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COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ AMCU/22	Course name: Activating teaching methods in chemistry
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: 4	
Recommended semester/trimester of the course: 1.	
Course level: II.	
Prerequisites:	
Conditions for course completion: 1. Participations in seminars (also applies to the online form of teaching). Students are required to participate in seminars. The students can excuse themselves (incapacity for work, family reasons, etc.) for a maximum of two seminars during the semester without the need for replacement. In the case of a longer-term justified absence (for example due to incapacity for work), the student will be assigned an alternative form of completing the missed curriculum. 2. Active participation in class. Seminars are conducted in a form in which students are active - students present assignments, which include worksheets. The student is obliged to prepare 5 written assignments. The assignments will be available through the e-learning portal LMS Moodle (direct link to the website: https://lms.upjs.sk/) in the course Activating teaching methods in chemistry. 3. The content of the seminars also includes assignment in a form of seminar work, which the student submits to the course. The seminar paper will focus on: Suggestion of an activity on a selected topic for active inquiry (inquiry-based learning, project-based learning, use of digital technologies) with a focus on the development of specific scientific and digital skills and skills related to learning. The design of the activity will also include the design of summative and formative assessment tools to verify understanding and skills in the topic. 4. The final presentation of the seminar work. Assessment of the presentation skills. (0 - 20 points). The final presentation will form a comprehensive output of acquired knowledge and skills. The final evaluation in the course consists of the sum of points obtained for: 1. Assignments during the semester 5x (0 - 50 points) 2. Seminar work (0 - 25 points) 3. Final presentation of the seminar work (0 - 25 points) Conditions for successful completion of the course: In order to obtain an A rating, it is necessary to obtain at least 85 points in total, to obtain an B rating at least 75 points, to obtain a C rating at least 65 points, to obtain a D rating at least 55 points and to obtain an E rating at least 45 points.	
Learning outcomes: Student will acquire an overview of selected activating methods in teaching chemistry from a theoretical and practical point of view. Can design project work, include it in teaching and evaluate its outcomes. Will be able to design inquiry-based activities, include them in teaching and verify their effectiveness based on formative assessment tools. Will gain knowledge about the requirements of assessment in the 21st century with a focus on the development and validation of	

conceptual understanding and skills through the tools of summative and formative assessment. Will learn how to create tasks at different levels of Bloom's taxonomy. Will get acquainted with selected cognitive and metacognitive tools of formative assessment as well as with specific examples. Will know and practically use applications usable for online assessment purposes (Google Forms, Socrative, Kahoot, etc.). Will acquire skills for the implementation of teaching with computer-based experiments in terms of work procedures, working with technology and organization of work.

Brief outline of the course:

1. Characteristics of activating methods in chemistry teaching.
2. Project-based method in chemistry teaching, characteristics and examples of project work.
3. Inquiry-based methods in chemistry teaching, examples of inquiry-based activities.
4. Computer-based chemical experiments.
5. Requirements for assessment in the 21st century. Assessment in chemistry teaching I - Summative assessment. Bloom's taxonomy. Creation of tasks and didactic tests using digital tools for summative assessment (Google Forms, Socrative, Kahoot) - practical examples.
6. Assessment in chemistry teaching - Formative assessment. Applications usable for online assessment purposes (Google Forms, Socrative, Kahoot, etc.). Tasks of international PISA measurements - examples of tasks, their characteristics. Complex tasks in teaching chemistry.
7. Concept maps in chemistry.

Recommended literature:

1. GANAJOVÁ, M. KALAFUTOVÁ, J. a kol.: Projektové vyučovanie v chémii. Didaktická príručka pre učiteľov základných škôl. Bratislava: Štátny pedagogický ústav, 2010. 144 s. ISBN 978-80-8118-058-3.
2. Digitálna knižnica pre projektové vyučovanie v chémii. http://kekule.science.upjs.sk/chemia/digitalna_kniznica/Index.htm
3. KIREŠ, M., JEŠKOVÁ, Z., GANAJOVÁ, M., KIMÁKOVÁ, K.: Bádateľské aktivity v prírodovednom vzdelávaní. Časť A. Bratislava: ŠPÚ, 2016. ISBN 978-80-8118-155-9. https://www.statpedu.sk/files/articles/nove_dokumenty/ucebnice-metodiky-publikacie/badatske-aktivity/01cast_a_web.pdf
4. GANAJOVÁ, M., KRISTOFOVÁ, M.: Bádateľské aktivity v prírodovednom vzdelávaní. Časť B. Ukážky vytvorených metodických a pracovných materiálov z predmetu Chémia. Bratislava: ŠPÚ, 2016. https://www.statpedu.sk/files/articles/nove_dokumenty/ucebnice-metodiky-publikacie/badatske-aktivity/04cast_b_chemia_web.pdf
5. GANAJOVÁ a kol.: Zbierka inovatívnych metodík z chémie pre základné školy. Doplnené vydanie. Bratislava: CVTI SR, 2021. ISBN 978-80-8240-007-9. <https://vzdelavanie.itakademia.sk/vystupy/zim-che-zs.pdf>
6. GANAJOVÁ a kol.: Zbierka inovatívnych metodík z chémie pre stredné školy. Doplnené vydanie. Bratislava: CVTI Bratislava: CVTI SR, 2021. ISBN 978-80-8240-008-6. <https://vzdelavanie.itakademia.sk/vystupy/zim-che-ss.pdf>
7. GANAJOVÁ, M.: Metodika tvorby učebných úloh a didaktických testov pre chémiu. Košice: UPJŠ, 2015. ISBN 978-80-8152-237-6. <https://unibook.upjs.sk/sk/prirodovedecka-fakulta/445-metodika-tvorby-ucebnych-uloh-a-didaktickych-testov-pre-chemiu>
8. GANAJOVÁ a kol.: Rozvíjanie kompetencií žiakov prostredníctvom učebných úloh z chémie. Bratislava: ŠPÚ, 2018. ISBN 978-80-8118-215-0. <https://www.statpedu.sk/files/sk/publikacna-cinnost/publikacie/spu-chemia-2018-web.pdf>
9. GANAJOVÁ, M., BRESTENSKÁ, B., GUNIŠ, J., JEŠKOVÁ, Z., KIREŠ, M., LEŠKOVÁ, A., LUKÁČ, S., OROSOVÁ, R., SOTÁKOVÁ, I., SZARKA, K., ŠNAJDER, L.: Formatívne

hodnotenie vo výučbe prírodných vied, matematiky a informatiky. 1. vyd. UPJŠ v Košiciach, 2021, 450 s. ISBN 978-80-8152-973-3.

10. Inovovaný štátny vzdelávací program pre 2. stupeň ZŠ. Človek a príroda. Chémia. https://www.statpedu.sk/files/articles/dokumenty/inovovany-statny-vzdelavaci-program/chemia_nsv_2014.pdf

11. Inovovaný štátny vzdelávací program pre gymnázia so štvorročným a päťročným vzdelávacím programom. Človek a príroda. Chémia. https://www.statpedu.sk/files/articles/dokumenty/inovovany-statny-vzdelavaci-program/chemia_g_4_5_r.pdf

12. Školský informačný systém. Chémia. <http://kekule.science.upjs.sk/chemia/index.htm>

13. E – learning kurz: Aktivizujúce metódy výučby chémie, <https://lms.upjs.sk/>

Course language:

Notes:

Course assessment

Total number of assessed students: 55

A	B	C	D	E	FX
96.36	3.64	0.0	0.0	0.0	0.0

Provides: doc. RNDr. Mária Ganajová, CSc., RNDr. Ivana Sotáková, Ph.D., RNDr. Petra Letošníková, PhD.

Date of last modification: 08.05.2022

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ ASFU/22	Course name: Astrophysics
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: 2	
Recommended semester/trimester of the course: 3.	
Course level: II.	
Prerequisites:	
Conditions for course completion: To successfully complete the course, the student must demonstrate sufficient understanding of the basic knowledge of the structure and evolution of the universe. Knowledge of the basic properties of stars and methods of their determination, the structure, evolution and energy sources of stars, the structure of matter in the universe and its evolution is required. The condition for obtaining credits is passing a written or oral exam, preparation, and presentation of a semester essay. The credit evaluation of the course considers the following student workload: direct teaching (1 credit) and assessment (1 credits). The minimum threshold for completing the course is to obtain at least 50% of the total score, using the following rating scale: A (90-100%), B (80-89%), C (70-79%), D (60- 69%), E (50-59%), Fx (0-49%).	
Learning outcomes: After completing the lectures, the student will master the basic knowledge about the properties of stars and methods of their determination, structure, evolution and energy sources of stars, the structure of matter in the universe and its evolution. It will also have sufficient physical knowledge and mathematical apparatus to enable independent solving of a various tasks related to astrophysical research.	
Brief outline of the course: 1. Basic properties of stars and methods of their determination: radiation flux, apparent and absolute magnitude, distances of stars, colors of stars. 2. Temperature of stars, black body radiation, spectra of atoms and molecules, non-thermal radiation. 3. Spectral classifications, luminosity classes, HR diagram, masses of stars. 4. Structure of stars: basic equations of stellar structure, transfer of energy by radiation and convection, production of energy in stars, fusion reactions. 5. Evolution of stars: interstellar matter and formation of stars and stellar systems, Jeans' criterion, protostars. 6. Evolution of stars: main sequence stars, giants, final stages of star evolution - white dwarfs, neutron stars and black holes. 7. Distribution of matter in the universe: Milky Way, its structure, dynamics, and evolution, types of galaxies, quasars, intergalactic matter, local group of galaxies.	

8. Clusters and super-clusters of galaxies, large-scale structure of the universe, dark matter, and dark energy.
9. Evolution of the universe: historical development of views on the universe, Olbers's paradox, gravitational paradox, Cosmological principle.
10. Isotropy and homogeneity of the universe, relic radiation, expansion of the universe. Steady state theory.
11. Relativistic cosmology: cosmological solutions of Einstein's equations, models of the universe and their properties, theory of the expanding universe, the Big Bang, the age of the universe.
12. Origin of the universe: the initial stages of the expansion of the universe, inflationary expansion and nucleogenesis, the formation of galaxies and galaxy clusters.

Recommended literature:

1. Carroll, B. W., Ostlie, D. A., An Introduction to Modern Astrophysics, Addison-Wesley Publishing Company, Reading, Massachusetts, 1996;
2. Contopoulos, D. Kotsakis, Cosmology, the structure and evolution of the Universe, Springer, 1984;
3. Pasachoff, J.M., Filippenko, A., The Cosmos: Astronomy in the New Millennium, Cambridge University Press, 2013;
4. Vanýsek, V., Základy astronomie a astrofyziky, Academia, Praha, 1980;
5. Čeman, R., Pittich, E., Vesmír 1 - Slnečná sústava, MAPA Slovakia, Bratislava, 2002;
6. Čeman, R., Pittich, E., Vesmír 2 - Hviezdy - Galaxie, MAPA Slovakia, Bratislava, 2003;

Course language:

Slovak, English

Notes:

Course assessment

Total number of assessed students: 35

A	B	C	D	E	FX
57.14	37.14	5.71	0.0	0.0	0.0

Provides: doc. RNDr. Rudolf Gális, PhD.

Date of last modification: 06.09.2022

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ ZTOX/22		Course name: Basic Toxicology			
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: 2					
Recommended semester/trimester of the course: 1.					
Course level: II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes: Goal of the course is to provide the students with a knowledge of types of toxic substances and their metabolism, safe and handling of toxic substances.					
Brief outline of the course: Historical aspects, types of toxic substances, types of exposure, dose-response relationship. Disposition of toxic compounds (absorption, distribution, excretion of toxic compounds). Metabolism of toxic compounds. Drugs as toxic substances, food additives and contaminants, environmental pollutants. Statement of chemistry laboratory policy. Safe and handling of toxic substances.					
Recommended literature: G. F. Fuhrman: Allgemeine Toxikologie fuer Chemiker, Teubner Verlag, Stuttgart 1984. V. E. Forbes, T. L. Forbe: Ecotoxicology in Theory and Practice, Chapman&Hall, London 1994. J. A. Timbrell: Introduction to Toxicology, Taylor&Francis, London 1994. J.H.Duffus, H.G.J. Worth: Fundamental toxicology, RSC Publishing, Cambridge, 2006.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 41					
A	B	C	D	E	FX
24.39	14.63	26.83	21.95	12.2	0.0
Provides: RNDr. Miroslava Matiková Maľarová, PhD.					
Date of last modification: 21.06.2022					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPPaPZ/SNP/09	Course name: Bullying, Violence and Their Prevention
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 credits: 2	
Recommended semester/trimester of the course: 1., 3.	
Course level: II.	
Prerequisites:	
Conditions for course completion: Active participation in seminars. Detailed information will be given. Active participation - 20% Seminar work - 40% Seminar work 2 - 40%	
Learning outcomes: Knowledge: the graduate of the course can summarize the latest knowledge about bullying in schools and its consequences. Skills. The student is able to analyse problem situations related to bullying and solve them. The student will develop professional skills through the implementation of prevention activities in seminars. Competences. The graduate of the course is sensitive to the issue of bullying, knows how to identify bullying in the early stages and prevent it from developing into serious forms.	
Brief outline of the course: Aggressive behavior. Characteristics of actors of bullying (personality, characteristics of family environment). Manifestations and possible causes of bullying. Bullying as a group process. The role of teacher, school and parent in solving bullying. Possibilities of prevention of bullying at the level of school, class, individuals. Primary, secondary and tertiary prevention. Socio-psychological activities used in the prevention of bullying.	
Recommended literature: Kolář, M.: Bolest šikanování. Cesta k zastavení epidemie šikanování ve školách. Portál, Praha, 2001 Jánošová a kol. Psychologie školní šikany. Grada, Praha, 2016 Říčan, P.: Agresivita a šikana mezi dětmi. Portál, Praha, 1995 Janošová, P., Kollerová, L., Cakirpaloglu, P., & Vorlíček, R. (2023). Empatie žáků vůči šikanovaným spolužákům. Československá psychologie, 67(1), 1-14.	
Course language:	
Notes:	

Course assessment					
Total number of assessed students: 243					
A	B	C	D	E	FX
87.24	11.52	0.82	0.41	0.0	0.0
Provides: doc. Mgr. Mária Bačíková, PhD.					
Date of last modification: 03.09.2024					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ ZCVU/22		Course name: Chemical Engineering			
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: 2					
Recommended semester/trimester of the course: 2., 4.					
Course level: II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course: General and Inorganic Engineering; Mineral raw materials; Raw materials processing, transport and holding; Chemical reactors; Chemical metallurgy – Fe, Al, Cu working; Inorganic acids manufacture (H ₂ SO ₄ , HNO ₃ , HCl, HF, H ₃ PO ₄); Industrial electrochemistry; Industrial fertilizers; Silicate industry – cement manufacture, ceramics; Petrochemistry					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 16					
A	B	C	D	E	FX
75.0	25.0	0.0	0.0	0.0	0.0
Provides: prof. RNDr. Zuzana Vargová, Ph.D.					
Date of last modification: 25.03.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ CHE2/22		Course name: Chemical Excursion			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 1t Course method: present					
Number of ECTS credits: 4					
Recommended semester/trimester of the course: 2.					
Course level: II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 25					
A	B	C	D	E	FX
92.0	8.0	0.0	0.0	0.0	0.0
Provides: prof. RNDr. Zuzana Vargová, Ph.D., RNDr. Miroslava Matiková Maľarová, PhD., Mgr. Nikolas Király, PhD.					
Date of last modification: 08.05.2022					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/MSSU1/22		Course name: Chemistry and Didactics of Chemistry I			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present					
Number of ECTS credits: 2					
Recommended semester/trimester of the course:					
Course level: II.					
Prerequisites: (ÚCHV/SPC1a/22 or ÚCHV/SPC1a/03) and (ÚCHV/SPC1b/22 or ÚCHV/SPC1b/03) and (ÚCHV/DCH1/22 or ÚCHV/DCH1/15) and (ÚCHV/DCH2/22 or ÚCHV/DCH2/15) and ÚCHV/VKVACH/22					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 53					
A	B	C	D	E	FX
60.38	20.75	11.32	3.77	3.77	0.0
Provides:					
Date of last modification: 27.04.2023					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/MSSU2/22		Course name: Chemistry and Didactics of Chemistry II			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present					
Number of ECTS credits: 2					
Recommended semester/trimester of the course:					
Course level: II.					
Prerequisites: (ÚCHV/SPC1a/22 or ÚCHV/SPC1a/03) and (ÚCHV/SPC1b/22 or ÚCHV/SPC1b/03) and (ÚCHV/DCH1/22 or ÚCHV/DCH1/15) and (ÚCHV/DCH2/22 or ÚCHV/DCH2/15) and ÚCHV/VKOCHEB/22					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 4					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
Provides:					
Date of last modification: 27.04.2023					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPO/SDaM/15		Course name: Child and Adolescent Sociology			
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: 2					
Recommended semester/trimester of the course: 3.					
Course level: II.					
Prerequisites:					
Conditions for course completion: Summary of assessment: A: 40-38; B: 37,5-35,5; C: 35-33; D: 32,5-30,5; E: 30-28; FX: less than 28					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1014					
A	B	C	D	E	FX
49.9	28.9	14.89	3.85	1.78	0.69
Provides: doc. Mgr. Alexander Onufrák, PhD.					
Date of last modification: 27.08.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPE/MT/09		Course name: Class Management			
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 credits: 2					
Recommended semester/trimester of the course: 2.					
Course level: II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 641					
A	B	C	D	E	FX
52.57	35.41	9.36	1.4	0.47	0.78
Provides: doc. PaedDr. Renáta Orosová, PhD.					
Date of last modification: 22.09.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ MPPc/15	Course name: Continuous Practice Teaching I
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 4t Course method: present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course: 3.	
Course level: II.	
Prerequisites: ÚFV/MPPb/15	
Conditions for course completion: Confirmed list of sittings in on classes and teaching as a confirmation of attendance in the required extent of 6 lessons of sitting in on classes and 18 physics lessons taught by student. Lesson records and written preparation for the lessons.	
Learning outcomes: Student gains under the guidance of teacher trainer practical teaching skills within the subject of Physics.	
Brief outline of the course: Sitting in on classes, teaching physics lessons by student, consulted with teacher trainer, analysis of observed and taught lessons.	
Recommended literature: Textbooks for lower and upper secondary school physics	
Course language: Slovak	
Notes:	
Course assessment Total number of assessed students: 44	
abs	n
100.0	0.0
Provides: doc. RNDr. Jozef Hanč, PhD.	
Date of last modification: 03.05.2015	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/MPPd/15	Course name: Continuous Practice Teaching II
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 6t Course method: present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course: 4.	
Course level: II.	
Prerequisites: ÚFV/MPPc/15	
Conditions for course completion: Confirmed list of sittings in on classes and teaching as a confirmation of attendance in the required extent of 8 lessons of sitting in on classes and 30 physics lessons taught by student. Lesson records and written preparation for the lessons.	
Learning outcomes: Student gains under the guidance of teacher trainer practical teaching skills within the subject of Physics.	
Brief outline of the course: Sitting in on classes, teaching physics lessons by student, consulted with teacher trainer, analysis of observed and taught lessons.	
Recommended literature: Textbooks for lower and upper secondary school physics	
Course language: Slovak	
Notes:	
Course assessment Total number of assessed students: 34	
abs	n
100.0	0.0
Provides: doc. RNDr. Jozef Hanč, PhD.	
Date of last modification: 03.05.2015	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/MPPc/15	Course name: Continuous practice teaching I
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 4t Course method: present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course: 3.	
Course level: II.	
Prerequisites: ÚCHV/MPPb/15 and ÚCHV/DCH1/22 or ÚCHV/DCH1/15	
Conditions for course completion: 1. Compulsory attendance during the organisational and informational seminar. 2. Compulsory attendance: sitting in on classes, analytical classes at training schools. 3. Sitting in on classes and analytical classes with supervising teachers – 6x. 4. Teaching classes and analytical classes under supervision – 18x. 5. Submitted Continued practice teaching (CPT) I documentation. (Sitting-in records, Written class preparations, List of sitting-in sessions and trainee's performance during CPT I, CPT I report, Assessment of the trainee's pedagogical performance during CPT).	
Learning outcomes: The student can plan lessons and teach them. Present their own psychodidactic and subject-specific didactic concepts of teaching in the environment of a real school classroom. Apply the didactic skills developed during the previous observation of teaching in practice to teach chemistry. Evaluate one's own lesson project and professional competence level (areas: student, educational process, professional development) in terms of pedagogic theory and assessment provided by the supervising teacher.	
Brief outline of the course: Observation and analysis of chemistry lessons and teaching under the supervision of the supervising teacher. Written class preparation and teaching, active participation in extracurricular activities. Didactic Continued practice teaching I analysis.	
Recommended literature: Current chemistry textbooks for primary and secondary schools in the Slovak Republic.	
Course language:	
Notes:	
Course assessment Total number of assessed students: 201	
abs	n
100.0	0.0

Provides:
Date of last modification: 26.10.2021
Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/MPPd/15	Course name: Continuous practice teaching II
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 6t Course method: present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course: 4.	
Course level: II.	
Prerequisites: ÚCHV/MPPc/15 and ÚCHV/DCH2/22	
Conditions for course completion: 1. Compulsory attendance during the organisational and informational seminar. 2. Compulsory attendance: sitting in on classes, analytical classes at training schools. 3. Complete 8 lessons: sitting in on classes and analytical classes with supervising teachers. 4. Teaching classes and analytical classes under supervision – 30x. 5. Submit Continued practice teaching (CPT) II documentation. (Trainee's sitting-in and teaching schedule, Sitting-in records, Written class preparations, List of sitting-in sessions and trainee's performance during CPT II, CPT II report, Assessment of the trainee's pedagogical performance during CPT).	
Learning outcomes: The student can plan a series of lessons and other forms of instruction and teach them continually. Apply the pedagogic as well as subject-specific theory in practical teaching. Apply the didactic skills developed during the previous teaching practice completed in the actual educational environment. Evaluate one's own lesson project and professional competence level (areas: student, educational process, professional development) in terms of pedagogic theory and evaluation provided by the supervising teacher.	
Brief outline of the course: Observation and analysis of chemistry lessons and teaching under supervision. Written class preparation and teaching, active participation in extracurricular activities. Didactic Continued practice teaching (CPT) II analysis.	
Recommended literature: Current chemistry textbooks for primary and secondary schools in the Slovak Republic.	
Course language:	
Notes:	

Course assessment	
Total number of assessed students: 174	
abs	n
100.0	0.0
Provides:	
Date of last modification: 17.11.2021	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPE/ TTUP/15		Course name: Creating Text Teaching Aids			
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 credits: 2					
Recommended semester/trimester of the course: 2.					
Course level: II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 306					
A	B	C	D	E	FX
58.82	31.05	7.19	2.29	0.65	0.0
Provides: doc. PaedDr. Renáta Orosová, PhD., Mgr. Zuzana Vagaská, PhD.					
Date of last modification: 22.09.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPPaPZ/VPU/17	Course name: Developmental Psychology for Teachers
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 credits: 2	
Recommended semester/trimester of the course: 1., 3.	
Course level: II.	
Prerequisites:	
Conditions for course completion: active participation in seminars - 20% seminar work according to the current instructions on the electronic bulletin board- 40% final test - 40% Detailed and updated information will be posted on the electronic board	
Learning outcomes: The graduate will understand the principles of developmental psychology, and will be able to characterize the norm in separate developmental stages with a specific focus on the period of school age and adolescence. As part of the seminar work, a students will process current knowledge published in foreign journals. They will have a knowledge about the current social discourse on the topics covered. The graduate will be able to consider various aspects of the possible influence of parents and friends on the development of piupils and apply the knowledge of developmental psychology in the practice of the teacher.	
Brief outline of the course: Determinants and factors of development, cognitive development, personality development. Socialization in separate developmental stages (family, peers, school). Specifics of development in the period of school age, in pubescence and adolescence. Parents and their role in child development. Application of knowledge of developmental psychology in the teacher's practice - communication with students in different developmental stages, creating a teacher-student relationship with respect to the development needs of the student.	
Recommended literature: Bačíková a kol. (2023). Keď dieťa potrebuje nielen psychológa. Grada publishing. Vágnerová, M. Vývojová psychologie. Portál, Praha 2000 Říčan, P. Cesta životem. Portál, Praha, 2004. Thorová, K. Vývojová psychologie. Portál, Praha, 2015. Macek, P. Adolescence. Praha: Portál, 2003 Matějček, Z. - rôzne diela Bačíková, M. Psychológia rodičovskej kontroly, Šafárik Press, Košice 2019	
Course language:	

Notes:					
Course assessment					
Total number of assessed students: 135					
A	B	C	D	E	FX
79.26	15.56	2.96	2.22	0.0	0.0
Provides: doc. Mgr. Mária Bačíková, PhD.					
Date of last modification: 03.09.2024					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ DCH1/22	Course name: Didactics of Chemistry I
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: 2.	
Course level: II.	
Prerequisites: ÚCHV/SPC1a/22	
Conditions for course completion: 1. Participations in seminars (also applies to the online form of teaching). Students are required to participate in seminars. The students can excuse themselves (incapacity for work, family reasons, etc.) for a maximum of two seminars during the semester without the need for replacement. In the case of a longer-term justified absence (for example due to incapacity for work), the student will be assigned an alternative form of mastering the missed curriculum. 2. Active participation in class. Seminars are conducted in a form in which students are active – students present assignments, which include worksheets. The student is obliged to prepare 2 written assignments and a micro-output, which will be one of the conditions for participation in the exam. Topics of micro-outputs as well as requirements will be available through the e-learning portal LMS Moodle (direct link to the website: https://lms.upjs.sk/) in the course Didactics of Chemistry I. 3. The content of the seminars also includes assignments of seminar papers, which the student submits to the course Didactics of Chemistry I. 4. The student must pass a continuous assessment in the form of a written exam twice a semester. 5. Passing the exam: the exam is conducted in person as an oral exam. In times of a pandemic situation, the written form of the exam is conducted through the Google Form application. Students fill in the answers to the written test. Test questions are always randomly generated. The final assessment in the course consists of the sum of points obtained for: 1. Seminar work (0-20 points) 2. Continuous assessment (0-30 points) 3. Oral exam (0-50 points) Conditions for successful completion of the course: In order to obtain an A rating, it is necessary to obtain at least 85 points in total, to obtain an B rating at least 75 points, to obtain a C rating at least 65 points, to obtain a D rating at least 55 points and to obtain an E rating at least 45 points.	
Learning outcomes: The student will acquire knowledge and necessary skills for the work of teachers in the field of didactics of general and inorganic chemistry. Can implement inquiry-based learning and digital tools in the teaching of topics from these fields of chemistry at primary school and grammar school with a focus on the use of videos, models, animations, simulations, interactive games	

and exercises (<https://viki.iedu.sk/landing>, <https://phet.colorado.edu/sk/>, <https://www.olabs.edu.in/>, <https://studiumchemie.cz/>). Expand your knowledge and skills on how to carry out demonstration experiments and projected experiments using a digital visualizer.

Brief outline of the course:

1. Introduction to didactics of chemistry. History of chemistry didactics and its current state. Teacher preparation for teaching (basic curricular documents: State educational program, school educational program, curricula, thematic educational plan, teacher preparation for a lesson).
2. Teaching aids in chemistry. Information and communication technologies in chemistry teaching.
3. School chemical experiment in chemistry teaching, demonstration and projected experiments.
4. Nomenclature of inorganic chemistry. Use of didactic games.
5. Didactics of calculation tasks in chemistry. Chemical calculations with a focus on the chemistry of everyday life.
6. Didactics of the topic Matter, substance, mixture. Inquiry methods in teaching the topic Mixtures and separation of components of mixtures. Inquiry-based method in teaching chemistry.
7. Didactics of the topic Atom, its composition and structure.
8. Didactics of the topic Chemical bonding.
9. Didactics of the topic Periodic table of elements. Interactive periodic table of elements at the Institute of Chemistry Faculty of Science, P. J. Šafárik University in Košice.
10. Didactics of the topic Chemical process. Thermochemistry and Chemical Kinetics.
11. Didactics of the topic Chemical process. Types of chemical reactions. Practical use of redox events. Electrolysis. Galvanic cells. Inquiry activities, computer-based experiments and projected experiments using a digital visualizer on the topic of Chemical process.
12. Presentation of micro-outputs on assigned topics.

Recommended literature:

1. GANAJOVÁ, M.: Vybrané kapitoly zo všeobecnej didaktiky chémie. UPJŠ v Košiciach, Prírodovedecká fakulta, 2009, 141 s. ISBN 978-80-7097-756-9.
2. KIREŠ, M., JEŠKOVÁ, Z., GANAJOVÁ, M., KIMÁKOVÁ, K.: Bádateľské aktivity v prírodovednom vzdelávaní. Časť A. Bratislava: ŠPÚ, 2016. ISBN 978-80-8118-155-9. https://www.statpedu.sk/files/articles/nove_dokumenty/ucebnice-metodiky-publikacie/badatske-aktivity/01cast_a_web.pdf
3. GANAJOVÁ, M., KRISTOFOVÁ, M.: Bádateľské aktivity v prírodovednom vzdelávaní. Časť B. Ukážky vytvorených metodických a pracovných materiálov z predmetu Chémia. Bratislava: ŠPÚ, 2016. https://www.statpedu.sk/files/articles/nove_dokumenty/ucebnice-metodiky-publikacie/badatske-aktivity/04cast_b_chemia_web.pdf
4. GANAJOVÁ a kol.: Zbierka inovatívnych metodík z chémie pre základné školy. Doplnené vydanie. Bratislava: CVTI SR, 2021. ISBN 978-80-8240-007-9. <https://vzdelavanie.itakademia.sk/vystupy/zim-che-zs.pdf>
5. GANAJOVÁ a kol.: Zbierka inovatívnych metodík z chémie pre stredné školy. Doplnené vydanie. Bratislava: CVTI Bratislava: CVTI SR, 2021. ISBN 978-80-8240-008-6. <https://vzdelavanie.itakademia.sk/vystupy/zim-che-ss.pdf>
6. GANAJOVÁ, M.: Metodika tvorby učebných úloh a didaktických testov pre chémiu. Košice: UPJŠ, 2015. ISBN 978-80-8152-237-6. <https://unibook.upjs.sk/sk/prirodovedecka-fakulta/445-metodika-tvorby-ucebnych-uloh-a-didaktickych-testov-pre-chemiu>
7. GANAJOVÁ a kol.: Rozvíjanie kompetencií žiakov prostredníctvom učebných úloh z chémie. Bratislava: ŠPÚ, 2018. ISBN 978-80-8118-215-0. <https://www.statpedu.sk/files/sk/publikacna-cinnost/publikacie/spu-chemia-2018-web.pdf>
8. GANAJOVÁ, M., BRESTENSKÁ, B., GUNIŠ, J., JEŠKOVÁ, Z., KIREŠ, M., LEŠKOVÁ, A., LUKÁČ, S., OROSOVÁ, R., SOTÁKOVÁ, I., SZARKA, K., ŠNAJDER, Ľ.: Formatívne

hodnotenie vo výučbe prírodných vied, matematiky a informatiky. 1. vyd. UPJŠ v Košiciach, 2021, 450 s. ISBN 978-80-8152-973-3.

9. Inovovaný štátny vzdelávací program pre 2. stupeň ZŠ. Človek a príroda. Chémia.

https://www.statpedu.sk/files/articles/dokumenty/inovovany-statny-vzdelavaci-program/chemia_nsv_2014.pdf

10. Inovovaný štátny vzdelávací program pre gymnázia so štvorročným a päťročným vzdelávacím programom. Človek a príroda. Chémia. https://www.statpedu.sk/files/articles/dokumenty/inovovany-statny-vzdelavaci-program/chemia_g_4_5_r.pdf

11. Učebnice chémie pre základné školy a gymnáziá.

12. E – learning kurz: Didaktika chémie I, <https://lms.upjs.sk/>

Course language:

Notes:

Course assessment

Total number of assessed students: 55

A	B	C	D	E	FX
72.73	14.55	10.91	0.0	1.82	0.0

Provides: doc. RNDr. Mária Ganajová, CSc., RNDr. Ivana Sotáková, Ph.D., RNDr. Petra Letošníková, PhD.

Date of last modification: 25.03.2025

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ DCH2/22	Course name: Didactics of Chemistry II
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: 3.	
Course level: II.	
Prerequisites: ÚCHV/DCH1/22 or ÚCHV/DCH1/15	
Conditions for course completion: 1. Participations in seminars (also applies to the online form of teaching). Students are required to participate in seminars. The students can excuse themselves (incapacity for work, family reasons, etc.) for a maximum of two seminars during the semester without the need for replacement. In the case of a longer-term justified absence (for example due to incapacity for work), the student will be assigned an alternative form of mastering the missed curriculum. 2. Active participation in class. Seminars are conducted in a form in which students are active – students present assignments, which include worksheets. The student is obliged to prepare 2 written assignments, which will be one of the conditions for participation in the exam. Topics of written assignments as well as requirements will be available through the e-learning portal LMS Moodle (direct link to the website: https://lms.upjs.sk/) in the course Didactics of Chemistry II. 3. The content of the seminars also includes assignments of seminar papers, which the student submits to the course Didactics of Chemistry II. 4. The student must pass a continuous assessment in the form of a written exam twice a semester. 5. Passing the exam: Passing the exam: the exam is conducted in person as an oral exam. In times of a pandemic situation, the written form of the exam is conducted through the Google Form application. Students fill in the answers to the written test. Test questions are always randomly generated. The final assessment in the course consists of the sum of points obtained for: 1. Written assignments (0-20 points) 2. Seminar work (0-10 points) 3. Written tests (0-20 points) 5. Oral exam (50 points) Conditions for successful completion of the course: In order to obtain an A rating, it is necessary to obtain at least 85 points in total, to obtain an B rating at least 75 points, to obtain a C rating at least 65 points, to obtain a D rating at least 55 points and to obtain an E rating at least 45 points.	
Learning outcomes: Student will acquire knowledge and necessary skills for the work of teachers in the field of didactics of inorganic and organic chemistry as well as in selected topics of didactics of biochemistry. Can implement inquiry-based learning and digital tools in the teaching of topics from these fields of chemistry at primary school and	

grammar school with a focus on the use of videos, models, animations, simulations, interactive games and exercises (<https://viki.iedu.sk/landing>, <http://kekule.science.upjs.sk/chemia/index.htm>, <https://studiumchemie.cz/>, <http://www.studiumbiochemie.cz/aplikace2.html#10>, <http://didaktikabiochemie.natur.cuni.cz/db2020/db.html>). He is able to include selected topics with an interdisciplinary focus (water quality, greenhouse effect, ozone hole, renewable energy sources) into teaching.

Brief outline of the course:

1. Didactics of inorganic chemistry – selected chemical elements and their inorganic compounds. Alkali metals, alkaline earth metals, selected transition elements. Use of SATL method in teaching chemistry, complex tasks focused on the development of transformation skills.
2. Didactics of the topic Air, Global environmental problems: Ozone and the ozone hole, Greenhouse effect.
3. Didactics of inorganic chemistry – selected chemical elements and their inorganic compounds. Alkali metals, alkaline earth metals, selected transition elements. Use of SATL method in teaching chemistry, complex tasks focused on the development of transformation skills.
4. Didactics of organic chemistry. Isomerism in the teaching of organic chemistry - Constitutional isomerism and stereoisomerism.
5. Didactics of the topic Hydrocarbons and hydrocarbon derivatives. SATL method. Energy sources - fossil fuels and renewable energy sources.
6. Plastics, chemistry of macromolecular substances. Use of inquiry-based method in teaching topics: Recognition of plastics, Properties of plastics.
7. Didactics of the topic Natural substances. Use of inquiry-based learning and project-based learning in topics: Proteins, Carbohydrates, Lipids. Home experiments on Proteins, Carbohydrates, Fats.
8. Didactics of the topic Washing and cleaning agents.
9. Didactics of the topic Additives in food. Didactics of the topic Vitamins. Didactics of selected topics from biochemistry Biosynthesis and metabolism, digestion and metabolism.

Recommended literature:

1. GANAJOVÁ, M. KALAFUTOVÁ, J. a kol.: Projektové vyučovanie v chémii. Didaktická príručka pre učiteľov základných škôl. Bratislava: Štátny pedagogický ústav, 2010. 144 s. ISBN 978-80-8118-058-3.
2. KIREŠ, M., JEŠKOVÁ, Z., GANAJOVÁ, M., KIMÁKOVÁ, K.: Bádateľské aktivity v prírodovednom vzdelávaní. Časť A. Bratislava: ŠPÚ, 2016. ISBN 978-80-8118-155-9. https://www.statpedu.sk/files/articles/nove_dokumenty/ucebnice-metodiky-publikacie/badatske-aktivity/01cast_a_web.pdf
3. GANAJOVÁ, M., KRISTOFOVÁ, M.: Bádateľské aktivity v prírodovednom vzdelávaní. Časť B. Ukážky vytvorených metodických a pracovných materiálov z predmetu Chémia. Bratislava: ŠPÚ, 2016. https://www.statpedu.sk/files/articles/nove_dokumenty/ucebnice-metodiky-publikacie/badatske-aktivity/04cast_b_chemia_web.pdf
4. GANAJOVÁ a kol.: Zbierka inovatívnych metodík z chémie pre základné školy. Doplnené vydanie. Bratislava: CVTI SR, 2021. ISBN 978-80-8240-007-9. <https://vzdelavanie.itakademia.sk/vystupy/zim-che-zs.pdf>
5. GANAJOVÁ a kol.: Zbierka inovatívnych metodík z chémie pre stredné školy. Doplnené vydanie. Bratislava: CVTI SR, 2021. ISBN 978-80-8240-008-6. <https://vzdelavanie.itakademia.sk/vystupy/zim-che-ss.pdf>
6. GANAJOVÁ, M.: Metodika tvorby učebných úloh a didaktických testov pre chémiu. Košice: UPJŠ, 2015. ISBN 978-80-8152-237-6. <https://unibook.upjs.sk/img/cms/2015/pf/didaktika-textyganajova.pdf>

7. GANAJOVÁ a kol.: Rozvíjanie kompetencií žiakov prostredníctvom učebných úloh z chémie. Bratislava: ŠPÚ, 2018. ISBN 978-80-8118-215-0. <https://www.statpedu.sk/files/sk/publikacna-cinnost/publikacie/spu-chemia-2018-web.pdf>
8. GANAJOVÁ, M., BRESTENSKÁ, B., GUNIŠ, J., JEŠKOVÁ, Z., KIREŠ, M., LEŠKOVÁ, A., LUKÁČ, S., OROSOVÁ, R., SOTÁKOVÁ, I., SZARKA, K., ŠNAJDER, Ľ.: Formatívne hodnotenie vo výučbe prírodných vied, matematiky a informatiky. 1. vyd. UPJŠ v Košiciach, 2021, 450 s. ISBN 978-80-8152-973-3.
9. Inovovaný štátny vzdelávací program pre 2. stupeň ZŠ. Človek a príroda. Chémia. https://www.statpedu.sk/files/articles/dokumenty/inovovany-statny-vzdelavaci-program/chemia_nsv_2014.pdf
10. Inovovaný štátny vzdelávací program pre gymnázia so štvorročným a päťročným vzdelávacím programom. Človek a príroda. Chémia. https://www.statpedu.sk/files/articles/dokumenty/inovovany-statny-vzdelavaci-program/chemia_g_4_5_r.pdf
11. Školský informačný systém. Chémia. <http://kekule.science.upjs.sk/chemia/index.htm>
12. E – learning kurz: Didaktika chémie II, <https://lms.upjs.sk/>

Course language:

Notes:

Course assessment

Total number of assessed students: 58

A	B	C	D	E	FX
87.93	10.34	0.0	0.0	1.72	0.0

Provides: doc. RNDr. Mária Ganajová, CSc., RNDr. Ivana Sotáková, Ph.D., RNDr. Petra Letošníková, PhD.

Date of last modification: 25.03.2025

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/DF1/22		Course name: Didactics of Physics I			
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: 4					
Recommended semester/trimester of the course: 2.					
Course level: II.					
Prerequisites:					
Conditions for course completion: semester work: elaborated online assignments in lms.upjs.sk analysis of model methodologies elaboration and presentation of own educational activity oral examination: clarification of two topics from subject didactics clarification of the thematic unit presentation of model methodology					
Learning outcomes: Knowledge and skills in the field of Physics education, overview about the problems of Physics education, basic skills necessary to prepare and guide educational activities, school experiments, problem solving and to use modern media for physics education.					
Brief outline of the course: Within the Didactics of Physics subject the core problems of physics education are introduced and case studies of their solving are interpreted. Strategies on design and implementation of educational activities, their evaluation and the use of modern media are introduced and corresponding skills are trained.					
Recommended literature: e- version of schoolbook Physics for lower secondary school					
Course language: Slovak, English					
Notes:					
Course assessment Total number of assessed students: 41					
A	B	C	D	E	FX
68.29	26.83	2.44	0.0	0.0	2.44

Provides: doc. RNDr. Marián Kireš, PhD., RNDr. Katarína Kozelková, PhD.
Date of last modification: 07.09.2021
Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/DF2/22	Course name: Didactics of Physics II
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: 4	
Recommended semester/trimester of the course: 3.	
Course level: II.	
Prerequisites: ÚFV/DF1/22	
Conditions for course completion: teaching plan for two lessons 10p micro teaching activities 20p educational project 20p answering questions during the course 10p end-of course oral examination 40p	
Learning outcomes: knowledge and skills in the field of Physics education, overview about the problems of Physics education, basic skills necessary to prepare and guide educational activities, school experiments, problem solving and to use modern media for physics education	
Brief outline of the course: 1. Didactic methods, forms and tools in physics education 2. Graphs in education 3. Control, evaluation and assessment of students results, 4. Tests 5. Everyday physics and its application in education 6. Computer based measurements: 7. Using of Internet and multimedia in education 8. IBSE 9. Informal activities to support physics education 10. Life long learning, science teacher training 11. 12. Semestral project presentation	
Recommended literature: 1.J. Janovič a kol.: Didaktika fyziky, MFF UK Bratislava, 1990 2.J. Janovič a kol.: Vybrané kapitoly didaktiky fyziky, MFF UK Bratislava, 1999 3.E. Kašpar a kol.: Didaktika fyziky, SPN Praha, 1978 4.E. Mechlová: Didaktika fyziky 1, 2, PdF Ostrava, 1989 5.J. Fenclová: Úvod do teórie a metodológie didaktiky fyziky, SPN Praha, 1982 6.Vachek, J. a kol.: Fyzika pre 1. ročník gymnázia. SPN, Bratislava, 1984. 7.Svoboda, E. a kol. Fyzika pre 2. ročník gymnázia. SPN, Bratislava, 1985.	

8.Lepil, O. a kol.: Fyzika pre 3. ročník gymnázia. SPN, Bratislava, 1986.
 9.Pišút, J. a kol.: Fyzika pre 4. ročník gymnázia. SPN, Bratislava, 1987.
 10.Scholtz, E., Kireš, M.: Fyzika - Kinematika pre osemročné gymnáziá, SPN, Bratislava, 2001, 104 strán, ISBN 80-08-02848-3
 11.Blaško, M., Gajdušek, J., Kireš, M., Onderová, Ľ.: Molekulová fyzika a termodynamika pre osemročné gymnáziá, SPN, Bratislava, 2004, 120 strán, ISBN 80-10-00008-6
 12.Scholtz, E., Kireš, M.: Fyzika - Dynamika pre osemročné gymnáziá, SPN, Bratislava, 2007, 231 strán, ISBN 80-10-00013-2
 School textbooks for Physics education at upper secondary level

Course language:

Slovak, English

Notes:

Course assessment

Total number of assessed students: 34

A	B	C	D	E	FX
76.47	14.71	5.88	0.0	0.0	2.94

Provides: doc. RNDr. Marián Kireš, PhD., RNDr. Katarína Kozelková, PhD.

Date of last modification: 07.09.2021

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/DDP1/22	Course name: Diploma Project I
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course: 1.	
Course level: II.	
Prerequisites:	
Conditions for course completion: regular consultations with diploma thesis supervisor about the progress of diploma project development, design of investigation plan	
Learning outcomes: Student has studied the theoretical background, formulates research questions, has designed investigation plan, has presented first results, eventually.	
Brief outline of the course: Development of diploma project	
Recommended literature: Recommended literature that is included in the diploma thesis assignments Regulations for diploma thesis preparation template for diploma thesis	
Course language: Slovak	
Notes:	
Course assessment Total number of assessed students: 9	
abs	n
88.89	11.11
Provides:	
Date of last modification: 15.02.2022	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ DPP1/22	Course name: Diploma Project I
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course: 1.	
Course level: II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 36	
abs	n
100.0	0.0
Provides:	
Date of last modification: 16.02.2022	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/DDP2/22	Course name: Diploma 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 credits: 3	
Recommended semester/trimester of the course: 2.	
Course level: II.	
Prerequisites:	
Conditions for course completion: regular consultaions with diploma thesis supervisor about the progress of diploma project development and about the investigation regular consultations study of available resources connected with the diploma thesis assignments first results	
Learning outcomes: Student understands the methods of investigation and he gains first results.	
Brief outline of the course: Work on the diploma project with regard to the assignemnts of the diploma thesis	
Recommended literature: Recommended literature that is included in the diploma thesis assignments Regulations for diploma thesis preparation template for diploma thesis	
Course language: Slovak	
Notes:	
Course assessment Total number of assessed students: 7	
abs	n
85.71	14.29
Provides:	
Date of last modification: 15.02.2022	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ DPP2/22	Course name: Diploma 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 credits: 3	
Recommended semester/trimester of the course: 2.	
Course level: II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 37	
abs	n
100.0	0.0
Provides:	
Date of last modification: 16.02.2022	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/DDP3/22	Course name: Diploma Project III
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 3	
Recommended semester/trimester of the course: 3.	
Course level: II.	
Prerequisites:	
Conditions for course completion: regular consultations with diploma thesis supervisor about the progress of diploma project development and about the project results	
Learning outcomes: Student has enough knowledge to prepare a theoretical part of the diploma thesis and for practical part based on the problem analysis and drawing conclusions.	
Brief outline of the course: Work on the project with regard to the diploma thesis assignments	
Recommended literature: Recommended literature that is included in the diploma thesis assignments Regulations for diploma thesis preparation template for diploma thesis	
Course language: Slovak	
Notes:	
Course assessment Total number of assessed students: 5	
abs	n
100.0	0.0
Provides:	
Date of last modification: 15.02.2022	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ DPP3/22	Course name: Diploma Project III
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 3	
Recommended semester/trimester of the course: 3.	
Course level: II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 32	
abs	n
100.0	0.0
Provides:	
Date of last modification: 16.02.2022	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/ DPOU/22		Course name: Diploma Thesis and its Defence			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present					
Number of ECTS credits: 14					
Recommended semester/trimester of the course:					
Course level: II.					
Prerequisites:					
Conditions for course completion: Preparation and submission of diploma thesis in printed and electronic form. Presentation of diploma thesis results and its defence in front of examination board.					
Learning outcomes: Knowledge and skills connected with selected problem analysis and presentation of diploma thesis results in front of experts.					
Brief outline of the course: Preparation and submission of diploma thesis to central registration system. Printed version for reviewing. Presentation of diploma thesis results and answers to the questions of reviewers. Discussion on the content of diploma thesis and answers to the questions of examination board members.					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 5					
A	B	C	D	E	FX
80.0	20.0	0.0	0.0	0.0	0.0
Provides:					
Date of last modification: 15.02.2022					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/DPOU/22		Course name: Diploma Thesis and its Defence			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present					
Number of ECTS credits: 14					
Recommended semester/trimester of the course:					
Course level: II.					
Prerequisites: ÚCHV/DPP3/22					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 31					
A	B	C	D	E	FX
83.87	12.9	3.23	0.0	0.0	0.0
Provides:					
Date of last modification: 25.03.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/DSU2/25	Course name: Diplomový seminár k tvorbe didaktických prostriedkov pre výučbu chémie
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 credits: 2	
Recommended semester/trimester of the course: 2.	
Course level: II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides: doc. RNDr. Mária Ganajová, CSc., RNDr. Ivana Sotáková, Ph.D., RNDr. Petra Letošníková, PhD.	
Date of last modification: 28.03.2025	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ DSU1a/10	Course name: Diplomový seminár z chémie pre XCH
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 credits: 2	
Recommended semester/trimester of the course: 2.	
Course level: II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 17	
abs	n
100.0	0.0
Provides: doc. RNDr. Mária Ganajová, CSc., RNDr. Ivana Sotáková, Ph.D., RNDr. Petra Letošníková, PhD.	
Date of last modification: 21.01.2022	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/DSU1b/21	Course name: Diplomový seminár z chémie pre XCH
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 credits: 2	
Recommended semester/trimester of the course: 3.	
Course level: II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 2	
abs	n
100.0	0.0
Provides: doc. RNDr. Mária Ganajová, CSc., RNDr. Ivana Sotáková, Ph.D., RNDr. Petra Letošníková, PhD.	
Date of last modification: 09.02.2022	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPPaPZ/PUDU/15	Course name: Drug Addiction Prevention in Educational Practice
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: 4	
Recommended semester/trimester of the course: 1., 3.	
Course level: II.	
Prerequisites:	
Conditions for course completion: 1st part of the semester evaluation: active participation in the training part (30p). 2nd part of the semester evaluation: active participation in workshops (20p) 3rd part of the semester evaluation - preparation (10p) and implementation (10p) of block activities (20p, minimum 11 points). 4th part of the evaluation - written knowledge exam (20p, minimum 11 points). In total, students can get 90p and the final grade is as follows: 90 - 82: A 81 - 73: B 72 - 66: C 65 - 59: D 58 - 54: E 53 and less: FX. 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 understands principals of research data based prevention of risk behavior, can describe and explain the determinants of risk behavior as well as protective and risk factors for substance use. Understands and adequately interprets the theory explaining the background of substance and non-substance addictions. The student is also able to state and classify the types and forms of prevention, strategies and approaches in prevention, can distinguish effective strategies from ineffective ones. The student is able to apply the learned rules, procedures and competencies for the work of a teacher in the field of drug use prevention, as well as the acquired professional skills for the work of a teacher and prevention coordinator at school.	
Brief outline of the course: Psychological, pedagogical-psychological, medical and legal-forensic aspects of substance use prevention Prevention of substance use based on risk and resilience Primary, secondary and tertiary prevention of substance use Universal, selective and indicated prevention of substance use Effective substance prevention strategies based on research data Preparation and implementation of components of effective substance use prevention programs	
Recommended literature: Orosová, O. a kol. (2012). Základy prevencie užívania drog a problematického používania internetu v školskej praxi. Košice: UPJŠ.	

Sloboda, Z., & Bukoski, J. (Eds.). (2006). Handbook of Drug Abuse Prevention: Theory, Science, and Practice. New York: Springer. National and international scientific journals.					
Course language: slovak					
Notes:					
Course assessment Total number of assessed students: 431					
A	B	C	D	E	FX
51.28	41.07	6.96	0.7	0.0	0.0
Provides: prof. PhDr. Oľga Orosová, CSc., PhDr. Janka Liptáková, PhD., PhDr. Anna Janovská, PhD., Mgr. Zuzana Michalove					
Date of last modification: 24.06.2022					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPPaPZ/VP/09		Course name: Educational Counselling			
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 credits: 2					
Recommended semester/trimester of the course: 2.					
Course level: II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 263					
A	B	C	D	E	FX
76.81	14.45	5.7	2.28	0.76	0.0
Provides: PhDr. Anna Janovská, PhD.					
Date of last modification: 30.01.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPE/ ZSP/15		Course name: Essentials of Special Education			
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: 2					
Recommended semester/trimester of the course: 3.					
Course level: II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 807					
A	B	C	D	E	FX
52.42	24.41	12.27	6.57	3.59	0.74
Provides: PaedDr. Michal Novocký, PhD., doc. PaedDr. Renáta Orosová, PhD.					
Date of last modification: 22.09.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPE/ ZZP/12		Course name: Experiential Education			
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: 1., 3.					
Course level: II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 453					
A	B	C	D	E	FX
41.28	38.41	15.01	4.19	0.88	0.22
Provides: doc. PaedDr. Renáta Orosová, PhD., Mgr. Beáta Galajda, PhD.					
Date of last modification: 22.09.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPPaPZ/PsZ/15	Course name: Health Psychology
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 credits: 2	
Recommended semester/trimester of the course: 1., 3.	
Course level: II.	
Prerequisites:	
Conditions for course completion: Assessment Conditions: Active participation in seminars (25%) – a maximum of 2 absences is allowed. Preparation and presentation of a seminar paper on a topic assigned during the seminar, within the agreed timeframe (25%). Final paper and its ongoing presentation (50%). Final Grading Scale: A: 100 – 90% B: 89 – 80% C: 79 – 70% D: 69 – 60% E: 59 – 50% FX: 49% or less – failed and the work must be revised.	
Learning outcomes: Knowledge: Students will gain basic knowledge of health psychology, including factors that promote health and those contributing to the development of illnesses. They will learn to formulate the basic theses of health psychology, explain its concepts, and understand the principles of the bio-psycho-social model of health. They will expand their understanding of the applications of health psychology in working with individuals and groups, including in school settings. Skills: Students will develop the ability to prepare a basic preventive program focused on promoting a healthy lifestyle and managing stress. They will learn to implement acquired knowledge in practice, including working with children and youth in school environments. Competencies: Graduates will be able to effectively participate in the creation and implementation of preventive programs that support health and mental well-being. They will know how to apply psychological knowledge when working with students in school settings, contributing to the improvement of both mental and physical health of individuals and society.	
Brief outline of the course: 1. Health psychology. Definition of health. Bio-psycho-social model of health. 2. Mental health and quality of life, well being. 3. Physiological aspects of mental health, lifestyle	

4. Stress. Coping, resilience.
5. Psychosomatic diseases, placebo.
6. Social support and its importance for health.
7. Burnout syndrome.
8. The meaning of life, faith.
9. Health-related behavior and prevention. Risky behavior, excessive use of the Internet and screens.
10. Socio-economic inequalities in health. Unemployment and health.

Recommended literature:

Křivohlavý, J. (2001). Psychologie zdraví. Praha: Portál.
 Kebza, V. (2005). Psychosociální determinanty zdraví. Praha: Academia.
 Křivohlavý, J. (2002). Psychologie nemoci. Praha: Grada.
 Sarafino, E. P. (2007). Health psychology: Biopsychosocial interactions. John Wiley & Sons.
 Taylor, E. (2006). Health psychology. Singapore: McGraw-Hill.
 Vollrath, M. E. (2006). Handbook of personality and health. Chichester: John Wiley & Sons.
 Marks, D. F., Murray, M., Estacio, E. V., & others. (2024). Health psychology: Theory, research and practice (7th ed.). SAGE Publications Ltd
 Mareš, J., & Kebza, V. (2024). Psychologie zdraví. Grada.

Course language:

Notes:

Course assessment

Total number of assessed students: 180

A	B	C	D	E	FX
98.89	0.56	0.0	0.56	0.0	0.0

Provides: PhDr. Janka Liptáková, PhD.

Date of last modification: 04.02.2025

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPPaPZ/UPN/17	Course name: Introduction into Psychology of Religion
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 credits: 2	
Recommended semester/trimester of the course: 2.	
Course level: II.	
Prerequisites:	
Conditions for course completion: The assessment is based on the interim evaluation. The subject will be taught in both present and distance format. Up-to-date information concerning the subject for the given academic year can be found on the electronic board of the subject in the Academic Information System (AIS) of the UPJŠ.	
Learning outcomes: The student will acquire a basic overview of the origin and current state of knowledge in the field of research and application the psychology of religion. He/she will be able to described, explaine, and evaluate this knowlege. The student will be able to apply the acquired knowledge in the basic orientation in the field, and develop critical thinking and will be able to apply and integrate already acquired knowledge from other (psychological) distributions	
Brief outline of the course: 1. History of psychology of religion in national and world context 2. Psychological perspective on religion and religious experience 3. Psychology of religion in an interdisciplinary context 4. Basic approaches to psychological interpretation and selected views 5. Different types of religious experience 6. Psychological view of religion from a biodromal perspective 7. Spirituality versus religiosity in a postmodern society 8. Coping in the context of religiosity 9. Psychotherapy and religion, pastoral psychology	
Recommended literature: Eliade, M. (1994). Posvátné a profánní. Praha: Česká křesťanská akademie. Eliade, M. (1995). Dějiny náboženského myšlení 1. Praha: Oikoymenh. Freud, S. (1999). Nutkavá jednání a náboženské úkony. In Freud, S., Spisy z let 1906–1909. Praha: Psychoanalytické nakladatelství. Fromm, E. (2003). Psychoanalýza a náboženství. Praha: Aurora Erikson, E. (1996). Mladý muž Luther: studie psychoanalytická a historická. Praha: Psychoanalytické nakladatelství. James, W. (1930). Druhy náboženské zkušenosti. Praha: Melantrich. Jung, C. G. (1993). Analytická psychologie: Její teorie a praxe. Praha: Academia.	

Křivohlavý, J. (2000). Pastorační péče. Praha: Oliva Pargament, K. (1997), Psychology of religion and coping, Říčan, P. (2007). Psychologie náboženství a spirituality. Praha: Portál. Říčan P. (2002), Psychologie náboženství, Portál, Praha, Stríženec, M. (2001) Súčasná psychológia náboženstva					
Course language:					
Notes:					
Course assessment Total number of assessed students: 87					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
Provides: Mgr. Marta Dobrowolska Kulanová, PhD.					
Date of last modification: 21.02.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ UECH/22	Course name: Introduction to Environmental Chemistry
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: 2	
Recommended semester/trimester of the course: 1., 3.	
Course level: II.	
Prerequisites:	
Conditions for course completion: Continuous test. Active participation in exercises - elaboration of semester work. Passing the final examination in the form of a written test.	
Learning outcomes: Introduction to topics in environmental chemistry and basic procedures applied for environmental protection.	
Brief outline of the course: Introduction to Environmental Chemistry Chemical aspects of pollution and environmental problems. Composition and behavior of the atmosphere. Energy balance of the Earth and climate changes. Principles of photochemistry, photoprocesses in the atmosphere. Petroleum, hydrocarbons and coal (characteristics, sources and environmental pollution). Soaps, polymers and synthetic surfactants. Haloorganics and pesticides. Environmental chemistry of some important elements (C, N, S, P, halogens, biologically important metals ...). Environmental chemistry in aqueous media. Aqueous systems, parameters, cycles and their protection. The Earth's crust (rocks, minerals, soils). Natural and artificial radioactivity, utilization. Energy and energy sources (fossil fuels, nuclear, geothermal, solar energy, wind and water energy). Solid waste disposal and recycling.	
Recommended literature: 1. Gary W. van Loon, Stephen J. Duffy: Environmental Chemistry - A Global Perspective, Oxford University Press, Oxford 2003. 2. R. A. Bailey, H. M. Clark, J. P. Ferris, S. Krause, R. L. Strong: Chemistry of the Environment, Academic Press, San Diego 2002. 3. G. Schwedt: The Essential Guide to Environmental Chemistry, Wiley and Sons, London 2001. 4. R. N. Reeve, J. D. Barnes: General Environmental Chemistry, Wiley, London 1994. 5. G. Burton, J. Holman, G. Pilling, D. Waddington: Chemical Storylines, Heinemann, Oxford, London 1994.	
Course language:	
Notes: In-person learning - lectures, seminars and examination. Students are required to attend seminars.	

Based on the current pandemic situation in Slovakia and in accordance with the conditions of the Faculty of Natural Sciences of UPJŠ in Košice, the education and examination can also be carried out in a distance form. The tutorial will be carried out in the form of online lectures and consultings in the BigBlueButton system.

Course assessment

Total number of assessed students: 9

A	B	C	D	E	FX
66.67	11.11	22.22	0.0	0.0	0.0

Provides: doc. RNDr. Andrea Straková Fedorková, PhD.

Date of last modification: 25.03.2025

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPPaPZ/ZMPPV/15	Course name: Introduction to Research Methodology in Education and Psychology
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: 4	
Recommended semester/trimester of the course: 2.	
Course level: II.	
Prerequisites: KPE/PDU/15 and KPPaPZ/PPgU/15	
Conditions for course completion: - active participation in seminars, presentation of assignments in groups, final exam	
Learning outcomes: The graduate of the course will gain information about the research methodology, will understand the basic methods of pedagogical and psychological research that can be used in the practice of the teacher. Within the seminars, students will develop professional skills through their own demonstration of a specific research method. The graduate of the course will be able to carry out simple scientific research, present the results of research and read the results of the latest research in the field of pedagogy and psychology.	
Brief outline of the course: Research in pedagogy and psychology. Scientific research, scientific thinking. Parts of a research project. Research planning. Topic selection, research problem formulation. Types of research plans. Hypothesis, variables, operationalization. Ethical issues of scientific research. Experiment (experiment problems, control of variables in the experiment). Experimental plans, quasi-experiment. Reliability and validity of research. Research sample, methods of sample selection. Data collection techniques - questionnaire, interview, sociometry, semantic differential, observation, tests. Introduction to qualitative methodology. Possibilities of quantitative data processing. How to write a scientific article, presentation, poster, qualification work. Interpretation of findings, integration of findings into context.	
Recommended literature: Bačíková, M., Janovská, A., Orosová, O. Základy metodológie pedagogicko-psychologického výskumu. 2.doplnené vydanie. Šafárik Press, 2019. dostupné online: https://unibook.upjs.sk/img/cms/2019/FF/zaklady-metodologie-ped-psych-vyskumu-2-vyd-web.pdf Gavora, P.: Úvod do pedagogického výskumu. Bratislava, UK 1999. Švec, Š. a kol.: Metodológia vied o výchove. Bratislava, Iris 1998. Turek, I.: K základom pedagogického výskumu. Prešov, KPÚ 1991. Ferjenčík, J.: Úvod do metodológie psychologického výskumu. Praha, Portál 2000. http://www.e-metodologia.fedu.uniba.sk/	
Course language:	

Notes:					
Course assessment					
Total number of assessed students: 915					
A	B	C	D	E	FX
20.87	29.4	23.83	17.81	7.98	0.11
Provides: doc. Mgr. Mária Bačíková, PhD., PhDr. Anna Janovská, PhD.					
Date of last modification: 24.06.2022					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ MDT/19	Course name: Modern Didactical Technology
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 credits: 2	
Recommended semester/trimester of the course: 2.	
Course level: II.	
Prerequisites:	
Conditions for course completion: Summary evaluation based on ongoing assessment: 1. Active participation at the seminars (in the contact or online form) with minimum 80% participation. 2. Practical ongoing assignments (10) and their defense. At least 50% must be obtained from each assignment elaborated according to assessment criteria.	
Learning outcomes: Student graduated from subject will be able: - recognize current available digital tools and their parameters for educational activities, - to use all types of actual digital tools in education of science or humanities, - to design and realize educational activities by using the modern technologies.	
Brief outline of the course: 00. Introduction - goals and didactic principles 01. Modern hybrid classroom in 21st century 02. Digital learning spaces in 21st century 03. Cloud repositories, services, modern web-browser 04. Cloud editors for notes, texts, spreadsheets and presentations 05. Digital text (scan, OCR, voice recognition, Kami pdf) 06. Digital image and audio (digital recording and editing) 07. Interactive E-voting and videoconference systems in education 08. Digital collaborative technologies (social e-reader, collaborative whiteboard) 09. Virtual and digitally based experiments, digital databases 10. Education video (digital recording and editing) 11. Smartphone and tablet in classic and blended education 12. Teaching tools and digital teacher's workspace	
Recommended literature: 1. Kireš, M. et al.: Modern didactical technics in teacher practice (in Slovak), Košice: Elfa, 2010 2. Redecker, C., & Punie, Y. (2017). European Framework for the Digital Competence of Educators: DigCompEdu. Luxembourg: Publications Office of the European Union.	

3. C. R. Tucker, T. Wycoff, J. T. Green, Blended Learning in Action: A Practical Guide Toward Sustainable Change. Thousand Oaks: Corwin Press, 2016.
4. D. Bannister, Guidelines on Exploring and Adapting: LEARNING SPACES IN SCHOOLS. Brussels: European Schoolnet, 2017.
5. current information from web sites related to didactical technologies,
catalogues of teaching tools,
current articles about modern trends in science and humanities education.

Course language:

Slovak, English

Notes:

Course assessment

Total number of assessed students: 126

A	B	C	D	E	FX
57.94	26.19	11.9	2.38	1.59	0.0

Provides: doc. RNDr. Jozef Hanč, PhD.

Date of last modification: 07.07.2022

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/MFDF/15	Course name: Modern Physics from Didactics Point of View
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: 3	
Recommended semester/trimester of the course: 1., 3.	
Course level: II.	
Prerequisites:	
Conditions for course completion: Summary evaluation based on ongoing assessment: 1. Practical ongoing assignments (at least 50% needed) 3. Active participation during face-to-face contact learning in classical or virtual classroom (3 absences allowed) and during online learning (no absence, uploading all ongoing assignments)	
Learning outcomes: Student should 1. Achieve better conceptual understanding and an integrated view on fundamental ideas of contemporary modern physics, which every future physicist and physics teacher should have. (Emphasis is not on abstract mathematical methods, but on using most recent knowledge and tools of Physics Education Research - computer modeling of physical phenomena and employing only elementary algebra and calculus.) 2. Get physical intuition and experience dealing with practical applications of modern physics.	
Brief outline of the course: 01.-05. Fundamental ideas of modern mechanics: scales, symmetry, event, worldline, spacetime diagram, principle of least action, conservation laws; practical applications. 06.-09. Fundamental ideas of relativity: principle of relativity, space-time interval, conservation of momentum, metrics, principle of maximal aging; practical applications. 10.-13. Fundamental ideas of quantum mechanics: probability amplitude, principle of democracy of histories, rules for amplitudes, propagator, Schrödinger's equation, stationary state, Feynman's diagrams; practical applications.	
Recommended literature: 1. Moore, T. A, Six Ideas That Shaped Physics - Unit C, Unit Q, Unit R, 3rd ed., Mc Graw Hill, Boston, 2017 2. Feynman, R.P., QED - The Strange theory of Light and Matter, Princeton University Press, Princeton, 1985 3. Hey, A., Walters, P., New Quantum Universe, Cambridge University Press, 2003 4. Taylor, E. F, Wheeler, J. A., Space-time Physics-Introduction to Special Relativity, 2nd ed., W.H. Freeman and Company, New York, 1992	

5. Taylor, Wheeler, Bertschinger, Exploring Black Holes - Introduction to General relativity, 2nd ed., 2018, <https://archive.org/details/exploringblackholes>
6. Thorne, K. S., Black Holes and Time Warps, W.W. Norton, New York, 1995
7. Relevant resources from recent journal literature (American Journal of Physics, European Journal of Physics, Scientific American...)

Course language:

Slovak

Notes:

Course assessment

Total number of assessed students: 5

A	B	C	D	E	FX
40.0	40.0	20.0	0.0	0.0	0.0

Provides: doc. RNDr. Jozef Hanč, PhD.

Date of last modification: 27.01.2022

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPE/ PDK/17		Course name: Pedagogical Communication			
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 credits: 2					
Recommended semester/trimester of the course: 1.					
Course level: II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 218					
A	B	C	D	E	FX
77.06	20.64	2.29	0.0	0.0	0.0
Provides: Mgr. Beáta Galajda, PhD., Mgr. Katarína Petriková, PhD.					
Date of last modification: 22.09.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPE/ PDD/17		Course name: Pedagogical Diagnostics			
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 credits: 2					
Recommended semester/trimester of the course: 2.					
Course level: II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 134					
A	B	C	D	E	FX
85.07	11.94	2.99	0.0	0.0	0.0
Provides: PaedDr. Michal Novocký, PhD., Mgr. Beáta Galajda, PhD.					
Date of last modification: 22.09.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPE/ PD/22	Course name: Pedagogy
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course:	
Course level: II.	
Prerequisites: KPE/PDU/15	
Conditions for course completion: Obtaining the required number of credits in the prescribed composition by the study plan.	
Learning outcomes: The student is able to demonstrate the acquired competencies in accordance with the profile of the graduate.	
Brief outline of the course: 1. Pedagogy, basic pedagogical categories, system of pedagogical scientific disciplines. 2. Education, pages and functions of education, educational process, self-education. 3. Factors of education, educated individual, pedagogue, pedagogical profession, professional competencies. 4. School education, family education. 5. Educational goals, taxonomy, requirements, classification of educational goals. 6. Methods of education. 7. Pedagogical principles. 8. School system of the Slovak Republic. 9. Didactics, basic questions of didactics, current starting points of didactics. 10. Objectives of the teaching process, the teacher's work with the objectives of teaching. 11. Content of education, basic curriculum, extension curriculum, elements and components of curriculum. 12. Assessment in school education, types, functions and criteria of assessment. 13. Pedagogical control, methods and forms of pedagogical control. 14. Teacher's work planning, written preparation of the teacher for teaching. 15. Teaching process, stages of the teaching process and their didactic functions. 16. Organizational forms of teaching, lesson, stages, types of lessons. 17. Teaching methods, classification, functions, selection of teaching methods. 18. Didactic principles of the teaching process. 19. Basic pedagogical documents, textbook, functions and structural components of the textbook. 20. Current concepts of the teaching process.	
Recommended literature: Čapek, R.: Moderní didaktika. Praha: Grada, 2016.	

Dytrtová, R., Krhutová, M. Učitel. Příprava na profesi. Praha: Grada, 2009. Kalhous, Z. – Obst, O. 2002. Školní didaktika. Praha: Portál, 2002. Petlák, E.: Kapitoly zo súčasnej didaktiky. Bratislava: IRIS, 2005. Prucha, J.: Moderní pedagogika. Praha: Portál, 2012. Turek, I.: Didaktika. Bratislava: Wolters Kluwer, 2014. Vališová, A., Kasíková, H.: Pedagogika pro učitele. Praha: Grada, 2010. Zormanová, L.: Obecná didaktika. Praha: Grada, 2014.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 41					
A	B	C	D	E	FX
24.39	36.59	24.39	12.2	2.44	0.0
Provides:					
Date of last modification: 22.09.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPE/ PPD/22	Course name: Pedagogy and Psychology
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course:	
Course level: II.	
Prerequisites: KPE/PDU/15 and KPPaPZ/PPgU/15	
Conditions for course completion: Obtaining the required number of credits in the prescribed composition by the study plan.	
Learning outcomes: The student is able to demonstrate the acquired competencies in accordance with the profile of the graduate.	
Brief outline of the course: Pedagogy: 1. Pedagogy, basic pedagogical categories, system of pedagogical scientific disciplines. 2. Education, pages and functions of education, educational process, self-education. 3. Factors of education, educated individual, pedagogue, pedagogical profession, professional competencies. 4. School education, family education. 5. Educational goals, taxonomy, requirements, classification of educational goals. 6. Methods of education. 7. Pedagogical principles. 8. School system of the Slovak Republic. 9. Didactics, basic questions of didactics, current starting points of didactics. 10. Objectives of the teaching process, the teacher's work with the objectives of teaching. 11. Content of education, basic curriculum, extension curriculum, elements and components of curriculum. 12. Assessment in school education, types, functions and criteria of assessment. 13. Pedagogical control, methods and forms of pedagogical control. 14. Teacher's work planning, written preparation of the teacher for teaching. 15. Teaching process, stages of the teaching process and their didactic functions. 16. Organizational forms of teaching, lesson, stages, types of lessons. 17. Teaching methods, classification, functions, selection of teaching methods. 18. Didactic principles of the teaching process. 19. Basic pedagogical documents, textbook, functions and structural components of the textbook. 20. Current concepts of the teaching process. Psychology: 1. Psychology as a science, goals and subject of psychology in terms of influential psychological directions. 2. Pedagogical psychology in teacher training, its subject, function. 3. Psychology in school practice: professional forms of control and assistance, psychological examination, counseling process. Crisis intervention. Code of ethics. 4. Psychology in school practice: approaches and models of prevention, prevention spectrum, protective and risk factors of risk behavior of schoolchildren in the context of the theory of triadic influence. 5. Psychology in school practice: effective strategies for prevention of substance use. 6. Psychology of education from the point of view of psychodynamic approach (Psychoanalysis and Individual Psychology). 7. Psychology of education from the point of	

view of humanistic psychology.8. Psychology of education from the point of view of cognitive psychology.9. Psychology of learning and types of learning supplemented by examples from school practice. / success in the context of individual theories of cognitive development.11. Nutritional peculiarities, school non-success / intelligence in terms of intelligence.12. Memory and developmental peculiarities, school non-success 13. Attention and developmental peculiarities, school non / success peculiarities of individual types of family, educational styles.15. Social relations at school, the modes of cognition of interaction U and Ž. Psychosocial climate of school class and school, methods of cognition, sociometry.16. Social influence: presence of others, interpersonal influences and meaningful understanding of social influence in teacher's work.17. Teacher as a professional, his professional ability, teaching style, attitudes towards students, expectations towards students, coping with stress, burnout syndrome.18. Students: gifted and talented, school failure, non-thriving pupils and failing pupils, pupils' self-efficacy.19. Types of research plans and their creation (setting goals, hypotheses, variables, selection of research sample) in the context of pedagogical-psychological research.20. Selected methods of pedagogical-psychological research - questionnaire, interview, observation and possibilities of their use in school practice.

Recommended literature:

Pedagogika:

Čapek, R.: Moderní didaktika. Praha: Grada, 2016.
 Dyrtrtová, R., Krhutová, M. Učitel. Příprava na profesi. Praha: Grada, 2009.
 Kalhous, Z. – Obst, O. 2002. Školní didaktika. Praha: Portál, 2002.
 Petlák, E.: Kapitoly zo súčasnej didaktiky. Bratislava: IRIS, 2005.
 Prucha, J.: Moderní pedagogika. Praha: Portál, 2012.
 Turek, I.: Didaktika. Bratislava: Wolters Kluwer, 2014.
 Vališová, A., Kasíková, H.: Pedagogika pro učitele. Praha: Grada, 2010.
 Zormanová, L.: Obecná didaktika. Praha: Grada, 2014.

Psychológia:

Mareš, J.: Pedagogická psychologie. Praha : Grada 2013.
 Mareš, J., & ČÁP, J.: Psychologie pro učitele. Praha: Portál, 2001.
 Džuka, J.: Základy pedagogickej psychológie. Prešov: UK 2003.
 Orosová, O. a kol.: Psychológia a pedagogická psychológia 1. Košice: UPJŠ, 2005.
 Orosová, O. a kol.: Základy prevencie užívania drog a problematického používania internetu v školskej praxi. Košice: UPJŠ 2012.
 Bačíková, M., Janovská, A. (2019) . Základy metodológie pedagogicko-psychologického výskumu. Sprievodca pre študentov učiteľstva. 2. rozšírené vydanie. Šafárik press, Košice.
 Gavora, P. a kol. (2010). Elektronická učebnica pedagogického výskumu. Bratislava: Univerzita Komenského, 2010. dostupné online na www.e-metodologia.fedu.uniba.sk.
 Vágnerová, M.: Základy psychológie. Praha : Karolinum 2005.
 Vágnerová, M.: Vývojová psychológie. Praha : Karolinum 2005.
 Vágnerová, M.: Škoní podadenská psychologie pro pedagogy. Praha : Karolinum 2005. Výrost, J., Slaměník, I.: Sociální psychologie. Praha : Grada 2008.
 Výrost, J., Salměník, I.: Aplikovaná sociální psychologie I. Praha: Portál 1998.
 Strana: 2
 Fontana, D. : Psychologie ve školní praxi. Praha: Portál 1997.
 Zelina, M.: Stratégie a metódy rozvoja osobnosti. Bratislava, Iris: 1996.
 Křivohlavý, J.: Pozitivní psychologie. Praha: Portál 2004.
 Křivohlavý, J.: Psychologie zdraví. Praha: Portál 2003.

Course language:

Notes:					
Course assessment					
Total number of assessed students: 222					
A	B	C	D	E	FX
34.23	29.73	24.77	9.91	0.9	0.45
Provides:					
Date of last modification: 22.09.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ FYU/22	Course name: Physical Problems
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: 3	
Recommended semester/trimester of the course: 1.	
Course level: II.	
Prerequisites:	
Conditions for course completion: On- line set of problems for self solving is available for students. One task is define for each seminar for testing of student preparation. Production and presentation of three own problems is necessary. problem solving 40 p obtained problem 10 p own problems 10 p oral examination 40 p Final: A 100-90 B 89-80 C 79-70 D 69-60 E 59-50 F 49-0	
Learning outcomes: Students will be ready for using of problem solving strategies at lower and upper secondary school levels. Classical problems are studied in more details from different point of view (students knowledge and skills, technologies, motivation, computer modelling and measurements).	
Brief outline of the course: Methods of problem solving are presented and trained. The sets of typical problems are analysed. Using of modelling and real experiments is discussed.	
Recommended literature: 1. Baláž, P. : Zbierka úloh z fyziky, SPN Bratislava, 1971 2. Bartuška, K.: Postup při řešení fyzikálních úloh, Sbíрка řešených úloh z fyziky pro střední školy I, Praha, Prometheus, 1997, s. 5-10. 3. Halpern, A.: 3000 solved problems in Physics, McGraw-Hill, Inc., USA, 1988 4. Janovič, J., Koubek, V. Pecen, I.: Vybrané kapitoly z didaktiky fyziky. Bratislava, UK, 1999, 5. Jurčová, M., Dohňanská, J., Pišút, J., Velmovská, K.: Didaktika fyziky – rozvíjanie tvorivosti žiakov a študentov. Bratislava, UK, 2001, 6. Kružík, M.: Sbíрка úloh z fyziky pro žáky středních škol, SPN, Praha, 1984 7. Lindner, H.: Řešené úlohy z fyziky, Alfa, Bratislava, 1973 8. Linhart, J. (1976): In: Volf, I.: Metodika řešení úloh ve výuce fyziky na základní škole. Hradec Králové, MAFY, 1998, 9. Pietrasiński, Z. (1964): In: Volf, I.: Metodika řešení úloh ve výuce fyziky na základní škole. Hradec Králové, MAFY, 1998,	

- 10.Scholtz, E., Kireš, M.: Fyzika – kinematika pre gymnázia s osemročným štúdiom. Bratislava, SPN, 2001,
- 11.Šedivý,P., Volf, I.: Dopravní kinematika a grafy. Hradec Králové, MAFY, 1998.
- 12.Volf,I. (1975): In: Bednařík, M., Lepil, O.: Netradiční typy fyzikálních úloh. Praha, PROMETHEUS,1995,
- 13.Volf,I.: Jak řešit úlohy fyzikální olympiády, XXIII. Ročník soutěže fyzikální olympiády ve školním roce 1981/82, Praha, SPN, 1981,
- 14.Volf,I.: Metodika řešení úloh ve výuce fyziky na základní škole. Hradec Králové, MAFY, 1998.
- 15.Halpern, A.: 3000 solved problems in Physics, McGraw-Hill, Inc., USA, 1988

Course language:

Slovak, English

Notes:

Course assessment

Total number of assessed students: 20

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

Provides: doc. RNDr. Marián Kireš, PhD.

Date of last modification: 15.02.2022

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/MSSU/22		Course name: Physics and Didactics of Physics			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present					
Number of ECTS credits: 2					
Recommended semester/trimester of the course:					
Course level: II.					
Prerequisites: ÚFV/DF1/22 and ÚFV/FKS/22 and ÚFV/DF2/22 and ÚFV/ASFU/22					
Conditions for course completion: The graduate has knowledge of physics in wider context. He is able to implement and apply knowledge of physics into education. He is able to apply knowledge of theory of education to selected physical content.					
Learning outcomes: Competencies in accordance with the graduate profile.					
Brief outline of the course: The graduate has knowledge of physics in wider context. He is able to implement and apply knowledge of physics content into education. He is able to apply knowledge of theory of education to selected physical content. Physics: Selected problems of Solid state physics, Subnuclear physics and Astrophysics. Didactics of physics: State educational curriculum ISCED 2,3-Physics. Development of scientific literacy. Physical experiment. Active learning, inquiry-based education in physics. Formative and summative assessment. Talented students and informal education. Analysis of lower and upper secondary teaching units.					
Recommended literature:					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 15					
A	B	C	D	E	FX
46.67	33.33	6.67	6.67	6.67	0.0
Provides:					
Date of last modification: 15.02.2022					

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPPaPZ/PASZ/17		Course name: Problem and Aggressive Behaviour of Pupils. Etiology, Prevention and Intervention.			
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 credits: 2					
Recommended semester/trimester of the course: 2.					
Course level: II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course: General principles of mental development as a basis for recognizing mental disorders in children and adolescents. Etiology of mental disorders and developmental disorders in children and adolescents. Definition of aggressive behavior. Concepts of aggression vs. aggressiveness. Theoretical approaches to aggression. Causes and factors of aggressive behavior. Violence at school and in the family. Bullying. Psychology of problem students. Problems resulting from disturbed behavior. Problems arising from group relationships. Adolescent lifestyle issues. Problems resulting from impaired emotional experience. Solving problematic and aggressive behavior in the school environment. School classroom management, group preventive and intervention work with the classroom. Crisis intervention. Work with parents of problem students. Principles of interviewing a parent. Cooperation with other experts. Prevention of aggressive and problematic behavior at school. Classroom and school climate, school prevention programs. Viac o tomto zdrojovom texteNa získanie ďalších informácií o preklade sa vyžaduje zdrojový text Odoslať spätnú väzbu Bočné panely					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 152					
A	B	C	D	E	FX
83.55	11.84	4.61	0.0	0.0	0.0
Provides: PhDr. Anna Janovská, PhD.					
Date of last modification: 30.01.2025					

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPPaPZ/KPE/ EPU/15	Course name: Professional Ethics for Teachers and School Counsellors
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 credits: 2	
Recommended semester/trimester of the course: 2., 4.	
Course level: II.	
Prerequisites:	
Conditions for course completion: 1. Active participation in seminars (max. 1 absence) - 30p, 2. Preparation for the seminar - 40p, 3. Preparation (description and analysis) of the moral dilemma - 30p. By summing the points obtained during the semester, the student obtains the final evaluation according to the scale: A 87 - 100, B 77 - 86, C 69 - 76, D 61 - 68, E 56 - 60, FX 55 and less. Detailed information in the electronic board of the course in AIS2. The teaching of the subject will be realized by a combined method.	
Learning outcomes: Knowledge: Students will acquire basic knowledge of the principles of teacher ethics and the ethics of school counselors, understanding the theoretical foundations of moral issues and ethical codes related to these professions. Skills: They will learn to analyze and solve moral problems in pedagogical practice, discuss ethical issues, and critically evaluate situations with a moral context. Competencies: They will be able to apply ethical principles in practice, resolve moral dilemmas, and promote a value-oriented school culture.	
Brief outline of the course: Moral emotions (theories of emotion, the center of emotions in the brain, types of emotions and their manifestations) Development of moral reasoning, cognitive approaches to moral reasoning and their comparison (Piaget, Kohlberg, Gilligan, Eisenberg, Selman, Lind), Moral behavior (from the point of view of learning theories) and moral (vs. social and emotional) intelligence in the work of a teacher Possibilities of examining moral behavior and judgment (socio-psychological research of conformity, obedience, aggression and psychodiagnostic approaches to the determination of moral judgment) Morality and professional ethics in general (ethical principles in helping professions) and codes of ethics Professional ethics of the teacher and educational counselor (terminology, concepts, main principles of teacher ethics) and teacher ethics codes Moral dilemmas and ways of solving them, MD of teaching practice	

Possibilities of influencing and stimulating moral judgment, use of moral dilemma in education Cheating and other unethical manifestations in the school environment, ethics and etiquette of final exams					
Recommended literature: Ráčzová, B., & Babinčák, P. (2009). Základy psychológie morálky. Košice: Equilibria. ISBN 978-80-7097-786-6. Gluchmanová, M. (2007). K niektorým terminologickým otázkam učiteľskej etiky. Pedagogická orientace, 17(2), 11–25. ISSN 1211-4669. Malankievičová, S. (2008). Profesijná etika. Prešov: FF PU. Miežgová, J., & Vargová, D. (2007). Etika. Bratislava: SPN Mladé letá. Remišová, A. (2008). Dejiny etického myslenia v Európe a USA. Bratislava: Kalligram. Zelina, M. (2010). Teória výchovy alebo hľadanie dobra. Bratislava: SPN. Gluchmanová, M. (2009). Uplatnenie princípov a hodnôt etiky sociálnych dôsledkov v učiteľskej etike. Prešov: FF PU. ISBN 978-80-555-0042-3. Campbell, E. (2003). The ethical teacher. Berkshire, England: Open University Press. ISBN 0-335-21219-0. Miller, C. B. (2021). Moral psychology (Elements in Ethics). Cambridge University Press. Tiberius, V. (2023). Moral psychology: A contemporary introduction (2nd ed.). Routledge.					
Course language: slovak					
Notes:					
Course assessment Total number of assessed students: 620					
A	B	C	D	E	FX
97.58	2.1	0.32	0.0	0.0	0.0
Provides: Mgr. Lucia Barbierik, PhD.					
Date of last modification: 22.09.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPPaPZ/PPgU/15	Course name: Psychology and Educational Psychology
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: 5	
Recommended semester/trimester of the course: 1.	
Course level: II.	
Prerequisites:	
Conditions for course completion: Assessment: A maximum of 40 points can be earned during the semester (through two assignments and a written verification). Exam entry criteria: Active participation in exercises and a minimum of 30 points earned during the semester. Continuous assessment (40%) and written examination (60%). For more information and updates, refer to the electronic board of the course AIS2. Final evaluation: A 87 – 100 B 77 – 86 C 69 – 76 D 61 – 68 E 56 – 60 FX 55 and less Combined method. The information will be yearly specified on the electronic noticeboard of the course in AIS2, alternatively in LMS UPJŠ or MS Teams environment.	
Learning outcomes: Students will be able to show understanding of the human behaviour in educational situations. Students will be able to describe, explain and justify possible teachers' decisions by using psychological concepts, principles and theories. Students will be able to apply the psychological findings in the field of education. Students will be able to explain how adolescents learn and retain new information, to explain their behaviour in response to educational environment. Students will be able to explain the desired data-based modification of adolescents' behaviour to bring an all-round development of his personality and school performance, to explain the desired data-based modification of the behaviour of adolescents with educational problems, with disadvantages.	
Brief outline of the course: Introduction: The content of the course is based on current knowledge of psychological disciplines, especially pedagogical and school psychology. Teaching is realized by a combination of lectures with engaging narrative interpretation and seminars using interactive, experiential methods, discussion and open communication with mutual respect, support of independence, activity and motivation of students. Syllabus: Goals and Subject of Psychology and Educational Psychology, the field and its transformations (Educational psychology and its changes over time, its mission, and possible personality transformations). School psychology, school psychologist. Professional forms of support in school practice. Psychological assessment. Counseling process. Crisis intervention. Effective strategies and programs for the prevention of risky behavior among schoolchildren.	

Risk/protective factors of risky behavior. Implementation of psychological concepts of personality into school practice. Psychological and educational-psychological characteristics of learning (psychology of learning, types of learning, learning styles). Developmental characteristics and school (un)success (Cognitive, social, emotional, and personality development in childhood and adolescence, Psychological characteristics of adolescence and adulthood. Intelligence, memory, attention, and developmental characteristics of schoolchildren, and school (un)success). Social psychology of the school (teacher-student relationships, methods of understanding teacher-student interaction, the psychosocial climate of the school) and family (factors of family functionality, functional/problematic/dysfunctional/non-functional family, parenting styles). Main actors: Teacher (the teacher as a professional, their professional competence, teaching style, attitudes toward students, expectations of students, coping with stress, burnout syndrome), students (gifted and talented, school failure, successful/unsuccessful students, and failing students, student self-efficacy), school class (as a small social group, internal and external differentiation, bullying, and prevention), psychosocial climate of the school class.

Recommended literature:

Compulsory:

Lectures (Literary sources in published lectures)

Mareš, J.: Pedagogická psychologie. Praha : Grada 2013.

Recommended:

Mareš, J., & ČÁP, J.: Psychologie pro učitele. Praha: Portál, 2001.

Džuka, J.: Základy pedagogickej psychológie. Prešov: UK 2003.

Orosová, O. a kol: Psychológia a pedagogická psychológia 1. Košice: UPJŠ, 2005.

Orosová, O. a kol.: Základy prevencie užívania drog a problematickeho používania internetu v školskej praxi. Košice: UPJŠ 2012.

Vágnerová, M.: Základy psychológie. Praha : Karolinum 2005.

Vágnerová, M.: Vývojová psychológia. Praha : Karolinum 2005.

Vágnerová, M.: Škoní podadenská psychologie pro pedagogy. Praha : Karolinum 2005. Výrost, J., Slaměnik, I.: Sociální psychologie. Praha : Grada 2008.

Výrost, J., Salměnik, I.: Aplikovaná sociální psychologie I. Praha: Portál 1998.

Fontana, D. : Psychologie ve školní praxi. Praha: Portál 1997.

Zelina, M.: Stratégie a metódy rozvoja osobnosti. Bratislava, Iris: 1996.

Křivohlavý, J.: Pozitivní psychologie. Praha: Portál 2004.

Křivohlavý, J.: Psychologie zdraví. Praha: Portál 2003.

ELECTRONIC INFORMATION RESOURCES (UL UPJŠ)

Course language:

slovak

Notes:

Course assessment

Total number of assessed students: 1823

A	B	C	D	E	FX
10.86	20.35	24.08	22.22	20.13	2.36

Provides: prof. PhDr. Oľga Orosová, CSc., Mgr. Lucia Barbierik, PhD.

Date of last modification: 09.09.2024

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPPaPZ/PTPN/17	Course name: Psychology of Creativity and Working with Gifted Students in Teacher Practice
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 credits: 2	
Recommended semester/trimester of the course: 2.	
Course level: II.	
Prerequisites:	
Conditions for course completion: 1. active participation in lessons (max. 2 absences) - 30p, 2. own output at the seminar - 40p, 3. seminar work - 30p. By summing the points obtained during the semester, the student obtains the final evaluation according to the given scale: A 87 - 100, B 77 - 86, C 69 - 76, D 61 - 68, E 56 - 60, FX 55 and less. Detailed information in the electronic board of the course in AIS2. The teaching of the subject will be realized by a combined method.	
Learning outcomes: The student understands the basic factors and process of creativity. The student is able to explain the specifics of working with the gifted. He knows the methods of identifying talent and also can apply methods to support creativity and the development of talent in the implementation of creative creativity in education.	
Brief outline of the course: The concept of creativity. A brief history of the theory of creativity. Social, psychological and biological factors of creativity. Cognitive processes in creativity. Creativity and cognitive style. Development of creativity. Talent and giftedness. Methods of determining creativity and talent. Methods of developing creativity and talent. Creativity and talent development programs. Specifics of working with the gifted children.	
Recommended literature: DOČKAL, V. (2006): Inteligencia a tvorivosť, tvorivé nadanie od intelektovej schopnosti po štruktúru osobnosti. In: KUSÁ, D. a kol. EDS. (2006): Zjavná a skrytá tvorivosť. Bratislava: Slovak Academic Press HRÁBKOVÁ, L. (2009): Nadání a nadaní. Pedagogicko- psychologické přístupy, modely, výzkumy a jejich vztah ke školské praxi. Praha: Grada Publishing DACEY, J.S.- LENNON, K.H. (2000): Kreativita. Praha: Grada	

GROSS, M.U.M. (2009): Highly Gifted Young People: Development from Childhood to Adulthood. In: SHAVININA, L. (2009): International Handbook on Giftedness. Part one. Springer

KUSÁ, D. a kol. EDS. (2006): Zjavná a skrytá tvorivosť. Bratislava: Slovak Academic Press

KOLKOVÁ, S. (2000): Tvorivosť a jej rozvoj vo voľnočasových aktivitách detí (v školskom klube). Bratislava: Metodické centrum v Bratislave

LOKŠOVÁ, I., - LOKŠA, J.: (2003): Tvořivé vyučování. Praha: Grada

LAZNIBATOVÁ, J. (2004): Špecifická vývinu a vzdelávania nadaných detí. In: Psychológia a patopsychológia dieťaťa, roč.39, č. 2-3

LAZNIBATOVÁ, J. (2001): Nadané dieťa, jeho vývin, vzdelávanie a podporovanie. Bratislava: Iris

MESÁROŠOVÁ, M. (1998): Nadané deti. Poznávanie a rozvíjanie ich osobnosti. Prešov: Manacon

SZOBIOVÁ, E. (2004): Tvorivosť – Od záhady k poznaniu. Bratislava: Stimul - Centrum informatiky a vzdelávania FIF UK

National and international scientific journals

Course language:

slovak

Notes:

Course assessment

Total number of assessed students: 82

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

Provides: PhDr. Janka Liptáková, PhD.

Date of last modification: 24.06.2022

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KSSFaK/ ČGUAP/15	Course name: Reading Literacy in Educational Process
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: 2	
Recommended semester/trimester of the course: 2.	
Course level: II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 48	
abs	n
100.0	0.0
Provides: doc. PaedDr. Ivica Hajdučková, PhD.	
Date of last modification: 07.03.2025	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPPaPZ/RKS/14	Course name: Resolving Conflict Situations in Educational Practice
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: 1., 3.	
Course level: II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 211	
abs	n
94.79	5.21
Provides: PhDr. Anna Janovská, PhD.	
Date of last modification: 27.05.2024	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ MPPb/15	Course name: Scheduled practice teaching
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 36s Course method: present	
Number of ECTS credits: 1	
Recommended semester/trimester of the course: 2.	
Course level: II.	
Prerequisites: KPE/MPPa/15 and KPE/PDU/15 and (KPPaPZ/PaSPP/09 or KPPaPZ/PPgU/15)	
Conditions for course completion: 1. Compulsory attendance during the organisational and informational seminar. 2. Compulsory attendance: sitting in on classes, analytical classes at training schools. 3. Sitting in on classes and analytical classes taught by supervising teachers – 11x. 4. Complete 1 independent teaching session and analytical class under supervision. 5. Submitted Scheduled practice teaching (SPT) documentation. (Sitting-in records, Written class preparation, List of sitting-in sessions and trainee's performance during SPT, SPT report, Assessment of the trainee's pedagogical performance during SPT).	
Learning outcomes: The student can purposefully perceive and interpret phenomena observed during chemistry classes in terms of subject didactics and psychodidactics. Confront their own preconcepts pertaining to subject didactics and psychodidactics with the actual teachers' concepts in practice. Gain motivation for further study of the respective disciplines in terms of their own specialisation and for purposeful development of professional competences. Apply didactic skills to teach chemistry by designing a lesson project and teaching it in practice.	
Brief outline of the course: Students observe the process of teaching the subject of chemistry in primary school and secondary school and analyze it with supervising teacher. The internship takes place continuously during the semester. It is included in the timetable once a week at time 1-3. lessons at primary and secondary schools. The first two hours students observe/teach, the third lesson is an analysis. Observation, perception, and analysis of subject-specific and psychodidactic phenomena in the way chemistry is taught at the training schools. Written evaluation and theoretical generalisation of the phenomena observed during the classes. Didactic Scheduled practice teaching analysis. Analysis of the perceived phenomena, theoretical generalisation, and comparison of the findings against theory. Written class preparation for teaching a lesson in chemistry. Trainee's teaching performance.	
Recommended literature: Current chemistry textbooks for primary and secondary schools in the Slovak Republic.	
Course language:	
Notes:	

Course assessment	
Total number of assessed students: 343	
abs	n
100.0	0.0
Provides:	
Date of last modification: 26.10.2021	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/MPPb/15	Course name: Scheduled practice teaching
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 36s Course method: present	
Number of ECTS credits: 1	
Recommended semester/trimester of the course: 2.	
Course level: II.	
Prerequisites: KPE/MPPa/15 and KPE/PDU/15 and (KPPaPZ/PaSPP/09 or KPPaPZ/PPgU/15)	
Conditions for course completion: Student observes 11 physics lessons and leads one own physics lesson under the guidance of a teacher trainer. Confirmation of classroom visits. Written assessment made by teacher trainer.	
Learning outcomes: Students acquire knowledge by observing the practical applications of teaching skills for teaching the subject of physics and getting known about the organization of school work. Students gain first experience with teaching the subject of physics.	
Brief outline of the course: Students observe the process of teaching physics at lower and upper secondary schools and analyze it with teacher trainer. Practice takes place continuously during the course of the semester. Practice is scheduled once a week at the time of the first to third lesson at schools. The first two lessons are observation/teaching, the third lesson - analysing the teaching process under the guidance of the teacher trainer.	
Recommended literature:	
Course language: Slovak	
Notes:	
Course assessment Total number of assessed students: 93	
abs	n
100.0	0.0
Provides: doc. RNDr. Jozef Hanč, PhD.	
Date of last modification: 03.05.2015	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ FEP1/15	Course name: School Computer-Based Physical Laboratory
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: 3	
Recommended semester/trimester of the course: 1., 3.	
Course level: II.	
Prerequisites:	
Conditions for course completion: Terms and conditions of assessment during the semester -participation in classes in accordance with study regulations and teacher's instructions -active participation at seminars and exercises -submitting all the assignments in accordance with teacher's instruction -realization, presentation and defence of the final assignment Final assessment: -based on assessment during the semester Conditions for successful completion of the course: -participation in lessons in accordance with the study regulations and teacher's instructions -achieving the level higher than 50 % in assessment during the semester and in final assessment	
Learning outcomes: By the end of the course student gains an overview about the possible use of digital technologies to support active learning in physics implementing methods of inquiry-based science education. He gains skills to use and develop activities on measuring data with the help of datalogging, measuring on videorecordings and picture and modeling physical processes. Student is able to implement such activities in physics teaching to support active learning, conceptual understanding and inquiry skills' development.	
Brief outline of the course: 1. Inquiry-based science education (IBSE). Inquiry skills. Digital technologies to enhance IBSE. 2. Inquiry teaching and learning in computer-based laboratory. Digital tools for data collection, videomeasruement, modeling and data processing and analysis. 3. Data collection in real experiment with the help of sensors. 4. Processing and analysis of data gained with the help of sensors. 5.Activities on real-time measurements and processing and data analysis implementing IBSE methods. 6. Videomeasurement. How to measure on videorecording and picture. 7. Processing and analysis of data gained from videomeaurement. 8. Activities on videomeasurement and processing and data analysis implementing IBSE methods	

9.Mathematical modeling with the help of computer. Role of computer modeling in science education. 10. Activities on computer modeling implementing IBSE methods. 11.Inquiry-based science education and methods of assessment. 12.Lesson design implementing digital technologies and IBSE methods.					
Recommended literature: Learning by doing the CMA way, available on https://cma-science.nl/ SOKOLOFF, David, THORNTON, Ronald, K.: Interactive Lecture Demonstrations, Wiley , 2006					
Course language: English					
Notes:					
Course assessment Total number of assessed students: 17					
A	B	C	D	E	FX
76.47	23.53	0.0	0.0	0.0	0.0
Provides: doc. RNDr. Zuzana Ješková, PhD.					
Date of last modification: 15.09.2021					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/ PSP1/22		Course name: School Physical Experiments I			
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 credits: 2					
Recommended semester/trimester of the course: 1.					
Course level: II.					
Prerequisites:					
Conditions for course completion: continuous written tests being active in practises final oral examination					
Learning outcomes: To gain basic skills with demonstration and physics interpretation of school physics experiments belonging to the subject matter in Physics classes at basic schools and high schools. To become familiar with didactic procedures related to using school experiments in different phases of the educational process.					
Brief outline of the course: The practices are aimed at practical realization and physics interpretation of school demonstration experiments from selected topics of the physics subject matter for basic-school and high-school pupils. The emphasis is on familiarizing with teaching aids and didactic devices used in performing school physics experiments and on getting basic skills with their utilization in physics teaching.					
Recommended literature: 1.Kašpar,E.,Vachek,J.: Pokusy z fyziky na středních školách, I.díl, SPN Praha,1967 2.Koubek, V. a kol.: Školské pokusy z fyziky, SPN Bratislava, 1992 3. http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 20					
A	B	C	D	E	FX
70.0	30.0	0.0	0.0	0.0	0.0
Provides: doc. RNDr. Marián Kireš, PhD.					
Date of last modification: 15.02.2022					

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ PSP2/22	Course name: School Physical Experiments II
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 credits: 2	
Recommended semester/trimester of the course: 2.	
Course level: II.	
Prerequisites:	
Conditions for course completion: Terms and conditions of assessment during the semester -participation in classes in accordance with study regulations and teacher's instructions -tests during the semester 50 points -active participation 20 points -first assessment 15points -second assessment 15points Final assessment: -based on assessment during the semester Conditions for successful completion of the course: -participation in lessons in accordance with the study regulations and teacher's instructions -achieving the level higher than 50 % in assessment during the semester and in final assessment	
Learning outcomes: By the end of the course students gain knowledge and broaden skills necessary for understanding methods, techniques and physical interpretations of all types of school physical experiments that are parts of the subject matter in physics classes at lower and upper secondary schools in accordance with the course curricular content	
Brief outline of the course: The practises are aimed at practical realization and physics interpretation of school demonstration experiments from selected topics of the physics subject matter for basic- and high-school pupils and their convenient incorporation into educational process. The emphasis is on familiarizing with teaching aids and didactic devices used in performing school physics experiments and on extending skills with their utilization in physics teaching. The course content involves: 1. Oscillations 2. Waves and acoustics 3. Electrostatics 4. Electric current 5. Stationary magnetic field 6. Non-stationary magnetic field 7. Alternating current	

8.Optics					
Recommended literature: ONDEROVÁ, Ľudmila, KIREŠ, Marián, JEŠKOVÁ, Zuzana, DEGRO, Ján: Praktikum školských pokusov z fyziky II. , PF UPJŠ, Košice, 2004 LEPIL, Oldřich, HOUDEK, Václav, PECHO, Alojz: Fyzika pre 3.ročník gymnázií, SPN, Bratislava, 1998 PIŠÚT, Ján a kol, Fyzika pre 4.ročník gymnázia , SPN, Bratislava, 1987 DEMKANIN, Peter, HORVÁTH, Peter, CHALUPKOVÁ, Soňa, ŠUHAIJOVÁ, Zuzana: Fyzika pre 2.ročník gymnázia a 6.ročník gymnázia s osemročným štúdiom, Združenie EDUCO, 2010 DEMKANIN, Peter, HORVÁTHOVÁ, Martina: Fyzika pre 3.ročník gymnázia a 7.ročník gymnázia s osemročným štúdiom, Združenie EDUCO, 2012					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 21					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
Provides: doc. RNDr. Zuzana Ješková, PhD.					
Date of last modification: 15.02.2022					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚTVŠ/ CM/13	Course name: Seaside Aerobic Exercise
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 credits: 2	
Recommended semester/trimester of the course:	
Course level: I., II., P	
Prerequisites:	
Conditions for course completion: Completion: passed Condition for successful course completion: - active participation in line with the study rule of procedure and course guidelines - effective performance of all tasks- aerobics, water exercise, yoga, Pilates and others	
Learning outcomes: Content standard: The student demonstrates relevant knowledge and skills in the field, which content is defined in the course syllabus and recommended literature. Performance standard: Upon completion of the course students are able to meet the performance standard and: - perform basic aerobics steps and basics of health exercises, - conduct verbal and non-verbal communication with clients during exercise, - organise and manage the process of physical recreation in leisure time	
Brief outline of the course: Brief outline of the course: 1. Basic aerobics – low impact aerobics, high impact aerobics, basic steps and cuing 2. Basics of aqua fitness 3. Basics of Pilates 4. Health exercises 5. Bodyweight exercises 6. Swimming 7. Relaxing yoga exercises 8. Power yoga 9. Yoga relaxation 10. Final assessment Students can engage in different sport activities offered by the sea resort – swimming, rafting, volleyball, football, table tennis, tennis and other water sports in particular.	
Recommended literature: 1. BUZKOVÁ, K. 2006. Fitness jóga. Praha: Grada. 167 s.	

2. ČECHOVSKÁ, I., MILEROVÁ, H., NOVOTNÁ, V. Aqua-fitness. Praha: Grada. 136 s. 3. EVANS, M., HUDSON, J., TUCKER, P. 2001. Umění harmonie: meditace, jóga, tai-či, strečink. 192 s. 4. JARKOVSKÁ, H., JARKOVSKÁ, M. 2005. Posilování s vlastním tělem 417 krát jinak. Praha: Grada. 209 s. 5. KOVAŘÍKOVÁ, K. 2017. Aerobik a fitness. Karolium, 130 s.	
Course language: Slovak language	
Notes:	
Course assessment Total number of assessed students: 82	
abs	n
7.32	92.68
Provides: Mgr. Agata Dorota Horbacz, PhD.	
Date of last modification: 29.03.2022	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/ DEX/22		Course name: Selected Demonstration Experiments			
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: 3					
Recommended semester/trimester of the course: 2.					
Course level: II.					
Prerequisites:					
Conditions for course completion: Seminar work – a project dealing with hands-on experiments and their role in Physics teaching. Oral examination					
Learning outcomes: The goal of the course is to develop pedagogic skills and creativity of future Physics teachers through non-traditional physical experiments.					
Brief outline of the course: The aim of the lecture is to show a lot of non-traditional physical experiments which can help students understand physical phenomena and find their connection with everyday life. The experiments are mainly hands-on ones which can be performed with simple tools and don't require any special equipment. The experiments are carried out by students themselves. Through these experiments students are able to gain practical skills, develop experimental habits and verify their theoretical knowledge.					
Recommended literature: 1. Onderová L.: Netradičné experimenty vo vyučovaní fyziky, MC Prešov, 2002 2. Lorbeer, G.L., Nelsonová, L.W.: Fyzikální pokusy pro děti, Portál, Praha, 1998 3. Kostič, Ž.: Medzi hrou a fyzikou, Alfa, Bratislava, 1971 4. Kireš, M., Onderová, L.: Fyzika každodenného života v experimentoch a úlohách, JSMF Bratislava 2001, ISBN 80-7097-446-X 5. http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 19					
A	B	C	D	E	FX
84.21	5.26	0.0	0.0	0.0	10.53

Provides: doc. RNDr. Marián Kireš, PhD.
Date of last modification: 15.02.2022
Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ VPF1/15	Course name: Selected General Physics Problems I
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present	
Number of ECTS credits: 3	
Recommended semester/trimester of the course: 2.	
Course level: II.	
Prerequisites:	
Conditions for course completion: 1. writing exam 20 points 2. writing exam 20 points self examples 60 bodov A 100-90 B 89-80 C 79-70 D 69-60 E 59-50 F 49-0	
Learning outcomes: Physics interpretation of everyday phenomena can help with deeper understanding of physics problems.	
Brief outline of the course: 1. Kinematics and dynamics 2. Hydrostatics and hydrodynamics 3. Surface properties of liquids 4. Thermics and Thermodynamics 5. Thermics and Thermodynamics II 6. Electrostatics 7. Electric field 8. Magnetic field 9. Mechanical oscillations, resonance, waves 10. Acoustics 11. Ray Optics 12. Wave Optics 13. Student assignments presentation	
Recommended literature: 1. Nahodil, J.: Fyzika v bežnom živote, Prometheus, Praha, 1996 2. Tulčinský, J.: Zbierka kvalitatívnych úloh z fyziky, SPN, Bratislava, 1990 3. Kašpar, E.: Problémové vyučovanie a problémové úlohy, SPN, Praha 1982 4. Feynman, R.P.: Feynmanove prednášky z fyziky 1-5, Alfa, 1985 5. Landau, Kitajgorodskij: Fyzika pre každého, Alfa 1972 6. Lange, V.: To chce vtip!, Alfa, Bratislava, 1988 7. http://kekule.science.upjs.sk/fyzika	

8. http://physedu.science.upjs.sk					
Course language: Slovak, English					
Notes:					
Course assessment Total number of assessed students: 40					
A	B	C	D	E	FX
82.5	12.5	0.0	0.0	0.0	5.0
Provides: doc. RNDr. Marián Kireš, PhD.					
Date of last modification: 28.03.2020					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ VPF2/22	Course name: Selected General Physics Problems II
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: 2	
Recommended semester/trimester of the course: 3.	
Course level: II.	
Prerequisites:	
Conditions for course completion: presentation of selected problem 30 p writing exam 70 p A 100-90 B 89-80 C 79-70 D 69-60 E 59-50 F 49-0	
Learning outcomes: Everyday phenomena are used for deeper and conceptual understanding of physics problem.	
Brief outline of the course: 1.Mechanics •Coriolisova force •How Swing works •Bicycle •Tides •Inertia 2.Hydromechanics •Archimedes screw •Water flow •Archimedes principle in Action 3.Kapilarity •Water in plant •Kapilár hysteresis •Bubbles and soap •Floating on water surface 4.Acoustic •Signal production •Human voice •Space acoustic •Home ciname 5.Optics •Sight •Opticalillusions	

- Space imaging
- Atmospheric acoustic
- 6.Probléms IYPT
- Magnetohydrodynamics
- Bulbs
- Falling spring
- Ship movement
- Thermal exchange
- 7.Differenct problems
- Sonoluminiscence
- Ice pick
- Kelvin water droplet
- Water stain
- 8.Student work presentation

Recommended literature:

1. Walker, J.: The Flying Circus of Physics with answers, John Wiley & Sons, 2005
 2. Gnädig, P., Honyek, G., Riley, K.: 200 Puzzling Physics Problems with Hints and Solutions, Cambridge University Press, 2001
 3. Stepan, J.: Targeting Studnets ` Misconceptions, Showboard, 2003
 4. Swartz, C.: Back of the Envelope Physics, The John Hopkins Uni. Press, Baltimore, 2003
 5. Nahodil, J.: Fyzika v bežnom živote, Prometheus, Praha, 1996
 6. Tulčinský, J.: Zbierka kvalitatívnych úloh z fyziky, SPN, Bratislava, 1990
 7. Kašpar, E. : Problémové vyučovanie a problémové úlohy, SPN, Praha 1982
 8. Feynman, R.P. : Feynmanove prednášky z fyziky 1-5, Alfa, 1985
 9. Landau, Kitajgorodskij : Fyzika pre každého, Alfa 1972
 10. Lange, V.: To chce vtip!, Alfa, Bratislava, 1988
- actual articles

Course language:

Slovak, English

Notes:

Course assessment

Total number of assessed students: 0

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

Provides: doc. RNDr. Marián Kireš, PhD.

Date of last modification: 15.02.2022

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KSSFaK/VSJU/15	Course name: Slovak Language for Teachers
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: 2	
Recommended semester/trimester of the course: 1., 3.	
Course level: II.	
Prerequisites:	
Conditions for course completion: Conditions for successful completion of the course: a) regular active participation in seminars, b) preparation of basic literature and content of lectures, c) elaboration of seminar work / creative task, d) successful completion of the final test. Conditions for obtaining the final evaluation: a) seminar work / creative task b) final test (min. 56%) Final evaluation: 100,00 - 92,00% A 91,99 - 83,00% B 82,99 - 74,00 % C 73.99 - 65.00% D 64.99 - 56.00% E 55.99% and less FX Prerequisites for successful completion of the course are annually updated on the electronic bulletin board in AIS2.	
Learning outcomes: During the final evaluation, the student demonstrates adequate mastery of the content standard of the course, which is defined by the required literature and seminar content, and demonstrates mastery of the performance standard, within which the student is able to practically apply the standard of standard Slovak in oral and written communications. manuals, gain skill in the bibliographic and citation standard. The graduate of the course normatively masters written communication on the basis of current orthographic rules and knows the basic characteristics of the means of expression of the text and functional language style.	
Brief outline of the course: Characteristics of basic terms of general linguistics (language – speech, language functions, the sign character of language, language levels, content and form in language, individual and general aspect of language units) on interdisciplinary background and with the application to Slovak as a national language. Language standard, codification, usus. Basic codification manuals. Application of orthographic rules in practical documents. Sound culture, pronunciation styles. Orthoepic phenomena in vowels and consonants. Application of rhythmic law and its exceptions. Assimilation and its specific features in Slovak. Style, stylization – methods and demonstration of structure of text components.	
Recommended literature: BÓNOVÁ, I. - JASINSKÁ, L.: Jazyková kultúra nielen pre lingvistov. Košice: UPJŠ 2019. 100 s.	

FINDRA, J.: Štylistika slovenčiny. Martin : Osveta, 2004.
 FINDRA, J.: Štylistika slovenčiny v cvičeniach. Martin : Osveta, 2005.
 KRÁĽ, Á.: Pravidlá slovenskej výslovnosti. Martin: Matica slovenská 2006. 423 s.
 Krátky slovník slovenského jazyka. Martin: Matica slovenská 2020.
 SABOL, J.- SLANČOVÁ, D. - SOKOLOVÁ, M.: Kultúra hovoreného slova. Prešov, FF UPJŠ 1989.
 Pravidlá slovenského pravopisu. Bratislava: Veda 2000 (2013).
 SABOL, J. – BÓNOVÁ, I. – SOKOLOVÁ, M.: Kultúra hovoreného prejavu. Prešov: FF PU 2006.
 SLANČOVÁ, D.: Praktická štylistika. 2., upravené a doplnené vydanie. Prešov: Slovacontact 1996. 178 s. ISBN 80-901417-9-X.
 Slovník súčasného slovenského jazyka. Bratislava: Veda 2006.
 Slovník súčasného slovenského jazyka. Bratislava: Veda 2011.
 Slovník súčasného slovenského jazyka. Bratislava: Veda 2015.

Course language:

Slovak language

Notes:

Course assessment

Total number of assessed students: 161

A	B	C	D	E	FX
15.53	23.6	30.43	14.29	13.66	2.48

Provides: PhDr. Iveta Bónová, PhD., univerzitná docentka, PhDr. Lucia Jasinská, PhD.

Date of last modification: 02.10.2025

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ FKS/22	Course name: Solid State Physics
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: 2	
Recommended semester/trimester of the course: 1.	
Course level: II.	
Prerequisites:	
Conditions for course completion: Successful passing the course requires presentation of adequate knowledge of concepts, phenomena and laws from Condensed Matter Physics. Knowledge of structural, mechanic, electric, thermal, transport and magnetic properties of solids and potential possibilities of their practical applications. The number of credits reflects the extent of the course (2 hours of lectures) and the fact that the contents of the course represents part of state exam in master degree. During semester students will prepare two written works on the given topic and they will actively participate in the final debate on the topics which are identical to the content of the lectures. Threshold for successful passing the course is 50 % of the sum of obtained scores from the tests and oral exam. Maximal total score from both tests represents 30 % from the total score. The scale of the total score is defined as follows: A 100-91% B 90-81% C 80-71% D 70-61% E 60-50% Fx 49-0%	
Learning outcomes: Successful passing the course will significantly contribute to the expertise of the teacher in physics. Student will learn basic concepts in Condensed matter physics and understand phenomena in solids. He will also learn selected theoretical approaches and used experimental techniques in Condensed matter physics. In addition, he will also be able to interpret simple experimental observations based on quantum-mechanical phenomena.	
Brief outline of the course: 1. week: Structure of crystals. Amorphous materials. Space and crystal lattice, elementary cell. Bravais lattices and crystallographic systems. Directions and planes in a crystal lattice – Miller's indexes. Reciprocal lattice. 2. week: Methods of structural analysis. Diffraction of X-ray radiation on crystals. Bragg's equation and Laue's condition, relation between them. Ewald's construction for different experimental techniques.	

3. week: Mechanical properties of solids and perturbations in crystal lattice. Classification of solids according to nature of bonding among elements in crystal lattice. Basic types of bondings (ion, covalent, metal, Van der Waals, hydrogen) 4. week: Thermal properties of solids – Einstein and Debye theory of specific heat. Electrical properties of solids. 5. week: Sommerfeld's theory. Density of electronic states. Influence of temperature on the distribution of free electrons. Fermi – Dirac distribution function. 6. week: Electron in periodic potential. Energy spectrum of electrons in crystal. Kronig – Penney's model. Effective mass of electron. 7. week: Concept of holes. Semiconductors. Electrical conductivity of metals and semiconductors adopting properties of energy spectrum of electrons. 8. week: Transport properties in metals and semiconductors – Hall effect, magnetoresistance, photoconductivity, contact phenomena, quantum Hall effect. 9. week: Macroscopic quantum phenomena: Superconductivity and Superfluidity. 10. week: Magnetic properties of solids – orbital and spin magnetic moment of atom. Definition of basic magnetic quantities (magnetization, polarization, susceptibility, permeability). Vector model of atom. 11. Classification of magnetic materials according to nature of magnetic interactions. Diamagnetic and paramagnetic systems. 12 week: Basic properties of ferromagnets. Magnetic hysteresis, coercitive field. Domain structure, physical reasons leading to the domain structure.																	
Recommended literature: H. Ibach, H. Lüth: Solid-State Physics. Springer - Verlag, Berlin, 1993. Ch. Kittel: Introduction to Solid State Physics. John Wiley & Sons, Inc. 1976.																	
Course language: Slovak, English																	
Notes: The course is given in attendance form, if a need arises, online form using MS Teams can be adopted.																	
Course assessment Total number of assessed students: 38 <table border="1"> <thead> <tr> <th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>FX</th></tr> </thead> <tbody> <tr> <td>68.42</td><td>21.05</td><td>7.89</td><td>2.63</td><td>0.0</td><td>0.0</td></tr> </tbody> </table>						A	B	C	D	E	FX	68.42	21.05	7.89	2.63	0.0	0.0
A	B	C	D	E	FX												
68.42	21.05	7.89	2.63	0.0	0.0												
Provides: prof. RNDr. Peter Kollár, DrSc.																	
Date of last modification: 19.12.2022																	
Approved: prof. RNDr. Peter Kollár, DrSc.																	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ SPC1a/22	Course name: Special Practising the School Experiments I
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 4 Per study period: 56 Course method: present	
Number of ECTS credits: 4	
Recommended semester/trimester of the course: 1.	
Course level: II.	
Prerequisites:	
Conditions for course completion: 1. Participations in exercises (also applies to the online form of teaching). Students are required to participate in laboratory exercises. The students can excuse themselves (incapacity for work, family reasons, etc.) for a maximum of two exercises during the semester without the need for replacement. In the case of a longer-term justified absence (for example due to incapacity for work), the student will be assigned an alternative form of mastering the missed curriculum. 2. Active participation in class. Students are active – they master the knowledge of general and inorganic chemistry, they know the working procedures for experiments, which include worksheets, cooperation and communication in pairs/groups and presentation of the results of their work. Learning materials will be available through the e-learning portal LMS Moodle (direct link to the website: https://lms.upjs.sk/) in the course Special Practising the School Experiments I. 3. Outputs – presentation of experiments for primary and secondary school. There will be two outputs focused on demonstration experiments on selected topics of primary and secondary school chemistry. 4. A part of the student's assessment in the subject is also a written test, given in the 8th week of teaching. The final assessment in the course consists of the sum of points obtained for: 1. Active preparation for exercises (0-30 points). 2. Outputs – presentation of experiments for primary and secondary schools (0-20 points). 3. Written test (0-50 points). Conditions for successful completion of the course: In order to obtain an A rating, it is necessary to obtain at least 85 points in total, to obtain an B rating at least 75 points, to obtain a C rating at least 65 points, to obtain a D rating at least 55 points and to obtain an E rating at least 45 points.	
Learning outcomes: The aim of the course is to acquire and consolidate basic experimental skills and habits in work techniques in school demonstration experiments with an emphasis on the safety and health of students in student experimental work. Students will also acquire basic knowledge and skills in the field of inquiry-based learning and work with computer-based chemical experiments.	
Brief outline of the course: 1. General instructions for work in a school chemical laboratory.	

2. Basic chemical concepts.
3. Basic chemical laws and properties of substances. Solubility of substances. Solutions. Determination of physical and chemical constants.
4. Energy changes in chemical reactions. Factors affecting the rate of chemical reactions.
5. Experiments on the topic of oxygen, hydrogen, air.
6. Halogens and their compounds.
7. Chalcogens and their compounds.
8. Carbon, nitrogen and their compounds.
9. Acids and bases.
10. Chemistry of everyday life in school experiments.
11. Environmental chemistry. Interesting school experiments.

Recommended literature:

1. GANAJOVÁ, M., DZURILLOVÁ, M.: Školské pokusy z chémie I. Košice: UPJŠ v Košiciach, Prírodovedecká fakulta, 2005. ISBN 80-7097-617-9.
2. KIREŠ, M., JEŠKOVÁ, Z., GANAJOVÁ, M., KIMÁKOVÁ, K.: Bádateľské aktivity v prírodovednom vzdelávaní. Časť A. Bratislava: ŠPÚ, 2016. ISBN 978-80-8118-155-9.
https://www.statpedu.sk/files/articles/nove_dokumenty/ucebnice-metodiky-publikacie/badatske-aktivity/01cast_a_web.pdf
3. GANAJOVÁ, M., KRISTOFOVÁ, M.: Bádateľské aktivity v prírodovednom vzdelávaní. Časť B. Ukážky vytvorených metodických a pracovných materiálov z predmetu Chémia. Bratislava: ŠPÚ, 2016. ISBN 978-80-8118-155-9.
https://www.statpedu.sk/files/articles/nove_dokumenty/ucebnice-metodiky-publikacie/badatske-aktivity/04cast_b_chemia_web.pdf
4. GANAJOVÁ a kol.: Zbierka inovatívnych metodík z chémie pre základné školy. Doplnené vydanie. Bratislava: CVTI SR, 2021. ISBN 978-80-8240-007-9.
<https://vzdelavanie.itakademia.sk/vystupy/zim-che-zs.pdf>
5. GANAJOVÁ a kol.: Zbierka inovatívnych metodík z chémie pre stredné školy. Doplnené vydanie. Bratislava: CVTI Bratislava: CVTI SR, 2021. ISBN 978-80-8240-008-6.
<https://vzdelavanie.itakademia.sk/vystupy/zim-che-ss.pdf>
6. Inovovaný štátny vzdelávací program pre 2. stupeň ZŠ. Človek a príroda. Chémia.
https://www.statpedu.sk/files/articles/dokumenty/inovovany-statny-vzdelavaci-program/chemia_nsv_2014.pdf
7. Inovovaný štátny vzdelávací program pre gymnázia so štvorročným a päťročným vzdelávacím programom. Človek a príroda. Chémia. https://www.statpedu.sk/files/articles/dokumenty/inovovany-statny-vzdelavaci-program/chemia_g_4_5_r.pdf
8. Učebnice chémie pre základné školy a gymnáziá.
9. Školský informačný systém. Chémia. <http://kekule.science.upjs.sk/chemia/index.htm>
10. Virtuálne prírodovedecké laboratórium. <http://www.virtual-lab.sk/videozaznamy.html>
11. Studium chemie. Portál PŘF UK pro podporu vyuky chemie na SŠ a ZŠ.
<https://studiumchemie.cz/>
12. E-ChemBook – Multimediální učebnice chemie. <https://www.youtube.com/user/VideosChemWeb/videos>
13. E – learning kurz: Špeciálne praktikum školských pokusov I, <https://lms.upjs.sk/>

Course language:

Notes:

Course assessment					
Total number of assessed students: 57					
A	B	C	D	E	FX
61.4	29.82	7.02	1.75	0.0	0.0
Provides: RNDr. Ivana Sotáková, Ph.D., RNDr. Petra Letošníková, PhD.					
Date of last modification: 17.02.2022					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ SPC1b/22	Course name: Special practising the school experiments II
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present	
Number of ECTS credits: 3	
Recommended semester/trimester of the course: 2.	
Course level: II.	
Prerequisites:	
Conditions for course completion: 1. Pressence is complusory. In the case of long-term absence can student realize experiments in alternative term. 2. Students activity - knowledges about reaction mechanisms and experimental skills to realize experiments. 3. Make reports of every exercise. Classification: 1. Short exams on the beginning of every exercise (max 35 points) 2. Reports of every exercise (max 15 points) 3. Two exams (each max 25 points, min 51%) A: 100 – 91% B: 90 – 81% C: 80 – 71% D: 70 – 61% E: 60 – 51%	
Learning outcomes: The students will become familiar with the basic laboratory skills and techniques that they can apply in demonstrating experiments in their future career as a teacher. The rules of healthy and safety laboratory work are emphasised. Students will apply their knowledges and skills in exploration activities in the topic of Natural compounds on the basis of 5E. They can motivate students using chemical experiments (https://studiumchemie.cz/ , https://www.youtube.com/user/VideosChemWeb/videos , http://www.e-chembook.eu/).	
Brief outline of the course: 1. Qualitative analysis of organic compounds - confirmation reactions for carbon, hydrogen, halogens and nitrogen. 2. Alkanes - preparation of methane. 3. Alkenes - preparation of ethene and its confirmation using its addition reactions; addition reactions of β -carotene. 4. Alkynes - preparation of acetylene and its derivatives, confirmation reactions of acetylene.	

5. Aromatic hydrocarbons and their derivatives – preparation of benzene, aromatic electrophilic substitution reactions – nitration of toluene and naphthalene, preparation of benzyl bromide.
6. Halogenoderivatives – preparation of chloroethane and iodoform.
7. Hydroxoderivatives – oxidation reactions of ethanol, ability to distinguish methanol from ethanol, confirmation reaction of glycerol, preparation of sodium ethanolate and sodium phenoxide, bromation of phenol, colour reactions of phenols and naphthols.
8. Ethers – properties of diethyl ether.
9. Carbonyl compounds - preparation of formaldehyde and acetaldehyde, confirmation reactions of aldehydes and ketones.
10. Carboxylic acids and their derivatives – esterification reactions, reaction of carboxylic acids with magnesium, preparation and properties of soap.
11. Natural compounds – carbohydrates, proteins, amino acids, lipids. Exploration activities on the topic of Natural compounds: fermentation, bioglue, murder and food
12. Natural pH indicator - study of its colour changes depending on pH values.
13. Column chromatography -acetylation reaction of ferrocene - its preparation and separation of the obtained products by column chromatography.
14. Isolation of the fragrant components using steam distillation.
15. Everyday life chemistry.

Recommended literature:

1. SMIK, L., MERVA, L., BRUTOVSKÁ, A: Technika a didaktika školských pokusov Košice: Vyd. Rektorát UPJŠ, 1988.
2. SMIK, L. a kol.: Špeciálna didaktika chémie II., Košice: Vyd. Rektorát UPJŠ, 1984.
3. Špeciálne praktikum školských pokusov z organickej chémie – Interné skriptá.
4. GANAJOVÁ a kol.: Zbierka inovatívnych metodík z chémie pre základné školy. 1. doplnené vydanie. Bratislava: CVTI SR, 2021. <https://vzdelavanie.itakademia.sk/vystupy/zim-che-zs.pdf>
5. GANAJOVÁ a kol.: Zbierka inovatívnych metodík z chémie pre stredné školy. 1. doplnené vydanie. Bratislava: CVTI SR, 2021. <https://vzdelavanie.itakademia.sk/vystupy/zim-che-ss.pdf>
6. Inovovaný štátny vzdelávací program pre 2. stupeň ZŠ. Človek a príroda. Chémia. https://www.statpedu.sk/files/articles/dokumenty/inovovany-statny-vzdelavaci-program/chemia_nsv_2014.pdf
7. Inovovaný štátny vzdelávací program pre gymnázia so štvorročným a päťročným vzdelávacím programom. Človek a príroda. Chémia. https://www.statpedu.sk/files/articles/dokumenty/inovovany-statny-vzdelavaci-program/chemia_g_4_5_r.pdf
8. Učebnice chémie pre základné školy a gymnáziá.
9. Studium chemie. Portál PřF UK pro podporu vyuky chemie na SŠ a ZŠ. <https://studiumchemie.cz/>
10. E-ChemBook – Multimediální učebnice chemie. <https://www.youtube.com/user/VideosChemWeb/videos>

Course language:

slovak language

Notes:

Course assessment

Total number of assessed students: 56

A	B	C	D	E	FX
67.86	28.57	3.57	0.0	0.0	0.0

Provides: RNDr. Slávka Hamuláková, PhD., univerzitná docentka, RNDr. Jana Špaková Raschmanová, PhD., RNDr. Ján Elečko, PhD.
Date of last modification: 16.02.2022
Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚTVŠ/ TVa/11	Course name: Sports Activities I.
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 credits: 2	
Recommended semester/trimester of the course: 1.	
Course level: I., II., P	
Prerequisites:	
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: The Institute of physical education and sport at the Pavol Jozef Šafárik University offers 20 sports activities aerobics; aikido, basketball, badminton, body-balance, body form, bouldering, floorball, yoga, power yoga, pilates, swimming, fitness, indoor football, SM system, step aerobics, table tennis, chess, volleyball, tabata, cycling. Additionally, the Institute of physical education and sport at the Pavol Jozef Šafárik University offers winter courses (ski course, survival) and summer courses (aerobics by the sea, rafting on the Tisza River) with an attractive programme, sports competitions with national and 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: 15804

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
85.76	0.06	0.0	0.0	0.0	0.04	8.99	5.14

Provides: Mgr. Patrik Berta, Mgr. Agata Dorota Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Ladislav Kručanica, PhD., Mgr. Richard Melichar, Mgr. Petra Melicharová, PhD., Mgr. Marcel Čurgali, PhD., Mgr. Alena Buková, PhD., univerzitná docentka, doc. PaedDr. Ivan Uher, MPH, PhD., prof. RNDr. Stanislav Vokál, DrSc., Mgr. Zuzana Küchelová, PhD., Mgr. Ferdinand Salonna, PhD., Mgr. Július Evelley, PhD.

Date of last modification: 07.02.2024

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚTVŠ/ TVb/11	Course name: Sports Activities II.
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 credits: 2	
Recommended semester/trimester of the course: 2.	
Course level: I., II., P	
Prerequisites:	
Conditions for course completion: active participation in classes - min. 80%.	
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: The Institute of physical education and sport at the Pavol Jozef Šafárik University offers 20 sports activities aerobics; aikido, basketball, badminton, body-balance, body form, bouldering, floorball, yoga, power yoga, pilates, swimming, fitness, indoor football, SM system, step aerobics, table tennis, chess, volleyball, tabata, cycling. Additionally, the Institute of physical education and sport at the Pavol Jozef Šafárik University offers winter courses (ski course, survival) and summer courses (aerobics by the sea, rafting on the Tisza River) with an attractive programme, sports competitions with national and international participation.	
Recommended literature: BENEC, 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: 14278

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
83.63	0.48	0.01	0.0	0.0	0.04	11.5	4.34

Provides: Mgr. Agata Dorota Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Marcel Čurgali, PhD., Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD., Mgr. Richard Melichar, Mgr. Petra Melicharová, PhD., Mgr. Alena Buková, PhD., univerzitná docentka, doc. PaedDr. Ivan Uher, MPH, PhD., prof. RNDr. Stanislav Vokál, DrSc., Mgr. Zuzana Küchelová, PhD., Mgr. Ferdinand Salonna, PhD., Mgr. Július Evelley, PhD.

Date of last modification: 07.02.2024

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚTVŠ/ TVc/11	Course name: Sports Activities III.
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 credits: 2	
Recommended semester/trimester of the course: 3.	
Course level: I., II.	
Prerequisites:	
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: The Institute of physical education and sport at the Pavol Jozef Šafárik University offers 20 sports activities aerobics; aikido, basketball, badminton, body-balance, body form, bouldering, floorball, yoga, power yoga, pilates, swimming, fitness, indoor football, SM system, step aerobics, table tennis, chess, volleyball, tabata, cycling. Additionally, the Institute of physical education and sport at the Pavol Jozef Šafárik University offers winter courses (ski course, survival) and summer courses (aerobics by the sea, rafting on the Tisza River) with an attractive programme, sports competitions with national and 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: 9347

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
87.97	0.06	0.01	0.0	0.0	0.02	4.91	7.02

Provides: Mgr. Marcel Čurgali, PhD., Mgr. Agata Dorota Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD., Mgr. Richard Melichar, Mgr. Petra Melicharová, PhD., Mgr. Alena Buková, PhD., univerzitná docentka, doc. PaedDr. Ivan Uher, MPH, PhD., prof. RNDr. Stanislav Vokál, DrSc., Mgr. Zuzana Küchelová, PhD., Mgr. Ferdinand Salonna, PhD., Mgr. Július Evelley, PhD.

Date of last modification: 07.02.2024

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚTVŠ/ TVd/11	Course name: Sports Activities IV.
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 credits: 2	
Recommended semester/trimester of the course: 4.	
Course level: I., II.	
Prerequisites:	
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: The Institute of physical education and sport at the Pavol Jozef Šafárik University offers 20 sports activities aerobics; aikido, basketball, badminton, body-balance, body form, bouldering, floorball, yoga, power yoga, pilates, swimming, fitness, indoor football, SM system, step aerobics, table tennis, chess, volleyball, tabata, cycling. Additionally, the Institute of physical education and sport at the Pavol Jozef Šafárik University offers winter courses (ski course, survival) and summer courses (aerobics by the sea, rafting on the Tisza River) with an attractive programme, sports competitions with national and 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: 6037

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
82.18	0.27	0.03	0.0	0.0	0.0	8.7	8.83

Provides: Mgr. Marcel Čurgali, PhD., Mgr. Agata Dorota Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD., Mgr. Richard Melichar, Mgr. Petra Melicharová, PhD., Mgr. Alena Buková, PhD., univerzitná docentka, doc. PaedDr. Ivan Uher, MPH, PhD., prof. RNDr. Stanislav Vokál, DrSc., Mgr. Zuzana Küchelová, PhD., Mgr. Ferdinand Salonna, PhD., Mgr. Július Evelley, PhD.

Date of last modification: 07.02.2024

Approved: prof. RNDr. Peter Kollár, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ SVKD/04	Course name: Student Scientific Conference
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: 2., 4.	
Course level: I., II.	
Prerequisites:	
Conditions for course completion: presentation of results of studnets' research work at Students' scientific conference	
Learning outcomes: Student gains experience and skills in processing and presentation of results of his research work.	
Brief outline of the course: Presentation of results of studnets' research work at Students' scientific conference.	
Recommended literature: Based on the recommendations of supervisor	
Course language: Slovak	
Notes:	
Course assessment Total number of assessed students: 10	
abs	n
100.0	0.0
Provides:	
Date of last modification: 03.05.2015	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚTVŠ/ LKSp/13	Course name: Summer Course-Rafting of TISA River
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 credits: 2	
Recommended semester/trimester of the course:	
Course level: I., II., P	
Prerequisites:	
Conditions for course completion: Completion: passed Condition for successful course completion: - active participation in line with the study rule of procedure and course guidelines - effective performance of all tasks: carrying a canoe, entering and exiting a canoe, righting a canoe, paddling	
Learning outcomes: Content standard: The student demonstrates relevant knowledge and skills in the field, which content is defined in the course syllabus and recommended literature. Performance standard: Upon completion of the course students are able to meet the performance standard and: - implement the acquired knowledge in different situations and practice, - implement basic skills to manipulate a canoe on a waterway, - determine the right spot for camping, - prepare a suitable material and equipment for camping.	
Brief outline of the course: Brief outline of the course: 1. Assessment of difficulty of waterways 2. Safety rules for rafting 3. Setting up a crew 4. Practical skills training using an empty canoe 5. Canoe lifting and carrying 6. Putting the canoe in the water without a shore contact 7. Getting in the canoe 8. Exiting the canoe 9. Taking the canoe out of the water 10. Steering a) The pry stroke (on fast waterways) b) The draw stroke	

11. Capsizing 12. Commands	
Recommended literature: 1. JUNGER, J. et al. Turistika a športy v prírode. Prešov: FHPV PU v Prešove. 2002. ISBN 8080680973. Internetové zdroje: 1. STEJSKAL, T. Vodná turistika. Prešov: PU v Prešove. 1999. Dostupné na: https://ulozto.sk/tamhle/UkyxQ2lYF8qh/name/Nahrane-7-5-2021-v-14-46-39#!ZGDjBGR2AQtkAzVkAzLkLJWuLwWxZ2ukBRLjnGqSomICMmOyZN==	
Course language: Slovak language	
Notes:	
Course assessment Total number of assessed students: 252	
abs	n
36.11	63.89
Provides: Mgr. Dávid Kaško, PhD.	
Date of last modification: 29.03.2022	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPE/MPPa/15	Course name: Supervised Teaching Practice
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 36s Course method: present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course: 1.	
Course level: II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 871	
abs	n
100.0	0.0
Provides: doc. PaedDr. Renáta Orosová, PhD., Mgr. Zuzana Vagaská, PhD., Mgr. Lucia Barbierik, PhD.	
Date of last modification: 22.09.2025	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚTVŠ/ KP/12	Course name: Survival Course
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 credits: 2	
Recommended semester/trimester of the course:	
Course level: I., II., P	
Prerequisites:	
Conditions for course completion: Completion: passed Condition for successful course completion: - active participation in line with the study rule of procedure and course guidelines, - effective performance of all the tasks defined in the course syllabus	
Learning outcomes: Content standard: The student demonstrates relevant knowledge and skills in the field, which content is defined in the course syllabus and recommended literature. Performance standard: Upon completion of the course students are able to meet the performance standard and should: - acquire knowledge about safe stay and movement in natural environment, - obtain theoretical knowledge and practical skills to solve extraordinary and demanding situations connected with survival and minimization of damage to health, - be able to resist and face situations related to overcoming barriers and obstacles in natural environment, - be able implement the acquired knowledge as an instructor during summer sport camps for children and youth within recreational sport.	
Brief outline of the course: Brief outline of the course: 1. Principles of conduct and safety in the movement in unfamiliar natural environment 2. Preparation and guidance of a hike tour 3. Objective and subjective danger in the mountains 4. Principles of hygiene and prevention of damage to health in extreme conditions 5. Fire building 6. Movement in the unfamiliar terrain, orientation and navigation 7. Shelters 8. Food preparation and water filtering 9. Rappelling, Tyrolian traverse 10. Transport of an injured person, first aid	

Recommended literature:	
1. JUNGER, J. et al. Turistika a športy v prírode. Prešov: Fakulta humanitných a prírodných vied PU v Prešove. 2002. 267s. ISBN 80-8068-097-3.	
2. PAVLÍČEK, J. Člověk v drsné přírodě. 3. vyd. Praha: Práh. 2002. ISBN 8072520598.	
3. WISEMAN, J. SAS: příručka jak přežít. Praha: Svojtka & Co. 2004. 566s. ISBN 8072372807.	
Course language: Slovak language	
Notes:	
Course assessment Total number of assessed students: 488	
abs	n
46.31	53.69
Provides: Mgr. Ladislav Kručanica, PhD.	
Date of last modification: 16.05.2023	
Approved: prof. RNDr. Peter Kollár, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPE/ PDU/15		Course name: Teaching Methodology and Pedagogy			
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: 5					
Recommended semester/trimester of the course: 1.					
Course level: II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 950					
A	B	C	D	E	FX
24.0	27.89	26.32	14.63	6.53	0.63
Provides: doc. PaedDr. Renáta Orosová, PhD., Mgr. Zuzana Vagaská, PhD., Mgr. Mária Baluchová					
Date of last modification: 22.09.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPPaPZ/UPR/15	Course name: The Art of Aiding by Verbal Exchange
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 credits: 2	
Recommended semester/trimester of the course: 2.	
Course level: II.	
Prerequisites:	
Conditions for course completion: 1. Active participation in seminars 2. Elaboration and presentation of PPT presentation on the assigned topic. Maximum number of points 20; minimum number of points 11. 3. Final test in the range of 20 questions from selected chapters and lectures. Maximum number of points 20; minimum number of points 11. The final evaluation (mark) is the sum of points for the presentation and the test. A 40b - 37b B 36b - 33b C 32b - 29b D 28b - 25b E 24b - 21b FX 20b - 0b The evaluation of the course and its subsequent completion will be based on clearly and objectively set requirements, which will be set in advance and will not change. The aim of the assessment is to ensure an objective and fair mapping of the student's knowledge while adhering to all ethical and moral standards. There is no tolerance for students' fraudulent behavior, whether in the teaching process or in the assessment process.	
Learning outcomes: Provide students with basic information about a systemic approach to helping. Train interviewing, clarify orders. Reflect on help options. The student is able to demonstrate an understanding of the theoretical principles of conducting a helping conversation. The student is able to describe, explain and evaluate in what context to use which of the selected techniques to help the interview with the individual. The student is able to use basic selected techniques when working with an individual in the interview process. The method of teaching the subject will be oriented to the student. Lecturers will be interested in students' needs, expectations and opinions so as to encourage them to think critically by expressing respect and feedback on their opinions and needs. The content of the curriculum will be based on primary and high-quality sources that will reflect the topicality of the topics so as to ensure the connection of the curriculum with other subjects and also the connection of the curriculum with practice. Students will be expected to take an active approach in lectures and seminars with an emphasis on their independence and responsibility.	
Brief outline of the course:	

Psychological preparation for conducting an interview. Self-reflection of one's own possibilities, abilities to lead a conversation, to help. Possibilities of helping with conversations from the point of view of selected psychological approaches. Systematic approach to helping. Interview and professional ways to help and control. Objectivist and constructivist framework of conversation in theory and practice. Is it possible to help with control? Opening the interview, negotiating the course, course, ending the interview. Constructivist questions in the interview. Analysis of individual phases of conducting the interview. Reflex team possibilities of help in conversation. Models of reflective teams. Model situations of conducting an interview with an individual. Model situations of conducting an interview with a group. Professional possibilities, advantages and pitfalls of solving problems with an individual, with a group.					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 214					
A	B	C	D	E	FX
91.59	2.8	4.21	0.93	0.47	0.0
Provides: Mgr. Ondrej Kalina, PhD.					
Date of last modification: 12.09.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ VKOCHB/22		Course name: Vybrané kapitoly z organickej chémie a biochémie			
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: 4					
Recommended semester/trimester of the course: 3.					
Course level: II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 4					
A	B	C	D	E	FX
50.0	25.0	25.0	0.0	0.0	0.0
Provides: prof. RNDr. Mária Kožurková, CSc., doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka, doc. RNDr. Ján Imrich, CSc.					
Date of last modification: 25.03.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ VKVACH/22		Course name: Vybrané kapitoly zo všeobecnej a anorganickej chémie			
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: 4					
Recommended semester/trimester of the course: 3.					
Course level: II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 54					
A	B	C	D	E	FX
66.67	29.63	3.7	0.0	0.0	0.0
Provides: prof. RNDr. Vladimír Zeleňák, DrSc., prof. RNDr. Zuzana Vargová, Ph.D.					
Date of last modification: 25.03.2025					
Approved: prof. RNDr. Peter Kollár, DrSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ SVKCHX/22	Course name: ŠVK (vystúpenie)
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:	
Course level: II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 6	
abs	n
100.0	0.0
Provides:	
Date of last modification: 30.06.2022	
Approved: prof. RNDr. Peter Kollár, DrSc.	