
Course level: II.									
Prerequisities:									
Conditions for o Examination. PPT presentation	course completi	on: dern LC techniqu	ies.						
Learning outcome Advanced know	mes: ledges about nev	w LC methods an	d applications						
Brief outline of Theoretical prin Sample pretreat chromatography	the course: ciples of liquid c ment. New trend c, combined syste	chromatography. ds in HPLC tech ems with LC. App	Selection and o niques - uLC, plications.	ptimisation of ser chiral analysis, n	paration process. nultidimensional				
Recommended Skoog D.A.: Pri Mondello L., Le	literature: nciples of Instru wis A.C., Bartle	mental Analysis. K.D.: Multidime	Saunders, New ensional Chrom	v York 1985. natography, Wiley	, 2002.				
Course languag	e:								
Notes:									
Course assessm Total number of	ent assessed studen	ts: 64							
Α	В	С	D	E	FX				
62.5	29.69	6.25	1.56	0.0	0.0				
Provides: doc. F	NDr. Taťána Go	ondová, CSc.							
Date of last mod	lification: 04.08	3.2022							
Approved: prof.	Dr. Yaroslav Ba	azeľ, DrSc.							

University: P. J. Šafárik University in Košice
Faculty: Faculty of Science
Course ID: ÚCHV/ MOL/06Course name: Molecular Spectrometry
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present
Number of ECTS credits: 6
Recommended semester/trimester of the course: 2.
Course level: II.
Prerequisities:
 Conditions for course completion: Active participation in laboratory exercises and seminars; successful completion of the tests. 1. Participation in laboratory exercises is required. Assigned teacher who leads exercises justifying the student's absence (incapacity for work, family reasons, etc.) for a maximum of two exercises during the semester without substitute supllying. The assigned teacher, who leads the seminar, assesses the preparation of students and their activity in seminars. The student is obliged to prepare a protocol from each laboratory exercise resp. assignment determined by the teacher. Written test. 2. Elaboration of 2 written assignments (or subject project), which will be one of the conditions for participation in the exam. 3. Successful completion of the final written test. The evaluation of continuous control during the teaching part of the semester with an examination during the examination period. To complete the course it will be necessary to achieve at least 51% of the total evaluation. Note: Detailed conditions are updated annually within the repository for digital support materials (LMS UPJŠ).
Learning outcomes: Advanced theoretical and practical knowledge of the modern methods of molecular spectroscopy.
Brief outline of the course: Molekular spectrophotometry (Ultra-Violet, Visible, Infrared) for Chemical Analysis. Fourier Transform Infrared. Raman spectrometry. Microwave spectrometry. Electron Paramegnetic Resonance. Nuclear Magnetic Resonance.
 Recommended literature: 1. L.Koller. Analytická chémia. TU Košice 2002. 2. S.Miertuš a kol. Atómová a molekulová spektroskopia. Alfa. Bratislava. 1991. 3. E.D.Olsen. Modern optical methods of analysis. McGraw-Hill, Inc. 1975. 4. A.Skoog, J.J.Leary. Instrumentelle Analytic. Springer. Berlin-Heidelberg. 1996. 5. Jie Shen, Tao Tang, Li-Lian Wang. Spectral Methods.Springer. Berlin-Heidelberg. 2013. 6. Aktuálna časopisecká literatúra.

Course language:

Slovak

Notes:

The course is implemented by full-time or, if necessary, distance method using the MS Teams or BBB or a combined method. The form of teaching is specified by the teacher at the beginning of the semester and updated continuously.

Course assessment

Total number of assessed students: 73

А	В	С	D	Е	FX
46.58	31.51	17.81	4.11	0.0	0.0

Provides: prof. Dr. Yaroslav Bazel', DrSc., RNDr. Rastislav Serbin, PhD., RNDr. Jana Šandrejová, PhD.

Date of last modification: 20.01.2022

NIDSE INFORMATION I ETTED

	CC	OURSE INFORM	MATION LETT	ER				
University: P. J.	Šafárik Univers	sity in Košice						
Faculty: Faculty	of Science							
Course ID: ÚCH PBACH1/03	Course ID: ÚCHV/ Course name: Practical in Bioanalytical Chemistry BACH1/03							
Course type, sco Course type: Pr Recommended Per week: 3 Per Course method	ppe and the me ractice course-load (h r study period: l: present	thod: ours): 42						
Number of ECT	'S credits: 3							
Recommended s	semester/trimes	ster of the cours	e: 2., 4.	_				
Course level: II.								
Prerequisities:								
Conditions for c Assessment	ourse completi	ion:						
Learning outcom Application of th	nes: neoretical know	ledge to bioanaly	tical laboratory p	practise				
Brief outline of the Analytical cheme and processing radioimunoanaly acid, selected sep	the course: histry in labora of biological rtical methods (paration method	tory medicine, b samples, enzyn RIA), electropho ls for the analysis	basic analysis of thes in bioanalys pretic methods, a s of biomolecules	biological syste sis, immunocher nalytical signific s.	ems, the nature nical methods, ance of nucleic			
 Recommended literature: 1. Mikkelsen S.R, Cortón E.: Bioanalytical Chemistry, Wiley, 2004 2. Wilson I.: Bioanalytical Separations 4, (Handbook of Analytical Separations), Elsevier, 2003 3. Suelter C.H.,Kricka L.J.: Methods of Biochemical Analysis, Vol.37, Bioanalytical Instrumentation, Wiley, 1994 4. Rodriguez-Diaz R., Wehr T., Tuck S.: Analytical Techniques for Biopharmaceutical Development, Marcell Dekker, 2005 								
Course language: Slovak								
Notes: The course is implemented by full-time or, if necessary, distance method using the MS Teams or BBB or a combined method. The form of teaching is specified by the teacher at the beginning of the semester and updated continuously								
Course assessme	ent							
A	B	C	D	Е	FX			
0.0	0.0	0.0	0.0	0.0	0.0			
		l			l			

Provides: doc. RNDr. Katarína Reiffová, PhD.

Date of last modification: 25.01.2022

University: P. J. Šafárik University in Košice
Faculty: Faculty of Science
Course ID: KPPaPZ/PPZMg/12 Course name: Psychology and Health Psychology (Master's Study)
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 1 / 2 Per study period: 14 / 28 Course method: present
Number of ECTS credits: 4
Recommended semester/trimester of the course:
Course level: II.
Prerequisities:
Conditions for the continuous assessment during the semester: Active work (maximum 5 points, 2 absences are allowed). Preparation, presentation and discussion on a selected topic - max. 15 points. Written examination (maximum 30 points). Conditions for admission to the exam: min. 25 points. Conditions for the final assessment: Exam: written form (max. 50 points, min. 25 points) Conditions for successful completion of the course: participation in lessons, fulfillment of assignments and at least 66 points from the overall evaluation. Detailed information in the electronic bulletin board of the course in AIS2. The teaching of the subject will be realized by a combined method.
Learning outcomes: The student will understand the basic concepts and theories of health psychology, can explain salutogenic factors as well as the consequences of risk behavior related to health. He is able to apply the knowledge especially in the field of prevention of burnout syndrome and support of mental health in the work of a teacher.
Brief outline of the course:1 Introduction to health psychology2 Psychoimmunology3 Personality factors and health4 Social support as a protective factor in relation to health5 Subjective well-being6 Stress and stressful situations and ways to manage them7 Burnout syndrome8 Health-promoting behavior, mental hygiene9 Health risk behavior10 School as an important factor of health
Recommended literature: Křivohlavý, J.: Psychologie zdraví. Portál, Praha 2001.

Křivohlavý, J.: Psychologie nemoci. Grada, Praha, 2002.

Křivohlavý, J.: Psychologie moudrosti a dobrého života. Grada, Praha, 2009.

Kebza, V.: Psychosociální determinanty zdraví. Academia, Praha 2005.

Kahneman, D., Diener, E., Schwarz, N.(Eds), Well-Being. The Foundations of Hedonic

Psychology. New York, Russell Sage Foundation, 2003.

Kaplan, R. M.: Zdravie a správanie človeka. SPN, Bratislava 1996.

Sarafino, E. P.: Health Psychology. Biopsychosocial interactions. John Wiley and sons 1994.

Baštecký, J., Šavlík, J., Šimek, J. 1993. Psychosomatická medicína. Praha: Grada

Tress, W., Krusse, J., Ott, J.: Základní psychosomatická péče. Portál, Praha 2008.

Course language:

slovak

Notes:

Course assessment

Total number of assessed students: 226

А	В	С	D	Е	FX
19.47	25.22	25.66	13.27	15.93	0.44

Provides: PhDr. Anna Janovská, PhD., Mgr. Lucia Barbierik, PhD.

Date of last modification: 07.07.2021

University: P. J. Šafárik University in Košice									
Faculty: Faculty of Science									
Course ID: ÚC AVZ1/02	HV/ Course name: Sampling of Analytical Samples								
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present									
Number of EC	TS credits: 5								
Recommended	semester/trim	ester of the cours	e: 2.						
Course level: II	- -								
Prerequisities:									
Conditions for Oral examination	course completion. Sampling of	tion: freal sample. Sucs	sesfull exam is b	y 40% of right an	swer.				
Learning outco	omes:								
Sample, charac samples. Samp pre-concentration Chromatograph Recommended	terisation. Sam ling technique on. Sample st ic sample pre-t literature:	pling and norms s. Sampling labor oring and conse reatment.	effecting sample atory equipmer rvation. Matrix	ing process. Quan at. Sampling tech simplifying, sp	ntity, number of niques. Sample ecific analysis.				
 O. Stoeppler: Sampling and Sample Preparation Practical Guide for Analytical Chemists. Academic Press, London, 2002. E. P. Popek: Sampling and Analysis of Environmental Chemical Pollutants. Elsevier Science, San Diego, 2003. 									
Course languag	ge:								
Notes:									
Course assessment Total number of assessed students: 204									
А	В	С	D	Е	FX				
60.78	60.78 20.59 13.73 3.92 0.98 0.0								
Provides: prof.	RNDr. Andrej	Oriňak, PhD., RN	Dr. Ján Macko,	PhD.					
Date of last mo	dification: 24.	11.2021							
Approved: prof	f. Dr. Yaroslav	Bazel', DrSc.							

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚTVŠ/ ÚTVŠ/CM/13	Course name: Seaside Aerobic Exercise
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	nd the method: ce rse-load (hours): dy period: 28 esent
Number of ECTS cr	edits: 2
Recommended seme	ster/trimester of the course:
Course level: I., II.	
Prerequisities:	
Conditions for course Completion: passed Condition for success - active participation - effective performan	se completion: sful course completion: in line with the study rule of procedure and course guidelines ce of all tasks- aerobics, water exercise, yoga, Pilates and others
Learning outcomes: Content standard: The student demonstr course syllabus and r Performance standard Upon completion of r - perform basic aerob - conduct verbal and - organise and manag	rates relevant knowledge and skills in the field, which content is defined in the ecommended literature. d: the course students are able to meet the performance standard and: bics steps and basics of health exercises, non-verbal communication with clients during exercise, ge the process of physical recreation in leisure time
 Brief outline of the c Brief outline of the c Basic aerobics – lo Basics of aqua fitm Basics of Pilates Health exercises Bodyweight exercises Bodyweight exercises Swimming Relaxing yoga exee Power yoga Yoga relaxation Final assessment Students can engage volleyball, football, t 	ourse: ow impact aerobics, high impact aerobics, basic steps and cuing ess ises rcises in different sport activities offered by the sea resort – swimming, rafting, able tennis, tennis and other water sports in particular.
Recommended litera	nture: 006. Fitness jóga. Praha: Grada. 167 s.

 ŽECHOVSKÁ, I., MILEROVÁ, H., NOVOTNÁ, V. Aqua-fitness. Praha: Grada. 136 s. EVANS, M., HUDSON, J., TUCKER, P. 2001. Umění harmonie: meditace, jóga, tai-či, strečink. 192 s. JARKOVSKÁ, H., JARKOVSKÁ, M. 2005. Posilováni s vlastním tělem 417 krát jinak. Praha: Grada. 209 s. KOVAŘÍKOVÁ, K. 2017. Aerobik a fitness. Karolium, 130 s. 					
Course language: Slovak language					
Notes:					
Course assessment Total number of assessed students: 54					
abs	n				
11.11 88.89					
Provides: Mgr. Agata Dorota Horbacz, PhD.					
Date of last modification: 29.03.2022					
Approved: prof. Dr. Yaroslav Bazel', DrSc.					

University: P. J.	Šafárik Univers	ity in Košice						
Faculty: Faculty	of Science							
Course ID: ÚCH VKAC/19	urse ID: ÚCHV/ Course name: Selected chapters of analytical chemistry							
Course type, sco Course type: Le Recommended Per week: 2 / 1 Course method	pe and the met ecture / Practice course-load (h Per study peri- : present	thod: ; ours): od: 28 / 14						
Number of ECT	S credits: 5							
Recommended se	emester/trimes	ster of the cours	e: 2., 4.					
Course level: II.								
Prerequisities:								
Active participati assignments (or exam. The evalu- by a combination examination duri Note: Detailed co (LMS UPJŠ). Learning outcon	ion in seminars subject project ation of the stu n of continuous ng the examina onditions are up nes:	; successful com c), which will be ident's study results control during to tion period (50% odated annually v	pletion of the f one of the co lts within the s the teaching pa). vithin the repos	inal test. Elaborat onditions for part study of the subject rt of the semester itory for digital su	ion of 2 written icipation in the ct is carried out · (50%) with an upport materials			
The student will bachelor's studies	expand the k	nowledge acquir	red in the field	d of analytical ch	nemistry during			
Brief outline of t	he course:							
Recommended li 1. Current scienti	terature: fic literature.							
Course language Slovak	:							
Notes: The course is imp BBB or a combin the semester and	plemented by fu led method. Th updated contin	Ill-time or, if nec e form of teachin uously.	essary, distance g is specified b	method using the y the teacher at the	MS Teams or e beginning of			
Course assessme Total number of a	nt assessed studen	ts: 16						
A	В	С	D	Е	FX			
56.25	18.75	25.0	0.0	0.0	0.0			
Provides: prof. N	lgr. Vasil' Andr	uch, DSc.		·				
Date of last mod	ification: 22.07	7.2022						

University: P. J. Šafárik University in Košice							
Faculty: Faculty of Science							
Course ID: ÚCHV/ Course name: Semestral Project I SP1/14							
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present							
Number of ECTS credits: 4							
Recommended semester/trimester of the course: 1.							
Course level: II.							
Prerequisities:							
Conditions for course completion: Elaboration and submission of a semester project based on the assignment of the teacher. Its content is an independent search of scientific information in scientometric databases, subsequent study of original papers, its processing and presentation of the results of literare search. After a successful presentation and answering any comments, the teacher will give the evaluation "completed".							
Learning outcomes: Mastering the independent and creative processing of the assigned topic using the latest scientific literature.							
 Brief outline of the course: WoS and Scopus scientific databases, resp. other, by the teacher suggested, accessible databases. Ways to search these databases. Specific search accodring to the assignement of the teacher. Selection of obtained results. Finding relevant original articles. Study of selected papers. Processing of obtained information into presentation. Presentation of the results. 							
Recommended literature: WoS and Scopus scientific databases, Science direct and other accessible websites of scientific literature publishers. Current scientific papers.							
Course language: Slovak, English.							
Notes:							

Course assessment Total number of assessed students: 213							
abs	n						
99.53	0.47						
Provides: RNDr. Rastislav Serbin, PhD., prof. RNDr. Mária Kožurková, CSc., prof. Dr. Yaroslav Bazel', DrSc., prof. RNDr. Jozef Gonda, DrSc., doc. RNDr. Ján Imrich, CSc., doc. RNDr. Miroslava Martinková, PhD., doc. RNDr. Erik Sedlák, DrSc., RNDr. Nataša Tomášková, PhD., doc. RNDr. Viktor Víglaský, PhD., doc. RNDr. Rastislav Varhač, PhD., RNDr. Danica Sabolová, PhD., RNDr. Jana Šandrejová, PhD., doc. RNDr. Ivan Potočňák, PhD., RNDr. Marián Fabián, CSc., doc. RNDr. Miroslav Almáši, PhD., RNDr. Miroslava Matiková Maľarová, PhD., doc. RNDr. Zuzana Vargová, Ph.D., RNDr. Martin Vavra, PhD., prof. RNDr. Juraj Černák, DrSc., doc. RNDr. Juraj Kuchár, PhD., prof. RNDr. Vladimír Zeleňák, DrSc.							

University: P. J. Šafá	University: P. J. Šafárik University in Košice					
Faculty: Faculty of S	cience					
Course ID: ÚCHV/ SPII/14	Course name: Semestral P	Project II				
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present						
Number of ECTS cr	edits: 6					
Recommended seme	ster/trimester of the cours	e: 3.				
Course level: II.						
Prerequisities:						
Conditions for cours Semestral project.	e completion:					
Learning outcomes: Work in the laborator	ry and creative processing of	f the assigned topic.				
Brief outline of the c	ourse:					
Recommended litera According to the reco Current journal litera	Recommended literature: According to the recommendations of project supervisors. Current journal literature.					
Course language:						
Notes:						
Course assessment Total number of asse	Course assessment Total number of assessed students: 67					
	abs	n				
100.0 0.0						
Provides: prof. Dr. Yaroslav Bazel', DrSc., doc. RNDr. Taťána Gondová, CSc., doc. RNDr. Katarína Reiffová, PhD., doc. Ing. Viera Vojteková, PhD., prof. Mgr. Vasil' Andruch, DSc., prof. RNDr. Renáta Oriňaková, DrSc., RNDr. Rastislav Serbin, PhD., RNDr. Jana Šandrejová, PhD.						
Date of last modifica	tion: 06.10.2021					
Approved: prof. Dr.	Yaroslav Bazel', DrSc.					

University: P. J. Šafárik University in Košice								
Faculty: Faculty of Science								
Course ID: ÚCHV/ Course name: Semestral Project III SPIII/15								
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present								
Number of ECTS cr	edits: 6							
Recommended seme	ster/trimester of the cours	e: 4.						
Course level: II.								
Prerequisities:								
Conditions for cours Mastering independe scientific experiment the results. Submission	e completion: ent and creative work con- s in the laboratory on the ba on of the semester project.	cerning the preparation and implementation of sis of the assigned topic and the ability to present						
Learning outcomes: Work in the laborator	y and creative processing or	f the assigned topic.						
Brief outline of the course: Selected experimental topics prepared within the diploma theses. Processing of results in the form of a comprehensive material and its presentation in departmental seminars or student scientific conferences								
Recommended literature: According to the recommendations of project supervisors. Current journal literature.								
Course language: Slovak, english.	Course language: Slovak, english.							
Notes:								
Course assessment Total number of asses	ssed students: 54							
	abs	n						
	100.0 0.0							
Provides: prof. Mgr. Vasil' Andruch, DSc., prof. Dr. Yaroslav Bazel', DrSc., doc. Ing. Viera Vojteková, PhD., doc. RNDr. Taťána Gondová, CSc., doc. RNDr. Katarína Reiffová, PhD., RNDr. Jana Šandrejová, PhD., RNDr. Rastislav Serbin, PhD.								
Date of last modification: 24.01.2022								
Approved: prof. Dr. Yaroslav Bazel', DrSc.								

University: P. J	. Šafárik Univers	ity in Košice			
Faculty: Facult	y of Science				
Course ID: ÚC SDP/03	HV/ Course na	me: Seminar to	Diploma Thesis		
Course type, sc Course type: I Recommended Per week: 2 Pe Course metho	ope and the met Practice d course-load (h er study period: d: present	thod: ours): 28			
Number of EC	TS credits: 2				
Recommended	semester/trimes	ster of the cours	e: 3.		
Course level: II	•				
Prerequisities:					
Active participation for serious reast completing the student.	ation in all semir cons (e.g. illness) course, the teach	hars. In case of n , fulfillment of a her will give an e	on-participation Iternative criteri valuation based	in a maximum a assigned by th on the activity a	of two seminars ne teacher. After nd results of the
Learning outco After completing emphasis on acc	mes: ng the course, the curate expression	e student is able t and adherence t	o work independ o ethical princip	lently in writing les.	a thesis with an
Brief outline of General princip phenomenon. P of citing literatu	the course: les of thesis writi rocessing of expo ure, preparation f	ng, formal require erimental results for the defense of	ements of diplom in the form of ta the diploma thes	na thesis, plagiari bles, figures and sis.	sm as a negative graphs. Method
Recommended As recommended	literature: ed by the teacher				
Course languag Slovak, English	ge:				
Notes:					
Course assessm Total number of	nent f assessed studen	ts: 377			
А	В	С	D	Е	FX
96.02	1.86	1.06	0.27	0.27	0.53
Provides: doc. l doc. RNDr. Ján DrSc., prof. RN Vojteková, PhD	RNDr. Andrea St Imrich, CSc., pro Dr. Andrej Oriňa ., doc. RNDr. Ka	raková Fedorkov of. RNDr. Katarír k, PhD., prof. RN tarína Reiffová, I	á, PhD., prof. R a Györyová, Dr NDr. Jozef Gond PhD., doc. RNDr	NDr. Mária Kožu Sc., prof. RNDr. a, DrSc., doc. Ing : Taťána Gondov	urková, CSc., Juraj Černák, g. Viera vá, CSc., doc.

RNDr. Mária Reháková, CSc., doc. RNDr. Miroslava Martinková, PhD., doc. RNDr. Zuzana Vargová, Ph.D., prof. RNDr. Vladimír Zeleňák, DrSc., doc. RNDr. Ivan Potočňák, PhD., prof.

RNDr. Renáta Oriňaková, DrSc., RNDr. Dušan Koščík, CSc., RNDr. Andrea Morovská Turoňová, PhD., RNDr. Slávka Hamul'aková, PhD., doc. RNDr. Ladislav Janovec, PhD., RNDr. Zuzana Kudličková, PhD., prof. Mgr. Vasil' Andruch, DSc., prof. Dr. Yaroslav Bazel', DrSc., doc. RNDr. Miroslav Almáši, PhD., RNDr. Jana Šandrejová, PhD., RNDr. Rastislav Serbin, PhD.

Date of last modification: 25.01.2022

University: P. J. Šafá	University: P. J. Šafárik University in Košice					
Faculty: Faculty of S	cience					
Course ID: KPPaPZ/SPVKE/07	Course ID: Course name: Social-Psychological Training of Coping with Critical Life Situations					
Course type, scope a Course type: Practic Recommended course Per week: 2 Per stu Course method: pre	Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of ECTS cr	edits: 2					
Recommended seme	ster/trimes	ster of the course: 2.				
Course level: II.						
Prerequisities:						
Conditions for cours	e completi	on:				
Learning outcomes:						
Brief outline of the c	ourse:					
Recommended litera	iture:					
Course language:						
Notes:						
Course assessment Total number of asses	Course assessment Total number of assessed students: 126					
abs	abs n z					
97.62 2.38 0.0						
Provides: Mgr. Ondrej Kalina, PhD.						
Date of last modification: 24.06.2022						
Approved: prof. Dr.	Yaroslav Ba	azel', DrSc.				

University: P. J.	University: P. J. Šafárik University in Košice							
Faculty: Faculty	of Science							
Course ID: ÚCH VSE1a/04	HV/ Course na	ame: Special Sen	ninar					
Course type, sco Course type: P Recommended Per week: 2 Pe Course method	Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present							
Number of ECT	S credits: 2							
Recommended s	semester/trimes	ster of the cours	e: 1.					
Course level: II.								
Prerequisities:								
Conditions for a	course completi	on:						
Learning outcom	mes:							
Brief outline of Actual problems students theses.	the course: s of physical and	analytical chem	istry which are co	onnected with the	e solution of the			
Recommended	literature:							
Course languag	e:							
Notes:								
Course assessme Total number of	Course assessment Total number of assessed students: 57							
A	В	С	D	Е	FX			
91.23	3.51	1.75	1.75	1.75	0.0			
Provides: prof. I Taťána Gondová RNDr. Andrea S Oriňaková, DrSc RNDr. Jana Šanc	Dr. Yaroslav Baz , CSc., doc. Ing. traková Fedorko ., RNDr. Andrea lrejová, PhD.	zeľ, DrSc., doc. F Viera Vojteková ová, PhD., prof. F a Morovská Turo	RNDr. Katarína R , PhD., prof. Mg RNDr. Andrej Ori ňová, PhD., RNI	eiffová, PhD., do r. Vasiľ Andruch, ňak, PhD., prof. Dr. Rastislav Sert	oc. RNDr. , DSc., doc. RNDr. Renáta oin, PhD.,			

University: P. J. S	Šafárik Univers	ity in Košice				
Faculty: Faculty	of Science					
Course ID: ÚCH VSE1b/04	V/ Course na	me: Special Sen	ninar			
Course type, sco Course type: Pr Recommended Per week: 2 Per Course method Number of ECT	pe and the met actice course-load (h study period: present S credits: 2	thod: ours): 28				
Recommended s	emester/trimes	ster of the cours	e: 2.			
Course level: II.						
Prerequisities:						
Conditions for co	ourse completi	on:				
Learning outcon	nes:					
Brief outline of t Actual problems students theses.	he course: of physical and	analytical chem	istry which are co	onnected with the	e solution of the	
Recommended li	iterature:			=		
Course language						
Notes:	,					
Course assessme Total number of a	Course assessment Total number of assessed students: 59					
A	В	С	D	Е	FX	
93.22	1.69	3.39	1.69	0.0	0.0	
Provides: prof. D RNDr. Andrej Or PhD., prof. RNDr Andruch, DSc., R Jana Šandrejová,	or. Yaroslav Baz iňak, PhD., doc :. Renáta Oriňak NDr. Andrea M PhD. ification: 07.11	zeľ, DrSc., doc. F . Ing. Viera Vojta cová, DrSc., doc. Iorovská Turoňo 2022	NDr. Andrea Str ková, PhD., doc. RNDr. Taťána G vá, PhD., RNDr.	aková Fedorkova RNDr. Katarína Jondová, CSc., pr Rastislav Serbin	á, PhD., prof. Reiffová, rof. Mgr. Vasiľ , PhD., RNDr.	

University: P. J. Šafá	rik University in Košice				
Faculty: Faculty of S	cience				
Course ID: ÚTVŠ/ TVa/11	Course ID: ÚTVŠ/ Course name: Sports Activities I. TVa/11				
Course type, scope a Course type: Practi Recommended cou Per week: 2 Per stu Course method: pro	and the method: ce rse-load (hours): ady period: 28 esent				
Number of ECTS cr	redits: 2				
Recommended seme	ester/trimester of the course: 1.				
Course level: I., I.II.,	Course level: I., I.II., II.				
Prerequisities:					

Conditions for course completion:

Min. 80% of active participation in classes.

Learning outcomes:

Sports activities in all their forms prepare university students for their professional and personal life. They have a great impact on physical fitness and performance. Specialization in sports activities enables students to strengthen their relationship towards the selected sport in which they also improve.

Brief outline of the course:

Brief outline of the course:

Within the optional subject, the Institute of Physical Education and Sports of Pavol Jozef Šafárik University provides for students the following sports activities: aerobics, aikido, basketball, badminton, body form, bouldering, floorball, yoga, power yoga, pilates, swimming, body-building, indoor football, S-M systems, step aerobics, table tennis, tennis, volleyball and chess.

In the first two semesters of the first level of education students will master basic characteristics and particularities of individual sports, motor skills, game activities, they will improve level of their physical condition, coordination abilities, physical performance, and motor performance fitness. Last but not least, the important role of sports activities is to eliminate swimming illiteracy and by means of a special program of medical physical education to influence and mitigate unfitness. In addition to these sports, the Institute offers for those who are interested winter and summer physical education trainings with an attractive program and organises various competitions, either at the premises of the faculty or University or competitions with national or international participation.

Recommended literature:

BENCE, M. et al. 2005. Plávanie. Banská Bystrica: FHV UMB. 198s. ISBN 80-8083-140-8. [online] Dostupné na: https://www.ff.umb.sk/app/cmsFile.php?disposition=a&ID=571 BUZKOVÁ, K. 2006. Fitness jóga, harmonické cvičení těla I duše. Praha: Grada. ISBN 8024715252.

JARKOVSKÁ, H, JARKOVSKÁ, M. 2005. Posilování s vlastním tělem 417 krát jinak. Praha: Grada. ISBN 9788024757308.

KAČÁNI, L. 2002. Futbal:Tréning hrou. Bratislava: Peter Mačura – PEEM. 278s. ISBN 8089197027.

KRESTA, J. 2009. Futsal.Praha: Grada Publishing, a.s. 112s. ISBN 9788024725345. LAWRENCE, G. 2019. Power jóga nejen pro sportovce. Brno: CPress. ISBN 9788026427902. SNER, Wolfgang. 2004. Posilování ve fitness. České Budějovice: Kopp. ISBN 8072322141. STACKEOVÁ, D. 2014. Fitness programy z pohledu kinantropologie. Praha: Galén. ISBN 9788074921155.

VOMÁČKO, S. BOŠTÍKOVÁ, S. 2003. Lezení na umělých stěnách. Praha: Grada. 129s. ISBN 8024721743.

Course language:

Slovak language

Notes:

Course assessment

Total number of assessed students: 14548

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
86.46	0.07	0.0	0.0	0.0	0.05	8.41	5.02

Provides: Mgr. Agata Dorota Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., MPH, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Marcel Čurgali, Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD., Mgr. Richard Melichar, Mgr. Petra Tomková, PhD., MUDr. Peter Dombrovský

Date of last modification: 29.03.2022

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚTVŠ/ TVb/11	Course name: Sports Activities II.
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	nd the method: ce rse-load (hours): idy period: 28 esent
Number of ECTS cr	edits: 2
Recommended seme	ster/trimester of the course: 2.
Course level: I., I.II.,	II.
Prerequisities:	
Conditions for cours active participation in	are completion: n classes - min. 80%.
Learning outcomes: Sports activities in all They have a great im enables students to s improve.	their forms prepare university students for their professional and personal life. pact on physical fitness and performance. Specialization in sports activities strengthen their relationship towards the selected sport in which they also
Brief outline of the c Within the optional s University provides badminton, body form indoor football, S-M In the first two seme and particularities of physical condition, c Last but not least, the means of a special pr In addition to these physical education tra the premises of the fac	ourse: ubject, the Institute of Physical Education and Sports of Pavol Jozef Šafárik for students the following sports activities: aerobics, aikido, basketball, n, bouldering, floorball, yoga, power yoga, pilates, swimming, body-building, systems, step aerobics, table tennis, tennis, volleyball and chess. sters of the first level of education students will master basic characteristics individual sports, motor skills, game activities, they will improve level of their oordination abilities, physical performance, and motor performance fitness. important role of sports activities is to eliminate swimming illiteracy and by ogram of medical physical education to influence and mitigate unfitness. sports, the Institute offers for those who are interested winter and summer ainings with an attractive program and organises various competitions, either at culty or University or competitions with national or international participation.
Recommended litera BENCE, M. et al. 200 [online] Dostupné na BUZKOVÁ, K. 2006 8024715252	i ture: 05. Plávanie. Banská Bystrica: FHV UMB. 198s. ISBN 80-8083-140-8. : https://www.ff.umb.sk/app/cmsFile.php?disposition=a&ID=571 5. Fitness jóga, harmonické cvičení těla I duše. Praha: Grada. ISBN

JARKOVSKÁ, H, JARKOVSKÁ, M. 2005. Posilování s vlastním tělem 417 krát jinak. Praha: Grada. ISBN 9788024757308.

KAČÁNI, L. 2002. Futbal:Tréning hrou. Bratislava: Peter Mačura – PEEM. 278s. ISBN 8089197027.

KRESTA, J. 2009. Futsal.Praha: Grada Publishing, a.s. 112s. ISBN 9788024725345.

LAWRENCE, G. 2019. Power jóga nejen pro sportovce. Brno: CPress. ISBN 9788026427902. SNER, Wolfgang. 2004. Posilování ve fitness. České Budějovice: Kopp. ISBN 8072322141. STACKEOVÁ, D. 2014. Fitness programy z pohledu kinantropologie. Praha: Galén. ISBN 9788074921155.

VOMÁČKO, S. BOŠTÍKOVÁ, S. 2003. Lezení na umělých stěnách. Praha: Grada. 129s. ISBN 8024721743.

Course language:

Slovak language

Notes:

Course assessment

Total number of assessed students: 13211

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
84.35	0.51	0.02	0.0	0.0	0.05	10.78	4.29

Provides: Mgr. Agata Dorota Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., MPH, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Marcel Čurgali, Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD., Mgr. Richard Melichar, Mgr. Petra Tomková, PhD., MUDr. Peter Dombrovský

Date of last modification: 29.03.2022

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚTVŠ/ TVc/11	Course name: Sports Activities III.
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	nd the method: ce rse-load (hours): idy period: 28 esent
Pasammandad sama	star/trimester of the courses 2
Course level. I I II	II
Prerequisities.	11.
Learning outcomes: Sports activities in all They have a great im enables students to s improve.	their forms prepare university students for their professional and personal life. pact on physical fitness and performance. Specialization in sports activities strengthen their relationship towards the selected sport in which they also
Brief outline of the c Within the optional s University provides badminton, body form indoor football, S-M In the first two seme and particularities of physical condition, c Last but not least, the means of a special pr In addition to these physical education tra the premises of the far Recommended litera	nourse: ubject, the Institute of Physical Education and Sports of Pavol Jozef Šafárik for students the following sports activities: aerobics, aikido, basketball, n, bouldering, floorball, yoga, power yoga, pilates, swimming, body-building, systems, step aerobics, table tennis, tennis, volleyball and chess. sters of the first level of education students will master basic characteristics individual sports, motor skills, game activities, they will improve level of their coordination abilities, physical performance, and motor performance fitness. e important role of sports activities is to eliminate swimming illiteracy and by rogram of medical physical education to influence and mitigate unfitness. sports, the Institute offers for those who are interested winter and summer ainings with an attractive program and organises various competitions, either at culty or University or competitions with national or international participation. ature:
BENCE, M. et al. 20 [online] Dostupné na	05. Plávanie. Banská Bystrica: FHV UMB. 198s. ISBN 80-8083-140-8. :: https://www.ff.umb.sk/app/cmsFile.php?disposition=a&ID=571

BUZKOVÁ, K. 2006. Fitness jóga, harmonické cvičení těla I duše. Praha: Grada. ISBN 8024715252.

JARKOVSKÁ, H, JARKOVSKÁ, M. 2005. Posilování s vlastním tělem 417 krát jinak. Praha: Grada. ISBN 9788024757308.

KAČÁNI, L. 2002. Futbal:Tréning hrou. Bratislava: Peter Mačura – PEEM. 278s. ISBN 8089197027.

KRESTA, J. 2009. Futsal.Praha: Grada Publishing, a.s. 112s. ISBN 9788024725345.

LAWRENCE, G. 2019. Power jóga nejen pro sportovce. Brno: CPress. ISBN 9788026427902. SNER, Wolfgang. 2004. Posilování ve fitness. České Budějovice: Kopp. ISBN 8072322141. STACKEOVÁ, D. 2014. Fitness programy z pohledu kinantropologie. Praha: Galén. ISBN 9788074921155.

VOMÁČKO, S. BOŠTÍKOVÁ, S. 2003. Lezení na umělých stěnách. Praha: Grada. 129s. ISBN 8024721743.

Course language:

Slovak language

Notes:

Course assessment

Total number of assessed students: 8879

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
88.62	0.07	0.01	0.0	0.0	0.02	4.25	7.03

Provides: Mgr. Marcel Čurgali, Mgr. Agata Dorota Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., MPH, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD., Mgr. Richard Melichar, Mgr. Petra Tomková, PhD., MUDr. Peter Dombrovský

Date of last modification: 29.03.2022

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	
Course ID: ÚTVŠ/ TVd/11	Course name: Sports Activities IV.
Course type, scope a Course type: Practic Recommended cou Per week: 2 Per stu Course method: pre	and the method: ce rse-load (hours): ady period: 28 esent
Number of ECTS cr	edits: 2
Recommended seme	ster/trimester of the course: 4.
Course level: I., I.II.,	II.
Prerequisities:	
Conditions for cours min. 80% of active p	articipation in classes
Learning outcomes: Sports activities in all They have a great in enables students to s improve.	their forms prepare university students for their professional and personal life. pact on physical fitness and performance. Specialization in sports activities strengthen their relationship towards the selected sport in which they also
Brief outline of the c Within the optional s University provides badminton, body forr indoor football, S-M In the first two seme and particularities of physical condition, c Last but not least, the means of a special pr In addition to these physical education tra the premises of the fa	ourse: ubject, the Institute of Physical Education and Sports of Pavol Jozef Šafárik for students the following sports activities: aerobics, aikido, basketball, n, bouldering, floorball, yoga, power yoga, pilates, swimming, body-building, systems, step aerobics, table tennis, tennis, volleyball and chess. sters of the first level of education students will master basic characteristics individual sports, motor skills, game activities, they will improve level of their coordination abilities, physical performance, and motor performance fitness. e important role of sports activities is to eliminate swimming illiteracy and by rogram of medical physical education to influence and mitigate unfitness. sports, the Institute offers for those who are interested winter and summer ainings with an attractive program and organises various competitions, either at culty or University or competitions with national or international participation.
Recommended litera BENCE, M. et al. 20	iture: 05. Plávanie. Banská Bystrica: FHV UMB. 198s. ISBN 80-8083-140-8. 1. https://www.ff.umb.sk/app/cmsEile.php?disposition=2&UD=571

[online] Dostupné na: https://www.ff.umb.sk/app/cmsFile.php?disposition=a&ID=571 BUZKOVÁ, K. 2006. Fitness jóga, harmonické cvičení těla I duše. Praha: Grada. ISBN 8024715252.

JARKOVSKÁ, H, JARKOVSKÁ, M. 2005. Posilování s vlastním tělem 417 krát jinak. Praha: Grada. ISBN 9788024757308.

KAČÁNI, L. 2002. Futbal:Tréning hrou. Bratislava: Peter Mačura – PEEM. 278s. ISBN 8089197027.

KRESTA, J. 2009. Futsal.Praha: Grada Publishing, a.s. 112s. ISBN 9788024725345.

LAWRENCE, G. 2019. Power jóga nejen pro sportovce. Brno: CPress. ISBN 9788026427902. SNER, Wolfgang. 2004. Posilování ve fitness. České Budějovice: Kopp. ISBN 8072322141. STACKEOVÁ, D. 2014. Fitness programy z pohledu kinantropologie. Praha: Galén. ISBN 9788074921155.

VOMÁČKO, S. BOŠTÍKOVÁ, S. 2003. Lezení na umělých stěnách. Praha: Grada. 129s. ISBN 8024721743.

Course language:

Slovak language

Notes:

Course assessment

Total number of assessed students: 5628

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
82.66	0.28	0.04	0.0	0.0	0.0	8.05	8.97

Provides: Mgr. Marcel Čurgali, Mgr. Agata Dorota Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., MPH, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD., Mgr. Richard Melichar, Mgr. Petra Tomková, PhD., MUDr. Peter Dombrovský

Date of last modification: 29.03.2022

University: P. J. Šafá	University: P. J. Šafárik University in Košice						
Faculty: Faculty of S	cience						
Course ID: ÚCHV/ SVK1/00	Course name: Students Sc	ientific Conference (Presentation)					
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): ly period: esent						
Number of ECTS cr	Number of ECTS credits: 4						
Recommended seme	Recommended semester/trimester of the course: 2., 4.						
Course level: II.							
Prerequisities:							
Conditions for course completion:							
Learning outcomes:							
Brief outline of the course:							
Recommended litera	iture:						
Course language:							
Notes:							
Course assessment Total number of asses	ssed students: 26						
	abs n						
100.0 0.0							
Provides: prof. RNDr. Andrej Oriňak, PhD., prof. RNDr. Renáta Oriňaková, DrSc., prof. Dr. Yaroslav Bazel', DrSc.							
Date of last modification: 01.12.2021							
Approved: prof. Dr. Yaroslav Bazel', DrSc.							

University: P. J. Šafán	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚTVŠ/ LKSp/13	Course name: Summer Course-Rafting of TISA River
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	nd the method: se se-load (hours): dy period: 28 sent
Number of ECTS cro	edits: 2
Recommended semes	ster/trimester of the course:
Course level: I., II.	
Prerequisities:	
Conditions for cours Completion: passed Condition for success - active participation - effective performance paddling	e completion: ful course completion: in line with the study rule of procedure and course guidelines ce of all tasks: carrying a canoe, entering and exiting a canoe, righting a canoe,
Learning outcomes: Content standard: The student demonstr course syllabus and re Performance standard Upon completion of t - implement the acqui - implement basic ski - determine the right s - prepare a suitable m	ates relevant knowledge and skills in the field, which content is defined in the ecommended literature. I: he course students are able to meet the performance standard and: ired knowledge in different situations and practice, Ils to manipulate a canoe on a waterway, spot for camping, aterial and equipment for camping.
 Brief outline of the constraints Safety rules for rafing Setting up a crew Practical skills traints Canoe lifting and constraints Canoe lifting and constraints Canoe lifting and constraints Putting the canoe in the canoe Exiting the canoe on the pry stroke (on b) The draw stroke 	burse: burse: liculty of waterways ting hing using an empty canoe arrying h the water without a shore contact e ut of the water fast waterways)

11. Capsizing	
12. Commands	
Recommended literature: 1. JUNGER, J. et al. Turistika a športy v prí 8080680973. Internetové zdroje: 1. STEJSKAL, T. Vodná turistika. Prešov: P Dostupné na: https://ulozto.sk/tamhle/Ukyxe ZGDjBGR2AQtkAzVkAzLkLJWuLwWxZ	rode. Prešov: FHPV PU v Prešove. 2002. ISBN PU v Prešove. 1999. Q2IYF8qh/name/Nahrane-7-5-2021-v-14-46-39#! 2ukBRLjnGqSomICMmOyZN==
Course language: Slovak language	
Notes:	
Course assessment Total number of assessed students: 209	
abs	n
37.32	62.68
Provides: Mgr. Dávid Kaško, PhD.	· · · ·
Date of last modification: 29.03.2022	
Approved: prof. Dr. Yaroslav Bazel', DrSc.	

University. F. J. Salarik University in Rusice	University	P. J.	Šafárik	University in	Nošice
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Faculty: Faculty of Science

Course ID: ÚCHV/	Course name: Water Pretreatment
ATV1/04	

Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours):

Per week: 2 / 2 Per study period: 28 / 28

Course method: present

Number of ECTS credits: 6

Recommended semester/trimester of the course: 2., 4.

Course level: II.

Prerequisities:

Conditions for course completion:

Active participation in laboratory exercises and seminars; successful completion of the final test. Elaboration of 2 written assignments (or project), which will be one of the conditions for participation in the exam. Written test (50%) and oral examination (50%) during the examination period.

Participation in excursions to the municipal wastewater treatment plant and drinking water treatment plant.

Note: Detailed conditions are updated annually within the repository for digital support materials (LMS UPJŠ).

Learning outcomes:

The student acquires knowledge of the methods of water pretreatment.

Brief outline of the course:

Classification of technological processes of water treatment according to phase processes, nature of the process, quality of treated water. Selection of resources for the supply of the population. Requirements for the treatment process. Water purification. Coagulation. Influence of various factors on coagulation. Water disinfection. Water fluoridation. Water softening methods. Water demineralization. Methods for removing Fe and Mn. Drinking water treatment plant. Scheme. Brief characteristics of individual stages of adjustment. Technological schemes and equipment.

Composition and properties of wastewater. Wastewater classification. Classification of industrial wastewaters. Stages of industrial wastewater treatment. Municipal wastewater treatment plant. Scheme. Technological process of wastewater treatment. Brief characteristics of individual stages. Technological schemes and equipment.

Recommended literature:

1. Žáček, L. Chemické a technologické procesy úpravy vody, Praha: SNTL, 1981. 270 s.

2. Tölgyessy J. a kol. Chémia, biológia a toxikológia vody a ovzdušia. Bratislava, VEDA, 1984.

3. Kalavská D., Holoubek I. Analýza vôd. Bratislava, Alfa, 1989. 262 s.

4. Handbook of Water and Wastewater Treatment Technologies. Ed. By Nicholas P Cheremisinoff, Butterworth Heinemann, 2001. 576 p.

5. Principles of Water Quality Control, Ed. by Thy Tebbutt, Butterworth Heinemann, 1997. 288 p.

Course language:

Slovak

Notes:

The course is implemented by full-time or, if necessary, distance method using the MS Teams or BBB or a combined method. The form of teaching is specified by the teacher at the beginning of the semester and updated continuously.

Course assessment

Total number of assessed students: 186

А	В	С	D	Е	FX
37.1	17.2	17.74	16.67	11.29	0.0

Provides: prof. Mgr. Vasil' Andruch, DSc.

Date of last modification: 22.07.2022