CONTENT

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: CJP/ PFAJAKA/07	**Course name:** Academic English

Course type, scope and the method:
Course type: Practice
Recommended course-load (hours):
Per week: 2 **Per study period:** 28
Course method: combined, present

Number of ECTS credits: 2

Recommended semester/trimester of the course:

Course level: I., II., N

Prerequisities:

Conditions for course completion:
Combined method of teaching (classroom/distance)
Active classroom participation, assignments handed in on time, 2 absences tolerated
1 test (10th week), no retake. (in classroom, in case of distance learning due to worsened epidemiological situation – online)
Presentation on chosen topic (in case of distance learning - online thorugh MS Teams)
Final evaluation- average assessment of test (40%), essay (30%) and presentation (30%).
Grading scale: A 93-100%, B 86-92%, C 79-85%, D 72-78%, E 65-71%, FX 64% and less

Learning outcomes:

Brief outline of the course:

Recommended literature:
Seal B.: Academic Encounters, CUP, 2002
T. Armer :Cambridge English for Scientists, CUP 2011
M. McCarthy M., O´Dell F. - Academic Vocabulary in Use, CUP 2008
Zemach, D.E, Rumisek, L.A: Academic Writing, Macmillan 2005
Olsen, A. : Active Vocabulary, Pearson, 2013
www.bbclearningenglish.com
Cambridge Academic Content Dictionary, CUP, 2009

Course language:
English language, level B2 according to CEFR.

Notes:

Course assessment
Total number of assessed students: 379

A	B	C	D	E	FX
33.77	22.16	15.3	10.03	6.6	12.14

Provides: Mgr. Viktória Mária Slovenská

Date of last modification: 17.09.2020

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ ATA/14	**Course name:** Algebra and theoretical arithmetic

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 3 / 1 **Per study period:** 42 / 14
Course method: present

Number of ECTS credits: 4

Recommended semester/trimester of the course: 3.

Course level: II.

Prerequisities:

Conditions for course completion:
It is based on the results of written and oral exam.

Learning outcomes:
Obtain knowledge about sets N, Z, Q and R, about their axiomatic building-up, the operations and the orderigs on them.

Brief outline of the course:
Sets of numbers N, Z, Q a R, their axiomatical building, operations and ordering.

Recommended literature:
J. Blažek a kol.: Algebra a teoretická aritmetika I. díl. SPN, Praha 1983
K. Hruša: Elementární aritmetika. Přírodovědecké vydavatelství, Praha 1953
W. Sierpinski: Arytmetyka teoretyczna. PWN, Varšava 1966
T. Šalát a kol.: Algebra a teoretická aritmetika (2). Alfa, Bratislava - SNTL Praha 1986

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 54

A	B	C	D	E	FX
55.56	24.07	12.96	7.41	0.0	0.0

Provides: doc. RNDr. Matúš Harminc, CSc.

Date of last modification: 06.03.2018

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ AIM/10	**Course name:** Application of ICT into mathematics teaching

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.

Prerequisities: ÚMV/DDMa/14

Conditions for course completion:
two tests elaborated on the computer, solving problems from worksheets
final project

Learning outcomes:
To learn students standard work procedures with the basic types of mathematical softvare systems and to provide examples and ideas on the possibility of using these software systems in mathematics teaching. To develop the knowledge and skills of students to use investigation and modelling in the digital environment for mathematical problems solving. Develop creative and evaluation abilities of students allow to prepare mathematics lessons with effective and meaningful use of modern technologies.

Brief outline of the course:
Possibilities of using numerical and graphical tools of spreadsheet to solve mathematical problems. Use of dynamic geometry systems in solving geometry problems, examples of their use in the implementation of constructivist approaches to mathematics teaching. Mathematical modelling and solving of problems in a CAS environment. The use of modern IT for active acquisition of knowledge in mathematics teaching.

Recommended literature:
M. Černochová et al.: Využití počítače při vyučování, Portál, 1998.
S. Lukáč: Multimédiá a počítačom podporované učenie sa v matematike, PF UPJŠ Košice 2001.
J. Vaníček: Počítačové kognitivní technologie ve výuce geometrie. Univerzita Karlova v Praze, 2009.
Journals MFI, MIF a Obzory matematiky, fyziky a informatiky.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 154

A	B	C	D	E	FX
41.56	30.52	12.99	9.74	5.19	0.0

Provides: doc. RNDr. Stanislav Lukáč, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/ASFU/15	**Course name:** Astrophysics

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: 3.

Course level: II.

Prerequisities:

Conditions for course completion:
Test within the curriculum presented during the course; seminar essay.
Oral exam with preparation; 3 questions within the curriculum presented during the course.

Learning outcomes:
Become acquainted with basic knowledge about the structure and evolution of the universe.

Brief outline of the course:
The stars, their basic properties, structure and evolution. Structure and distribution of matter in the universe. Cosmological theories, formation, evolution and future of the universe.

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. Narlikar, J.V.,An Introduction to Cosmology, Cambridge University Press, Cambridge, 2002;
4. Pasachoff, J.M., Filippenko, A., The Cosmos: Astronomy in the New Millennium, Cambridge University Press, 2013;

Course language:
Slovak, English

Notes:

Course assessment
Total number of assessed students: 10

A	B	C	D	E	FX
90.0	10.0	0.0	0.0	0.0	0.0

Provides: doc. RNDr. Rudolf Gális, PhD.

Date of last modification: 26.09.2017

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 867

A	B	C	D	E	FX
49.83	29.87	15.34	3.34	1.27	0.35

Provides: Mgr. Alexander Onufrák, PhD.

Date of last modification: 21.09.2020

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 499

A	B	C	D	E	FX
53.91	33.87	9.02	1.6	0.6	1.0

Provides: PaedDr. Renáta Orosová, PhD.

Date of last modification: 12.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: CJP/ PFAJKKA/07	**Course name:** Communicative Competence in English

Course type, scope and the method:
Course type: Practice
Recommended course-load (hours):
Per week: 2 **Per study period:** 28
Course method: combined, present

Number of ECTS credits: 2

Recommended semester/trimester of the course:

Course level: I., II., N

Prerequisities:

Conditions for course completion:
Active participation in class and completed homework assignments. Students are allowed to miss two classes at the most.
Online teaching (MS Teams), in case of an improved epidemiological situation = on-site teaching.
2 credit tests (presumably in weeks 6/7 and 12/13) and a short oral presentation in English.
The tests will be taken online (MS Teams) during online teaching and in class in case of on-site classes.
The presentation will be sent to the course instructor as a video recording.
Final evaluation consists of the scores obtained for the 2 tests (70%) and the presentation (30%).
Final grade will be calculated as follows: A 93-100 %, B 86-92%, C 79-85%, D 72-78%, E 65-71%, FX 64 % and less.

Learning outcomes:
Uplatnenie a aktívne používanie svojich teoretických vedomostí v praktických komunikačných situáciách. Zdokonalenie jazykových vedomostí a zručností študenta, rečovej, pragmatickej a vecnej kompetencie, predovšetkým zlepšujú komunikáciu, schopnosťprijímať a formulovať výpovede, efektívne vyjadrovať svoje myšlienky ako aj orientovať sa v obsahovom pláne výpovede. Precvičovanie rečových intencií kontaktných (napr. pozdravy, oslovenia, pozvanie, oslovenie), informatívnych (napr. získavanie a podávanie informácií, vyjadrenie priestorových a časových vzťahov), regulačných (napr. prosba, poďakovanie, zákaz, pochvala, súhlas, nesúhlas) a hodnotiacich (napr. vyjadrenie vlastného názoru, stanoviska, želania, emócií). Výsledkom budovania praktickej jazykovej kompetencie majú byť vedomosti a zručnosti zodpovedajúce požiadavkám a kritériám dokumentu Spoločný európsky referenčný rámec pre vyučovanie jazykov.

Brief outline of the course:
Rodina, jej formy a problémy
Vyjadrovanie pocitov a dojmov
Dom, bývanie a budúcnosť
Formy a dialekty v anglickom jazyku
Život v meste a na vidieku
Kolokácie a idiomy, zaužívané slovné spojenia
Prázdniny a sviatky vo svete

Životné prostredie a ekológia
Výnimky zo slovosledu
Frázové slovesá a ich použitie
Charakteristiky neformálneho diškurzu

Recommended literature:

www.bbclearningenglish.com
McCarthy M., O'Dell F.: English Vocabulary in Use, Upper-Intermediate. CUP, 1994.
Misztal M.: Thematic Vocabulary. SPN, 1998.
Fictumova J., Ceccarelli J., Long T.: Angličtina, konverzace pro pokročilé. Barrister and Principal, 2008.
Peters S., Gráf T.: Time to practise. Polyglot, 2007.
Jones L.: Communicative Grammar Practice. CUP, 1985.
Alexander L.G.: Longman English Grammar. Longman, 1988.

Course language:
English language, B2 level according to CEFR

Notes:

Course assessment
Total number of assessed students: 241

A	B	C	D	E	FX
38.59	22.41	19.5	9.54	6.64	3.32

Provides: Mgr. Barbara Mitríková

Date of last modification: 11.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: CJP/ PFAJGA/07	**Course name:** Communicative Grammar in English

Course type, scope and the method:
Course type: Practice
Recommended course-load (hours):
Per week: 2 **Per study period:** 28
Course method: combined, present

Number of ECTS credits: 2

Recommended semester/trimester of the course:

Course level: I., II., N

Prerequisities:

Conditions for course completion:
Active classroom participation (max. 2x90 min. absences tolerated). 2 test (5th/6th and 12/13th week), no retake. Final evaluation- average assessment of tests. Grading scale: A 93-100%, B 86-92%, C 79-85%, D 72-78%, E 65-71%, FX 64% and less.

Learning outcomes:

Brief outline of the course:

Recommended literature:
Vince M.: Macmillan Grammar in Context, Macmillan, 2008
McCarthy, O'Dell: English Vocabulary in Use, CUP, 1994
C. Oxengen, C. Latham-Koenig: New English File Advanced, Oxford 2010
Misztal M.: Thematic Vocabulary, Fragment, 1998
www.bbclearningenglish.com
ted.com/talks

Course language:

Notes:

Course assessment
Total number of assessed students: 406

A	B	C	D	E	FX
39.66	18.97	16.75	8.62	5.91	10.1

Provides: Mgr. Lenka Klimčáková

Date of last modification: 14.09.2019

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: KGER/NJKG/07	**Course name:** Communicative Grammar in German Language

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.

Prerequisities:

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
59.26	11.11	9.26	3.7	9.26	7.41

Provides: Mgr. Blanka Jenčíková

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities: 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: 15

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., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities: 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: 9

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., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/VSPc/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.

Prerequisities: ÚMV/VPPb/15

Conditions for course completion:

Learning outcomes:
Enable students to gain first practical experience in teaching mathematics to apply theoretical knowledge in specific teaching situations, to develop their teaching skills. To acquaint students with the atmosphere and the organization of school.

Brief outline of the course:

Recommended literature:

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 62

abs	n
100.0	0.0

Provides: doc. RNDr. Dušan Šveda, CSc., RNDr. Ingrid Semanišinová, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/VSPd/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.

Prerequisities: ÚMV/VSPc/15

Conditions for course completion:

Learning outcomes:
Enable students to gain first practical experience in teaching mathematics to apply theoretical knowledge in specific teaching situations, to develop their teaching skills. To acquaint students with the atmosphere and the organization of school.

Brief outline of the course:

Recommended literature:

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 42

abs	n
100.0	0.0

Provides: doc. RNDr. Dušan Šveda, CSc., RNDr. Ingrid Semanišinová, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 139

A	B	C	D	E	FX
53.24	30.94	10.07	4.32	1.44	0.0

Provides: Mgr. Katarína Petríková, PhD., PaedDr. Renáta Orosová, PhD.

Date of last modification: 12.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KSSFaK/ KJPUAP/15	**Course name:** Culture of Spoken Discourse

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

Number of ECTS credits: 2

Recommended semester/trimester of the course: 1.

Course level: II.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

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: PhDr. Iveta Bónová, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Course level: II.

Prerequisities:

Conditions for course completion:
Evaluation of participation in teaching, continuous evaluation of activity in seminars, evaluation of seminar work,

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:
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

Course language:

Notes:

Course assessment
Total number of assessed students: 44

A	B	C	D	E	FX
65.91	22.73	4.55	6.82	0.0	0.0

Provides: Mgr. Mária Bačíková, PhD.

Date of last modification: 17.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ DF1a/15	**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.

Prerequisities:

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 quide 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:
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
Primary school textbooks for Physics
actuall didactic publications

Course language:
Slovak, English

Notes:

Course assessment
Total number of assessed students: 13

A	B	C	D	E	FX
46.15	53.85	0.0	0.0	0.0	0.0

Provides:

Date of last modification: 28.03.2020

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ DF1b/15	**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.

Prerequisities: ÚFV/DF1a/15

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 quide 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: 12

A	B	C	D	E	FX
83.33	16.67	0.0	0.0	0.0	0.0

Provides: doc. RNDr. Marián Kireš, PhD., PaedDr. Iveta Štefančínová, Ph.D.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ DDMa/14	**Course name:** Didactics of mathematics

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: 2.

Course level: II.

Prerequisities:

Conditions for course completion:
Continuous assessment - 60% of the total assessment, exam - 40% of the total assessment.

Learning outcomes:
Master the basic principles and methods of teaching of mathematics at primary and secondary schools. Gain knowledge of the various ways of teaching specific topics of school mathematics.

Brief outline of the course:
Subject of Didactics of Mathematics, the development of mathematics and mathematics education.
Aims and objectives of mathematics teaching
Planning in mathematics teaching
Logical and didactical curriculum analysis
Determination of learning objectives
Didactical principles, methods of mathematics teaching
Assessment of learning outcomes, the creation of didactic tests
Mathematical problems
Construction numeric fields, Theory of elementary functions, synthetic and analytic geometry

Recommended literature:
[1] M.Hejný a kol.: Teorie vyučovania matematiky, SPN Blava 1989, (in slovak)
[2] L.Frantíková,K.Hončarivová,O.Kopanev: Didaktika matematiky, UPJŠ 1982 (in slovak)
[3] R.Fischer,G.Malle: Člověk a matematika, SPN Bratislava 1992 (in slovak)
[4] Polya, G.: How to solve it, Princeton University Press, 1957.
[5] Hejný, M., Kuřina, F.: Dítě, škola a matematika: Konstruktivistické přístupy k vyučování. Portál, Praha 2001. (in czech)

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 64

A	B	C	D	E	FX
45.31	31.25	14.06	6.25	3.13	0.0

Provides: doc. RNDr. Dušan Šveda, CSc.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ DDMb/14	**Course name:** Didactics of mathematics

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.

Prerequisities: ÚMV/DDMa/14

Conditions for course completion:
Seminar paper - 40% of the total score.
Written exam - 40% of the total score.
Homework - 20% of the total score.
Evaluation A - at least 90% points,
evaluation B - at least 80%,
evaluation C at least 70%,
evaluationD at least 60%,
evaluationE rating of at least 50% of the points.
Credits shall not be granted to a student who receives less than 50% of the points.

Learning outcomes:
Students become familiar with some mathematical theories of education. They will acquire different teaching methods of selected topics of school mathematics. Become familiar with the potential use of history of mathematics in teaching. Students will be prepared to work in the educational process, focusing on the creative application of knowledge in mathematics.

Brief outline of the course:
Student learning process.
Language of mathematics, enactive iconic and symbolic representation.
Using history of mathematics in the teaching mathematics.
Students' learning difficulties and their possible causes.
Teaching mathematical proofs.
Combinatorics, probability, statistics.
Calculus.
Developing mathematical creativity. Motivation.

Recommended literature:
[1] M.Hejný a kol.: Teoria vyučovania matematiky, SPN Blava 1989.
[2] Hejný, M., Kuřina, F.: Dítě, škola a matematika: Konstruktivistické přístupy k vyučování. Portál, Praha 2001.
[3] Fischer, R., Malle, G.: Človek a matematika, SPN Bratislava 1992.
[4] Učebnice a zbierky úloh pre stredné a základné školy.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 77

A	B	C	D	E	FX
71.43	15.58	10.39	1.3	1.3	0.0

Provides: RNDr. Ingrid Semanišinová, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ DFR/10	**Course name:** Differential equations

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 3 / 1 **Per study period:** 42 / 14
Course method: present

Number of ECTS credits: 5

Recommended semester/trimester of the course: 1.

Course level: I., II.

Prerequisities:

Conditions for course completion:
Continuous assessment is taken the form of two tests during the semester. Final evaluation is given by continuous assessment (40%), written and oral part of the exam (30% and 30%).

Learning outcomes:
Theory of differential equations is one of the fundamental areas of mathematical analysis. It has numerous applications in various fields of science and technology. The main objective of this course is to familiarize students with the basics of the theory of ordinary differential equations and their systems, and methods for solving certain types of differential equations and systems. We consider them as possible mathematical models of real situations.

Brief outline of the course:
Basic concepts. Elementary methods for solving and applications of the first order differential equations. The existence and uniqueness of solutions to Cauchy problem for differential equations of the first order, the n-th order and for differential systems. The relationship between differential equations of the n-th order and systems. Linear differential equations of the n-th order and linear differential systems - the local and global theorem on the existence and uniqueness
of solutions to Cauchy problem, basic properties of solutions, fundamental system of solutions, structure of general solution, Lagrange method of variation of constants, linear differential equations and systems with constant coefficients. Reduction of the order of differential equations. Euler differential equations. Elimination method for solving the systems of differential equations.

Recommended literature:
1. L. Kluvánek, I. Mišík, M. Švec: Matematika II, SVTL, Bratislava, 1961 (in Slovak).
2. J. Eliaš, J. Horváth, J. Kajan: Zbierka úloh z vyššej matematiky 3, Alfa, Bratislava, 1980 (in Slovak).
3. S. J. Farlow: An introduction to differential equations and their applications, Dover Publications, New York, 2006.
4. W. Kohler, L. Johnson: Elementary differential equations with boundary value problems, Pearson Education, Boston, 2006.
5. M. Tenenbaum: Ordinary differential equations, Dover Publications, New York, 1985.
6. J. C. Robinson: An introduction to ordinary differential equations, Cambridge University Press, Cambridge, 2004.

7. J. Polking, A. Boggess, D. Arnold: Differential equations, Prentice Hall (Pearson), Upper Saddle River, 2006.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 149

A	B	C	D	E	FX
20.13	20.81	14.77	22.15	18.79	3.36

Provides: Mgr. Jozef Kiseľák, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/ DPP1/14	**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: 1

Recommended semester/trimester of the course: 1.

Course level: II.

Prerequisities:

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: 10

abs	n
100.0	0.0

Provides:

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/ DPP2/14	**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: 2

Recommended semester/trimester of the course: 2.

Course level: II.

Prerequisities:

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: 10

abs	n
100.0	0.0

Provides:

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/ DPP3/14	**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: 2

Recommended semester/trimester of the course: 3.

Course level: II.

Prerequisities:

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: 18

abs	n
100.0	0.0

Provides:

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/DPOU/14	**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: 15

Recommended semester/trimester of the course:

Course level: II.

Prerequisities:

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 reviewrs.
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: 18

A	B	C	D	E	FX
77.78	11.11	11.11	0.0	0.0	0.0

Provides:

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ DPP2a/14	**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: 1	
Recommended semester/trimester of the course: 1.	
Course level: II.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language: Slovak	
Notes:	
Course assessment Total number of assessed students: 39	

abs	n
100.0	0.0

Provides: doc. RNDr. Dušan Šveda, CSc.
Date of last modification: 03.05.2015
Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ DPP2b/14	**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: 2	
Recommended semester/trimester of the course: 2.	
Course level: II.	
Prerequisities: ÚMV/DPP2a/14	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language: Slovak	
Notes:	
Course assessment Total number of assessed students: 27	

abs	n
100.0	0.0

Provides: prof. RNDr. Jozef Doboš, CSc.
Date of last modification: 03.05.2015
Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ DPP2c/14	**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: 2	
Recommended semester/trimester of the course: 3.	
Course level: II.	
Prerequisities: ÚMV/DPP2b/14	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language: Slovak	
Notes:	
Course assessment Total number of assessed students: 26	

abs	n
100.0	0.0

Provides:
Date of last modification: 03.05.2015
Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

Conditions for course completion:
Students can get a maximum of 90 points for the course: Part 1 of the assessment: participation in the training (30p) - replaces the classic lessons, students choose the date of the training at the introductoryfirst meeting to the course, therefore their participation is necessary. As the training takes place in two days, participation in the entire training is required. If it is impossible to participate in both days of training, the student must change to another date of training, which he will be able to complete. The training takes place partly over the weekend and also outside the school or in the training center in Danišovce (it starts on Thursday evening and ends on Saturday with lunch). The costs of accommodation, meals and travel are paid by the student himself. 2nd part of assessment: workshops (20p) - they replace classic lectures, are held 4 times per semester and for each workshop the student can get 5p (a total of 20p for workshops). Part 3 of the assesment - preparation (10p) and implementation (10p) of block activities in pairs - a total of 20b. Students must send the prepared preparation of the block of activities on the chosen topic for the pair or an individual, which is evaluated with a maximum of 10 points, no later than one week before the date of their training. The preparation should include a clear goal, a description of the selected activities and their goals and justification on the topic, a description of the necessary tools, preparation of questions for discussion as well as activities in stock. The preparation will then be consulted by the lecturers and a possible correction will still be possible. The actual implementation of training activities will be evaluated by a maximum of 10 points, while evaluating the adequacy of selected activities with respect to the selected topic, to fulfill the goal of activities, ability to stimulate group discussion, equal distribution of all members in the group block with other members in the group. The minimum that needs to be achieved from the preparation and implementation of activities is at least 11 points. Part 4 of the assessment - knowledge test (20b). The exam will consist of 5-6 questions related to prevention and the social skills needed in prevention. Students will be able to answer these questions based on the study literature and participation in the training. The minimum number of points required for successful completion of the course in this part of the evaluation is 11 points. In total, students can get 90bp per subject and the final evaluation is as follows: 90 - 82: A 81 - 73: B 72-66: C 65 - 59: D 58 - 54: E 53 and less: FX. Any modifications to the implementation of the course in connection with the current order of the Rector are listed in the electronic board of the course.

Learning outcomes:

To provide students with more detailed information on the psychological aspects of drug prevention through an interesting, engaging explanation of theory and practice. Development of skills for the work of teachers in the field of drug use prevention also thanks to the use of experiential methods in teaching and the possibility of developing professional skills in the work of a teacher and a prevention coordinator at school.

Brief outline of the course:

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.

Course language:
slovak

Notes:

Course assessment
Total number of assessed students: 321

A	B	C	D	E	FX
50.78	40.19	8.1	0.93	0.0	0.0

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

Date of last modification: 16.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ DGE/10	**Course name:** Dynamic geometry
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: 3.	
Course level: II.	
Prerequisities:	
Conditions for course completion: test using a computer, didactic project and final exam	
Learning outcomes: To acquire commands and the concept of dynamic constructions in the program Geogebra and Cabri 3D. To learn to use a dynamic geometry environment for experimentation with geometric objects and their attributes and the investigation of invariant properties of geometric figures and relationships between objects in triangles, quadrilaterals, and conics basic solid figures.	
Brief outline of the course: Constructions and exploration of the properties of triangles, quadrilaterals, circles, and their use in solving construction tasks. Menelaus' theorem, Ceva's theorem, Varignon's theorem, Ptolemy's theorem, cyclic and tangential quadrilaterals, the centre point of polygons. The use of transformations in solving tasks. Constructions of conics and their use in solving problems. Mathematical modeling and exploration of functional dependencies, solving problems for searching of extremes. The cross positions of linear geometric shapes in space, cuts of solid figures, intersetion lines and solid figures. Analysis of the possibilities of using dynamic geometry environment to support active learning of mathematics.	
Recommended literature: 1. Vaníček, J.: Počítačové kognitivní technologie ve výuce geometrie. Univerzita Karlova v Praze, 2009. 2. King, J., Schattschneider, D.: Geometry Turned On! Dynamic Software in Learning, Teaching, and Research. The Mathematical Association of America, 1997. 3. De Villiers, M., D.: Rethinking proof with the Geometer's Sketchpad. Key Curriculum Press, 2003.	
Course language: Slovak	
Notes:	

Course assessment
Total number of assessed students: 39

A	B	C	D	E	FX
48.72	30.77	12.82	7.69	0.0	0.0

Provides: doc. RNDr. Stanislav Lukáč, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

Conditions for course completion:
Overall rating:
–Evaluation requirements:
a) Active work during the whole semester, continuous control of study results in exercises during the teaching part of the semester in the range of maximum 5 points.
Preparation and presentation of a case study on a selected topic - max. 15 points.
A more detailed explanation of the assignment and the work schedule of students will be the subject of an agreement for the 1st exercise of the semester.
a) Presentation and processing of case studies from the school environment in a minimum range of 3 standard pages.
Structure:
-Introduction
-Description of the case / problem
-Suggestions for solutions from the position of an educational consultant.
Maximum number of points per case report: 15
(evaluation: 5 points - presentation, 5 points - introduction and description of the problem, 5 points - suggestions for solution)
b) Preparation and presentation of the project on a selected topic - number of points for presentation and written processing max. 30
Maximum number of points from the subject: 50
Minimum number required to complete the course: 31
Current modifications of the course are listed in the electronic bulletin board of the course before the beginning of each semester.
Overall rating scale:
30 and less FX
31 - 34 E
35 - 38 D
39 - 42 C
43 - 46 B
47 - 50 A

Learning outcomes:

To provide students with quality and up-to-date information regarding the content of the work of an educational counselor and to introduce them to the issue of educational counseling in the school space. The content and formal aspects of the course are designed to not only expand students' theoretical knowledge and orientation in the organization and legislation on the system of educational counseling in our schools, but also to apply the acquired knowledge in practice. The teaching of the subject is closely connected with the practice, which increases the possibility of employment of the graduate of the subject.

Brief outline of the course:

Educational counseling in the education system, the role and position of the educational counselor in the school.

Cooperation between school and family, the main principles of conducting a counseling interview with the student and the parent.

Issues of school maturity, adaptation to the 1st year of elementary school. Identification of gifted children, possibilities of their education. The role of an educational counselor, cooperation with a psychologist in enrollment and in the first half of the first year of elementary school.

Specific developmental learning disorders, integration of students with SEP learning in primary and secondary school.

ADHD - identification, diagnostics, specifics of children with ADHD in the teaching process, the procedure for solving problems arising from ADHD at school

Autism spectrum disorders, Asperger's syndrome. identification, diagnostics, specifics of children with this type of disorder in the teaching process, the procedure for solving problems at school

Pupils' behavioral disorders - characteristics of behavioral disorders, identification and diagnostics, possible solutions in the school environment. Aggressive behavior of students at school, manifestations, causes, solutions to aggressive behavior

Crisis intervention.

Career choice and career development advice. Possibilities of VP and cooperation with CPPPaP.

Recommended literature:

Základná a odporúčaná literatúra je dostupná. Študentom budú sprostredkovávané v priebehu semestra aktuálne materiály týkajúce sa tém predmetu.

Základná štúdijná literatúra:

Mertin, V., Krejčová, L. a kol.: Výchovné poradenství, Praha: Wolters Kluwer, 2013

Odporúčaná študijná literatúra:

Beranová, E. a kol.:Metodický pruvodce výchovného poradce. Praha: Raabe, 2014
Fontana David: Psychologie ve školní praxi, Praha: Portál, 2003
Kyriacou, Chris: Řešení výchovných problémů ve škole. Praha : Portál, 2005
Šefránková, Mária: Výchovný poradca . Bratislava : Iris, 2007
Vendel, Š.(2008): Kariérní poradenství. Praha: Grada.
Vendel, Š.: Poradenstvo pri voľbe povolania. In: Sprievodca triedneho učiteľa, str.1-54, 2006, ISBN 80-89182-03-8, Bratislava: vydavateľstvo Raabe.
Čáp, Mareš: Psychologie pro učitele. Praha: Portál
Vendel, Š.(2007): Pedagogická psychológia. Bratislava: Epos.
Pokorná, Věra: Teorie a náprava vývojových poruch učení a chování. Praha : Portál, 2001
Šefránková, Mária: Výchovný poradca. Bratislava Iris 2007.
Vágnerová, Marie: Školní poradenská psychologie pro pedagogy. Praha : Karolinum, 2005
Pešová, Ilona: Poradenská psychologie pro děti a mládež. Praha : Grada, 2006
Španteková, N. a kol. Krízová intervence pro praxi. Praha: Grada, 2011.
Matějček, Z.: Praxe dětského psychologického poradenství. Praha: Portál, 2011
Sheedy-Kurcinka, Mary: Problémové dítě v rodině a ve škole. Praha : Portál, 1998

Ronenová, T: Psychologická pomoc dětem v nesnázích : kognitivně-behaviorální přístupy při práci s dětmi. Praha : Portál, 2000
Martin, V.: Jak řešit problémy deti se školou. Praha: Portal, 1997
Hvozdík, j.: Základy školskej psychológie. Bratislava: SPN, 1986.
Koščo, Jozef: Poradenská psychológia. Bratislava : SPN, 1987

Course language:

Notes:

Course assessment
Total number of assessed students: 148

A	B	C	D	E	FX
62.84	22.97	8.78	4.05	1.35	0.0

Provides: PhDr. Anna Janovská, PhD.

Date of last modification: 17.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 429

A	B	C	D	E	FX
54.55	26.34	13.05	4.66	1.17	0.23

Provides: Mgr. Katarína Petríková, PhD.

Date of last modification: 12.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 299

A	B	C	D	E	FX
47.16	37.12	13.71	2.01	0.0	0.0

Provides: PaedDr. Renáta Orosová, PhD., Mgr. Katarína Petríková, PhD.

Date of last modification: 12.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/ VBF2/15	**Course name:** General Biophysics II

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: 1., 3.

Course level: II.

Prerequisities:

Conditions for course completion:
Exam

Learning outcomes:
To provide information about the object, significance and role of biophysics in science. The main emphasis will be given on the understanding of the principles determining the structure and function of the most important biological structures (nucleis acids, proteins, biomembranes) as well as on the thermodynamics and kinetics of selected chemical and biophysical processes.

Brief outline of the course:
The definition of biophysics and its role in the science. Intra- and inter-molecular interactions in biological systems. Function and structure of the important biomacromolecules (nucleic acids, proteins, biomembranes, sugars). Conformational transitions in biopolymers: helix-coil transition in DNA, denaturation of proteins, phase transitions in biomembranes.
Thermodynamics of biological processes. Gibbs energy and chemical equilibrium, chemical potential, binding constants of the ligand-macromolecule intractions, cooperativity of the binding between biological important molecules, membrane potential.
Kinetics of the chemical and biophysical processes. The principles of chemical kinetics, enzymatic reactions, inhibition of the enzymes, membrane transport, introduction to the pharmacokinetics.
Cell biophysics. The basic bioenergetic processes, oxidative phosphorylation, photosynthesis. Mechanisms of regulations and control processes in cells-the basic principles.
Medicinal biophysics. Biophysical principles of selected diagnostic and therapeutical methods.
Radiation and environmental biophysics. The influence of physico-chemical factors of the environment on the living systems.

Recommended literature:
1. M. B. Jackson, Molecular and cellular biophysics, Cambridge University Press, 2006.
2. M. Daune, Molecular biophysics-Structures in motion, Oxford University Press, 2004.
3. R. Glaser, Biophysics, Springer Verlag, 2001.
4. M.V. Volkenštein, Biofizika, Nauka, Moskva 1988.
5. W.Hoppe and W. Lohmann, Biophysics, Springer Verlag, 1988.

6. K.E.van Holde, W.C. Johnson and P. Shing Ho, Principles of physical biochemistry, Simon and Schuster, Prentice Hall, 1998.
7. D.G. Nichols and S.J. Ferguson, Bioenergetics 3, Academic Press, Elsevier Science Ltd., 2002.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 9

A	B	C	D	E	FX
22.22	44.44	11.11	11.11	11.11	0.0

Provides: doc. Mgr. Daniel Jancura, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ GEO2b/10	**Course name:** Geometry II

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 3 / 2 **Per study period:** 42 / 28
Course method: present

Number of ECTS credits: 6

Recommended semester/trimester of the course: 1.

Course level: II.

Prerequisities:

Conditions for course completion:

Learning outcomes:
To obtain knowledge about affine, isometric, and similarity transformations and their properties.

Brief outline of the course:
1. Quadric surfaces (circular and general quadric surfaces)
2. Affine transformations (associated transformation, matrix representation, affinities, fixed points and lines, pseudo-reflections)
3. Isometric transformations (matrix representation, isometries, classification in the plane, composiion of reflections)
4. Similarity transformations (matrix representation, similarities, homothety, composition of homotheties)
5. Geometry of circles (the power of a point with respect to a circle, radical axis of two circles, pencils of circles)

Recommended literature:
1. M. Sekanina et al, Geometry 2, SPN, 1988 (in slovak).
2. O. Šedivý et al, Geometry 2, SPN, 1987 (in slovak).
3. H.S.M. Coxeter, Introduction to geometry, Wiley, 1989.
4. J.T. Smith, Methods of geometry, Wiley, 2000.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 115

A	B	C	D	E	FX
17.39	17.39	23.48	17.39	21.74	2.61

Provides: RNDr. Igor Fabrici, Dr., RNDr. Lucia Janičková, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ GEO2c/10	**Course name:** Geometry III

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: 2.

Course level: II.

Prerequisities:

Conditions for course completion:

Learning outcomes:
A new look on the classical geometric results.

Brief outline of the course:
1. Points and lines connected with a triangle (Menelaus's theorem, Ceva's theorem, points of interest, the incircle and excircles, pedal triangles, Euler line, nine-point circle)
2. Properties of circles (the power of a point with respect to a circle, radical axis of two circles, Simson lines, Ptolemy's theorem, Morley's theorem)
3. Collinearity and concurrence (quadrangles, Varignon's parallelogram, cyclic quadrangles, Brahmagupta's formula, Napoleon triangles)
4. Focal properties of regular conics (Dandelin spheres, tangents and directrix of a regular conic)
5. Inversion with respect to a circle (basic properties, composition of inversions and homotheties)

Recommended literature:
1. H.S.M. Coxeter, S.L. Greitzer, Geometry revisited, MAA, 1967.
2. R.A. Johnson, Advanced Euclidean geometry, Dover Publ., 2007.
3. A.V. Akopyan, A.A. Zaslavsky, Geometry of conics, AMS, 2007.
4. D.A. Brannan, M.F. Esplen, J.J. Gray, Geometry, Cambridge Univ. Press, 2007.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 96

A	B	C	D	E	FX
20.83	28.13	30.21	9.38	11.46	0.0

Provides: RNDr. Igor Fabrici, Dr.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ DEJ1/99	**Course name:** History of 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: 2.

Course level: I., II.

Prerequisities:

Conditions for course completion:
written test and thesis
exam

Learning outcomes:
Basic facts in the history of physics.

Brief outline of the course:
Evolution of knowledge before Galileo. Evolution of physics within the mechanical picture of the world. Evolution and limits of classical physics, phase of breakthrough in physics. Origin and evolution of the theory of relativity. Quantum physics and prospects of further evolution of physics and their application. Contemporary state of physical research and its application in technology, natural sciences and philosophy. Position of physics in our society.

Recommended literature:
1. R.Zajac, J.Chrapan: Dejiny fyziky, skriptá, MFF UK, Bratislava, 1982.
2. V.Malíšek: Co víte o dějinách fyziky, Horizont, Praha, 1986.
3. I.Kraus, Fyzika v kulturních dějinách Evropy, Starověk a středověk, Nakladatelství ČVUT, Praha, 2006.
4. A.I.Abramov: Istoria jadernoj fiziky, KomKniga, Moskva, 2006.
5. L.I.Ponomarev: Pod znakom kvanta, Fizmatlit, Moskva, 2006.
6. I.Kraus, Fyzika v kulturních dějinách Evropy, Od Leonarda ke Goethovi, Nakladatelství ČVUT, Praha, 2007.
7. I.Kraus, Fyzika od Thaléta k Newtonovi, Academia, Praha, 2007.
8. I.Štoll, Dějiny fyziky, Prometheus, Praha, 2009.
9. www-pages.
10.Brandt S., The harvest of a century, Discoveries of modern physics in 100 episodes, Oxford, 2009.

Course language:

Notes:

Course assessment
Total number of assessed students: 31

A	B	C	D	E	FX
80.65	9.68	9.68	0.0	0.0	0.0

Provides: prof. RNDr. Stanislav Vokál, DrSc., doc. RNDr. Janka Vrláková, PhD.

Date of last modification: 30.03.2020

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

Conditions for course completion:
The assessment is based on the interim evaluation.

Learning outcomes:
The aim of the subject is to gain a basic overview of the origin and current state of knowledge in the field of research and application of the psychology of religion. Students will aquire basic knowlege need for orientation in the field and emphasis will be given to individual reflection and critical thinking as well as application of already acquired knowledge from other (psychological) disciplines.

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). Pastorální 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: 11

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

Provides: Mgr. Jozef Benka, PhD. et PhD.

Date of last modification: 18.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ DPU/14	**Course name:** Magister thesis and its defense

Course type, scope and the method:
Course type:
Recommended course-load (hours):
Per week: Per study period:
Course method: present

Number of ECTS credits: 15

Recommended semester/trimester of the course:

Course level: II.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 25

A	B	C	D	E	FX
80.0	12.0	4.0	4.0	0.0	0.0

Provides:

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ MST/19	**Course name:** Mathematical statistics

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: I., II.

Prerequisities:

Conditions for course completion:
To obtain at least 50% in two written tests during the semester. Total evaluation based on written tests and oral exam.

Learning outcomes:
Student should obtain the knowledge about basic statistical methods and the ability to apply theoretical knowledge in practical problems solving.

Brief outline of the course:
Random vectors, their distributions and characteristics. Joint and marginal distributions. Correlation and regression, properties of correlation coefficient. Random sample, sampling distributions and characteristics. Some important statistics and their distributions. Point estimators and their properties. Maximum likelihood method. Interval estimates, confidence interval construction.Testing of statistical hypothesis, critical region, level of significance. Methods for searching optimal critical regions. Some important parametric and nonparametric tests.

Recommended literature:

1. Skřivánková V.: Pravdepodobnosť v príkladoch, UPJŠ, Košice, 2006 (in Slovak)
2. Skřivánková V.-Hančová M.: Štatistika v príkladoch, UPJŠ, Košice, 2005 (in Slovak)
3. CASELLA, G., BERGER, R., Statistical Inference, 2nd ed., Duxbury Press, 2002
4. DeGroot, M. H., Schervish, M. J.: Probability and Statistics, 4th ed., Pearson, Boston, 2012
5. Utts, J.M., Heckard, R.F.: Mind od Statistics, 5th ed., Thomson Brooks/Cole, 2014
6. Anděl J.: Základy matematické statistiky, MatfyzPress, Praha, 2011 (in Czech)

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 124

A	B	C	D	E	FX
20.97	21.77	15.32	21.77	12.9	7.26

Provides: prof. RNDr. Ivan Žežula, CSc., RNDr. Martina Hančová, PhD.
Date of last modification: 18.03.2019
Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/MDM/14	**Course name:** Mathematics and didactics of mathematics

Course type, scope and the method:
Course type:
Recommended course-load (hours):
Per week: Per study period:
Course method: present

Number of ECTS credits: 1

Recommended semester/trimester of the course:

Course level: II.

Prerequisities: ÚMV/DDMa/14,ÚMV/DDMb/14

Conditions for course completion:
Acquiring the required number of credits in the structure defined by the study plan.

Learning outcomes:
Evaluation of student‘s competences with respect to the profile of the graduate.

Brief outline of the course:

Recommended literature:

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 65

A	B	C	D	E	FX
27.69	26.15	20.0	16.92	9.23	0.0

Provides:

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/ FEP1/07	**Course name:** Microcomputer Based Science Laboratory

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

Number of ECTS credits: 4

Recommended semester/trimester of the course:

Course level: II.

Prerequisities:

Conditions for course completion:
test 30 points
active participation 10 points
project (development of mathematical model, videomeasurement and physical experiment) 60 points
The final assessment is based on the sum of partial results

Learning outcomes:
After the course student gains an overview about the possible use of digital technologies to support active learning in science. He gains skills to use and develop activities on measuring data with the help of datalogging, measuring on picture and viderecording and modeling natural processes. Student is able to implement such activities in science teaching to support active learning and conceptual understanding.

Brief outline of the course:
The aim of the course is to present the use of digital technologies to enhance active learning in science with the help of datalogging, videomeasurement and modeling tools. Mathematical modeling is based on dynamical modeling of natural phenomena. Within the course students carry out computer-based experiments, videomeasurements and measurement on picture and create corresponding models. The activities involve selected topics of secondary schools science. The emphasize is put on the methods of implementation of the activities with regard to active students ´ learning.

Recommended literature:
[1]Koubek, V., Pecen, I.: Fyzikálne experimenty a modely v školskom mikropočítačom podporovanom laboratóriu, Univerzita Komenského, Bratislava, 1999
[2]Príručka COACH
[3]http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 34

A	B	C	D	E	FX
44.12	44.12	11.76	0.0	0.0	0.0

Provides: doc. RNDr. Zuzana Ješková, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: KPPaPZ/SNP/09	**Course name:** Mobbing, 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.

Prerequisities:

Conditions for course completion:
Active participation in seminars. Processing of current research results related to bullying and subsequent presentation at a seminar. Implementation of bullying prevention activities in class.

Learning outcomes:
The student will acquire the latest information about bullying in schools and its consequences, about solving problematic situations associated with bullying as well as about possible ways of prevention. Within the seminars, students will develop professional skills through the implementation of prevention activities. At the same time, their sensitivity to the issue of bullying and their willingness to actively address it during their pedagogical practice will increase.

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

Course language:

Notes:

Course assessment
Total number of assessed students: 143

A	B	C	D	E	FX
80.42	17.48	1.4	0.7	0.0	0.0

Provides: Mgr. Mária Bačíková, PhD.

Date of last modification: 16.02.2021
Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/ MDT06/19	**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., 4.

Course level: II.

Prerequisities:

Conditions for course completion:
All assignments must be uploaded by a student and accepted by a teacher according to assessment criteria.
Active participation at the seminar with minimum 80% participation.

Learning outcomes:
Student graduated from subject will be able:
- recognise basic tools for teaching activities,
- to use all types of actuall tools in education of science or humanities,
- to design and realise educational activities by using modern technologies.

Brief outline of the course:
0. Introduction
1. Cloud services
2. Digital notebooks
3. Digital imaging
4. Digital image processing
5. Digital text processing
6. Digital audio processing
7. Digital video, processing, videoconferencing
8. Google online services
9. Interactive didactical system (whiteboard, e-voting system, tablet)
10. Computer based laboratories
11. Digital technologies and virtual experiments
12. Didigital teacher`s workspace

Recommended literature:
1. Kireš, M. et al.: Modern didactical technics in teacher practice, Košice: Elfa, 2010, ISBN 788080861353
2. actuall information from web sites related to didactical technologies,
3. catalogues of teaching tools,
3. actuall articles about modern trends in science and humanities education.

Course language:
Slovak, English

Notes:

Course assessment
Total number of assessed students: 50

A	B	C	D	E	FX
34.0	44.0	14.0	4.0	4.0	0.0

Provides: doc. RNDr. Jozef Hanč, PhD.

Date of last modification: 31.03.2020

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Course level: II.

Prerequisities:

Conditions for course completion:
Active participation; completing reading assigments; realization of a chosen modern physics project with a practical application.
Exam and defending own project

Learning outcomes:
1. Achieving better conceptual understanding and getting an integrated view on fundamental ideas of contemprorary 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. Getting physical intuition and experience dealing with practical applications of modern physics.

Brief outline of the course:
1. Fundamental ideas of modern mechanics: symmetry, event, worldlline, spacetime diagram, principle of least action, conservation laws; practical applications.
2. Fundamental ideas of relativity: principle of relativity, space-time interval, conservation of momenergy, metrics, principle of maximal aging; practical applications.
3. 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 and Q, 2nd ed., Mc Graw Hill, Boston, 2003
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. Thorne, K. S., Black Holes and Time Warps, W.W. Norton, New York, 1995
6. 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: 3

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

Provides: doc. RNDr. Jozef Hanč, PhD.

Date of last modification: 02.05.2017

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 65

A	B	C	D	E	FX
73.85	23.08	3.08	0.0	0.0	0.0

Provides: Mgr. Katarína Petríková, PhD.

Date of last modification: 12.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 21

A	B	C	D	E	FX
90.48	4.76	4.76	0.0	0.0	0.0

Provides: PaedDr. Janka Ferencová, PhD.

Date of last modification: 12.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPE/ PPD/15	**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: 1	
Recommended semester/trimester of the course:	
Course level: II.	
Prerequisities: KPE/PDU/15,KPPaPZ/PPgU/15	
Conditions for course completion: Obtaining the required number of credits in the prescribed composition by the study plan.	
Learning outcomes: Verification of the acquired competencies of the student in accordance with the profile of the graduate.ie required number of credits in the prescribed composition by the study plan.	
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 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, me 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.
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.
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 psychológie 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.: Pozitívni psychologie. Praha: Portál 2004.
Křivohlavý, J.: Psychologie zdraví. Praha: Portál 2003.

Course language:

Notes:

Course assessment
Total number of assessed students: 444

A	B	C	D	E	FX
29.73	25.0	25.9	15.54	3.6	0.23

Provides:

Date of last modification: 17.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/FPK1/15	**Course name:** Phase Transitions and Critical Phenomena

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.

Prerequisities:

Conditions for course completion:
Grade

Learning outcomes:
To acquaint students with based problems of the phase transitions and critical phenomena.

Brief outline of the course:
Thermodynamics of phase transitions. Classification of phase transitions. Critical phenomena, universality. Microscopic models of the magnetic phase transitions. Ising model in one and two dimensions. Mean field theory of the Ising model. Landau theory of phase transitions.

Recommended literature:
1. Stanley H.G.: Introduction to Phase Transitions and Critical Phenomena, Clarendon Press Oxford, Oxford, 1971.
2. Reichl L.E.: A Modern Course in Statistical Physics, University of Texas Press, Austin, 1980.
3. Plischke M., Bergersen B.: Equilibrium Statistical Physics, World Scientific, Singapore, 1994.
4. Kadanoff L.P.: Statistical Physics, Statistics, Dynamics and Renormalization, World Scientific, Singapore, 2000.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 44

A	B	C	D	E	FX
72.73	9.09	4.55	6.82	6.82	0.0

Provides: prof. RNDr. Andrej Bobák, DrSc.

Date of last modification: 19.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ FYU1/15	**Course name:** Physical Problems

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.

Course level: II.

Prerequisities:

Conditions for course completion:
On- line set of problems for self solving is avialable 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. Clasical problems are studied in more details from different pont of view (students knowledge anmd skills, technologies, motivation, computer modelling and measuremets).

Brief outline of the course:
Methods of problem solving are presented and trained. The sets of typical problems are analysed. Uding 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, Sbírka 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.: Sbírka úloh z fyziky pro žáky strědních škol, SPN, Praha, 1984
7.Lindner, H.: Riešené 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 soutěze 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: 16

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

Provides: doc. RNDr. Marián Kireš, PhD., doc. RNDr. Zuzana Ješková, PhD.

Date of last modification: 23.01.2020

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/MSSU/15	**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: 1

Recommended semester/trimester of the course:

Course level: II.

Prerequisities: (ÚFV/DF1a/15,ÚFV/FKS/15,ÚFV/SJF1/15,ÚFV/DF1b/15,ÚFV/ASFU/15)

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: 8

A	B	C	D	E	FX
75.0	25.0	0.0	0.0	0.0	0.0

Provides:

Date of last modification: 11.04.2017

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

Conditions for course completion:
Active participation in seminars - 5 points
Research presentation (individual) - 10 points presentation; 10 points - written processing - a total of 20 points
Paper from the topics covered - 5 questions / 1 question maximum 5 points - a total of 25 points
∑ semester points: 50
Minimum number for completing the course - 31
Current information is available in el. the notice board of the subject before the beginning of each semester.

Learning outcomes:
Students will gain quality and up-to-date information on problem behavior of children and adolescents, including aggressive behavior, its etiology, prevention and intervention from the position of a teacher. Emphasis is placed on the independence and activity of students with an emphasis on linking theory with practice. Students will acquire knowledge and skills that develop their professional competencies and are applicable in the practice of the teacher.

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:

Study literature and material are available and will be supplemented with current information that will be provided to students.

Vágnerová, M. (2005). Školní poradenská psychologie pro pedagogy. Praha: Karolinum.
Fontana, D. (2003). Psychologie ve školní praxi. Praha: Portál.
Train, A. (2001).Nejčastější poruchy chování dětí. Jak je rozpoznat a kdy se obrátit na odborníka. Praha: Portál.
Čáp, J., Mareš, J. (2007). Psychologie pro učitele. Praha. Portál
Matoušek, O., Matoušková, A. (2011). Mládež a delikvence. Možné příčiny, současná struktura, programy prevence kriminality mládeže. Praha: Portál.
Rogge, J.U. (1999). Dětské strachy a úzkosti. Praha: Portál.

Course language:

Notes:

Course assessment

Total number of assessed students: 33

A	B	C	D	E	FX
75.76	24.24	0.0	0.0	0.0	0.0

Provides: PhDr. Anna Janovská, PhD.

Date of last modification: 17.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

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. Any adjustments to the implementation of the course in connection with the current order of the Rector and the exact criteria and method of evaluation are listed in the electronic board of the course.

Learning outcomes:
Getting acquainted with the teaching ethics and ethics of an educational counselor as one of the branches types of professional ethics, the subject of which is a theoretical reflection on ethical and moral issues teaching profession and the function of educational counselor (including the formulation of moral values, principles and standards of the teaching profession and the function of educational counselor in the form of codes of ethics) and on the other hand, it also includes the search for answers or solutions to practical moral problems. Students have the opportunity to freely discuss moral and ethical issues, which encourages their critical thinking. Teaching uses several methods, while the knowledge is presented in the form of an interesting explanation supplemented by experiential activities. Students will gain knowledge and experience in solving personal moral and ethical problems in pedagogical practice as well as in the use of this issue in education, which supports the development of their professional skills. The basis of teacher ethics and the ethics of an educational counselor is an interdisciplinary approach based on the interaction of philosophy, ethics, pedagogy and psychology.

Brief outline of the course:
Professional ethics, Ethics in helping professions, Pedagogical and teaching ethics, Concepts of teacher ethics, Ethics of work of educational counselor, Ethical and moral issues, Code of ethics, Psychology of morality, Moral reasoning, Moral conduct, Moral emotions, Solving moral and ethical dilemmas.

Recommended literature:
Ráczová, Babinčák, P. Základy psychológie morálky. Košice : Equilibria, 2009. - 130 s. ISBN 9788070977866 (brož.).

Gluchmanová, M. K niektorým terminologickým otázkam učiteľskej etiky. Pedagogická orientace 2007, č. 2, s. 11–25. ISSN 1211-4669.
Malankievičová, S. Profesijná etika: FF PU. 2008.
Miezgová J., Vargová, D. Etika. SPN Mladé letá 2007.
Remišová A. Dejiny etického myslela v Európe a USA. Bratislava, Kalligram 2008.
Zelina, M. Teória výchovy alebo hľadanie dobra. Bratislava SPN 2010.
Gluchmanová, M. 2009. Uplatnenie princípov a hodnôt etiky sociálnych dôsledkov v učiteľskej etike. Prešov: FF PU,2009. 222 s. ISBN 978-80-555-0042-3
Campbell, E. 2003. The Ethical Teacher. Berkshire (England): Open University Press, 2003. 178 s. ISBN 03-3521-219-0.

Course language:
slovak

Notes:

Course assessment
Total number of assessed students: 333

A	B	C	D	E	FX
95.5	3.9	0.6	0.0	0.0	0.0

Provides: Mgr. Lucia Barbierik, PhD.

Date of last modification: 16.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

Conditions for course completion:
Continuous assessment and examination.
Electronic board of the course AIS2 - more information and news.

Learning outcomes:
Understanding of psychological, pedagogical-psychological peculiarities of experience and behavior
of the teacher and the pupil, development of skills necessary for professional, competent performance of teaching practice.
Acquisition and understanding of psychological knowledge necessary for working with students with educational problems, with disadvantaged pupils.

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: The subject and goals of psychology and educational psychology. Professional forms of help in school practice.
Implementation of psychological concepts of personality into school practice (Classical and contemporary psychoanalytic theory, Individual psychology, Humanistic psychology, Concept of creative-humanistic education; Cognitivism and Theory of personal constructs). Social psychology of school and family. Learning and teaching. Health and disease; risk / protective factors with healthy related risk behavior. Psychology of students with behavioral and learning problems. Psychology of students with psychosocial, socio-cultural, health disadvantages. Psychological examination. Consulting process. Crisis intervention. Programs for prevention of risky behavior of schoolchildren.

Recommended literature:
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.
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 psychológie 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.: Pozitívni psychologie. Praha: Portál 2004.
Křivohlavý, J.: Psychologie zdraví. Praha: Portál 2003.

Course language:
slovak

Notes:

Course assessment
Total number of assessed students: 1432

A	B	C	D	E	FX
10.47	18.37	23.04	23.25	22.0	2.86

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

Date of last modification: 16.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

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. Any adjustments to the implementation of the course in connection with the current order of the Rector and the exact criteria and method of evaluation are listed in the electronic board of the course.

Learning outcomes:
The key task of this course is to provide future teachers with quality information about the specifics of working with the gifted through understanding the basic factors and process of creativity, clarify methods of identifying giftedness, focus on supporting and developing giftedness in practice and ensure the development of professional skills. The teaching presents many current topics and encourages students to discuss practical problems arising not only in working with the gifted but also in the implementation of a creative-humanistic approach in education. The curriculum overlap is evident mainly with other subjects dealing with developmental and pedagogical psychology, methodology of pedagogical-psychological research, etc.

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:
Povinná literatúra:
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
HŘÍBKOVÁ, L. (2009): Nadání a nadaní. Pedagogicko- psychologické přístupy, modely, výzkumy a jejich vztah ke školské praxi. Praha: Grada Publishing
Odporúčaná literatúra:

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): Špecifiká 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

Course language:
slovak

Notes:

Course assessment
Total number of assessed students: 28

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

Provides: Mgr. Lucia Barbierik, PhD.

Date of last modification: 16.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: KPPaPZ/PsZ/15	**Course name:** Psychology of Health

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.

Prerequisities:

Conditions for course completion:
Active participation in seminars, preparation and presentation of seminar work, final evaluation

Learning outcomes:
The aim of the course is to provide students with the latest knowledge and background of Health Psychology as well as forms of its application in order to improve the mental and physical health of individuals and society. The graduate of the course will understand the principles of health psychology, will be familiar with the current social discourse on the topics covered. The student will learn to use the acquired knowledge in school practice.

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.: Psychologie zdraví. Praha: Portál, 2001
Kebza, V.: Psychosociální determinanty zdraví. Praha: Academia, 2005
Křivohlavý, J.: Psychologie nemoci. Praha : Grada, 2002
Sarafino, E.P.: Health Psychology: Biopsychosocial Interactions, John Wiley & Sons, 2007
Taylor, E.: Health Psychology. Singapore: McGraw-Hill, 2006
Vollrath M.E.: Handbook of Personality and Health. Chichester: John Wiley & Sons, 2006

Course language:

Notes:

Course assessment
Total number of assessed students: 81

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

Provides: Mgr. Mária Bačíková, PhD.

Date of last modification: 16.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 25	

abs	n
100.0	0.0

Provides: doc. PaedDr. Ivica Hajdučeková, PhD.	
Date of last modification: 16.02.2019	
Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.	

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.

Prerequisities: KPE/MPPa/15,KPE/PDU/15,(KPPaPZ/PaSPP/09 and leboKPPaPZ/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. Studneets 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 durin 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 obeservation/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: 64

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., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/VPPb/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.

Prerequisities: KPE/MPPa/15,KPE/PDU/15,(KPPaPZ/PaSPP/09 and leboKPPaPZ/PPgU/15)

Conditions for course completion:

Learning outcomes:
Enable students to gain first practical experience in teaching mathematics to apply theoretical knowledge in specific teaching situations, to develop their teaching skills. To acquaint students with the atmosphere and the organization of school.

Brief outline of the course:

Recommended literature:

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 52

abs	n
100.0	0.0

Provides: doc. RNDr. Dušan Šveda, CSc., RNDr. Ingrid Semanišinová, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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: 3.

Course level: II.

Prerequisities:

Conditions for course completion:
The final assessment is based on the sum of partial results
Test 30 points
active participation 10 points
project (development of mathematical model, videomeasurement and physical experiment) 60 points

Learning outcomes:
After the course student gains an overview about the possible use of digital technologies to support active learning in physics. 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 and conceptual understanding.

Brief outline of the course:
The aim of the course is to present the use of digital technologies to enhance active learning in science with the help of datalogging, videomeasurement, measurement from the picture and modeling tools. Mathematical modeling is based on dynamical modeling of physical phenomena. Within the course students carry out computer-based experiments, videomeasurements and measurement on the picture and create corresponding models. The activities involve selected topics of secondary school physics. The emphasize is put on the methods of implementation of the activities with regard to active students´ learning.

Recommended literature:
[1]Koubek, V., Pecen, I.: Fyzikálne experimenty a modely v školskom mikropočítačom podporovanom laboratóriu, Univerzita Komenského, Bratislava, 1999
[2]Príručka COACH
[3]http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 10

A	B	C	D	E	FX
70.0	30.0	0.0	0.0	0.0	0.0

Provides: doc. RNDr. Zuzana Ješková, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/ PSP1a/05	**Course name:** School Physical Experiments I

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: 2

Recommended semester/trimester of the course: 1.

Course level: II.

Prerequisities:

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: 75

A	B	C	D	E	FX
49.33	20.0	17.33	6.67	4.0	2.67

Provides: doc. RNDr. Zuzana Ješková, PhD., doc. RNDr. Marián Kireš, PhD., PaedDr. Iveta Štefančínová, Ph.D.

Date of last modification: 03.05.2015
Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/ PSP1b/04	**Course name:** School Physical 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: 2

Recommended semester/trimester of the course: 2.

Course level: II.

Prerequisities:

Conditions for course completion:
continuous written tests
being active in practises
final oral examination

Learning outcomes:
Students should 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 basic and high schools.

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.

Recommended literature:
1.Onderová, Ľ., Kireš, M., Ješková, Z., Degro, J.: Praktikum školských pokusov z fyziky II., PF UPJŠ
2.Kašpar, E., Vachek, J.: Pokusy z fyziky na středních školách, I. díl, SPN Praha, 1967
3.Žouželka,, J., Fuka, J.: Pokusy z fyziky na středních školách, II. díl, SPN Praha, 1971
4.http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 67

A	B	C	D	E	FX
52.24	10.45	29.85	4.48	1.49	1.49

Provides: doc. RNDr. Zuzana Ješková, PhD., doc. RNDr. Marián Kireš, PhD.
Date of last modification: 02.04.2020
Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/ VPSP/04	**Course name:** School Physics Experiments III

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: 3.

Course level: II.

Prerequisities:

Conditions for course completion:
continuous written tests
active work in practises
final oral examination

Learning outcomes:
The students gain skills and competencies to the own and effective organisation and solving of experimental tasks, use of activities enhanced by digital technologies for physics teaching at lower and upper secondary level.

Brief outline of the course:
The practices are aimed at practical realization and physics interpretation of different forms of selected school demonstration. The emphasis is on creative utilization of teaching aids and didactic devices and computer-aided experiments.

Recommended literature:
Šucha, J.: Metodická príručka pre rozkladný transformátor, Učebné pomôcky B.Bystrica, 1973
Demkanin, P. a kol. Počítačom podporované prírodovedné laboratórium, FMFI UK Bratislava, 2006, ISBN:80-89186-10-6
Ješková, Z., a kol. Využitie informačných a komunikačných technológií v predmete Fyzika pre stredné školy : učebný materiál - modul 3. - 1. vyd. - Košice : Elfa, 2010. - 242 s., ISBN 978-80-8086-146-9
Duľa, I. a kol. Využitie informačných a komunikačných technológií v predmete Fyzika pre základné školy : učebný materiál - modul 3. - 1. vyd. - Košice : Elfa, 2010. - 240 s., ISBN 978-80-8086-154-4
Ješková, Z., Degro, J., Onderová, Ľ.: Počítačom podporovaná výučba fyziky, PF UPJŠ, Košice, ISBN 80 - 7097 - 451 -6
http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 2

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

Provides: doc. RNDr. Zuzana Ješková, PhD., doc. RNDr. Marián Kireš, PhD., RNDr. Ľudmila Onderová, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚTVŠ/ ÚTVŠ/CM/13	**Course name:** Seaside Aerobic Exercise

Course type, scope and the method:
Course type: Practice
Recommended course-load (hours):
Per week: Per study period: 36s
Course method: combined, present

Number of ECTS credits: 2

Recommended semester/trimester of the course:

Course level: I., II.

Prerequisities:

Conditions for course completion:
Conditions for course completion:
Attendance

Learning outcomes:
Learning outcomes:
Students will be provided an overview of possibilities how to spend leisure time in seaside conditions actively and their skills in work and communication with clients will be improved. Students will acquire practical experience in organising the cultural and art-oriented events, with the aim to improve the stay and to create positive experiences for visitors.

Brief outline of the course:
Brief outline of the course:
1. Basics of seaside aerobics
2. Morning exercises
3. Pilates and its application in seaside conditions
4. Exercises for the spine
5. Yoga basics
6. Sport as a part of leisure time
7. Application of projects of productive spending of leisure time for different age and social groups (children, young people, elderly)
8. Application of seaside cultural and art-oriented activities in leisure time

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 41

abs	n
12.2	87.8

Provides: Mgr. Agata Horbacz, PhD.
Date of last modification: 15.03.2019
Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/ DEX/15	**Course name:** Selected Demonstration Experiments

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: 2.

Course level: II.

Prerequisities:

Conditions for course completion:
Seminar work – a project dealing with hands-on experiments and their role in Physics teachig.
Oral examination

Learning outcomes:
The goal of the course is to develop pedagogic skills and creativity of further 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 Ľ.: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, Ľ.: 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: 4

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: 28.03.2020
Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

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 interpretationf 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.Tulčinskyj, : Zbierka kvalitatívnych úloh z fyziky, SPN, Bratislava, 1990
3.Kašpar, E. : Problémové vyučovanie a problémové úlohy, SPN, Praha1982
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: 10

A	B	C	D	E	FX
90.0	10.0	0.0	0.0	0.0	0.0

Provides: doc. RNDr. Marián Kireš, PhD.

Date of last modification: 28.03.2020

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ VPF2/15	**Course name:** Selected General Physics Problems II
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: 3.	
Course level: II.	
Prerequisities:	
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. Stepans, 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. Tulčinskyj, : Zbierka kvalitatívnych úloh z fyziky, SPN, Bratislava, 1990
7. Kašpar, E. : Problémové vyučovanie a problémové úlohy, SPN, Praha1982
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: 9

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: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ VMA/19	**Course name:** Selected topics on mathematical analysis

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: I., II.

Prerequisities: ÚMV/FRPb/19

Conditions for course completion:
Final evaluation is given by continuous assessment.

Learning outcomes:
Expand the knowledge of mathematical analysis needed to deepen understanding of machine learning and artificial intelligence.

Brief outline of the course:
1. Vector (linear) space - examples of infinite-dimensional spaces (spaces of sequences and functions).
2. Metric space (MS) - metric, convergence of sequences, closure and interior of a set, completeness and compactness of MP, Banach fixed-point theorem.
3. Normed linear space (NLS) - norm, Banach spaces, relation to MS, dual spaces, Hölder, Minkowski inequality.
4. Space with scalar product - unitary and Hilbert spaces, Cauchy-Schwartz inequality, Pythagorean theorem, parallelogram rule, relation to LNP, orthogonal projections.
6. Operators (functionals) in NLP - linearity, continuity, boundedness, adjointness.

Recommended literature:
1. N. Katzourakis, E. Varvaruca, An illustrative introduction to modern analysis. Boca Raton, FL:CRC Press (2018)
2. A. M. Bruckner, J. B. Bruckner, B. S. Thomson, Real analysis, 2nd. ed., ISBN 1434844129, 2008
3. Taylor, A.: Úvod do funkcionální analýzy, Academia 1973.
4. Kolmogorov, A., Fomin, S.: Základy teórie funkcí a funkcionální analýzy, 1975.
5. S. Lang, Undegraduate Analysis, Springer, 1997.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 1

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

Provides: doc. RNDr. Ondrej Hutník, PhD., Mgr. Jozef Kiseľák, PhD.

Date of last modification: 27.03.2019

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ SHM/10	**Course name:** Seminar on history of mathematics

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.

Prerequisities:

Conditions for course completion:
Homework, presentation on the chosen topic during the seminar.
More than 91 points - evaluation of A.
81-90 points - evaluation of B.
71-80 points - rating C.
61-70 points - evaluation of D.
51-60 points - evaluation of E.
Less than 50 points - FX evaluation.

Learning outcomes:
Students get an overview of the history of the development of certain mathematical disciplines and selected terms and about parallel between phylogenesis and ontogenesis of mathematical thinking.

Brief outline of the course:
Mathematics in Early Civilizations. Greek Mathematics. Mathematics in the Near and Far East (Arabia, China, India). Medieval European Mathematics. The Renaissance of Mathematics. The Beginning of Modern Mathematics.

Recommended literature:
Burton, D. M.: The History of Mathematics: An Introduction. McGraw−Hill, 2007.
Devlin, K.: Jazyk matematiky. Dokořán, 2002 (in czech)
Kolman, A.: Dejiny matematiky ve starověku. Academia, Praha, 1968 (in slovak)
Juškevič, A. P.: Dejiny matematiky ve středověku. Academia, Praha 1977 (in slovak)
Znám,Š. a kol.: Pohľad do dejín matematiky. Alfa, Bratislava, 1986 (in slovak)
Konforovič, A.G.: Významné matematické úlohy, SPN Praha, 1989 (in slovak)

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 105

A	B	C	D	E	FX
72.38	10.48	9.52	3.81	3.81	0.0

Provides: RNDr. Ingrid Semanišinová, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ SSM/15	**Course name:** Seminar on school mathematics

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.

Prerequisities:

Conditions for course completion:
During the semester will be 3 written exams.
Evaluation A - at least 90% of the points, evaluation B - at least 80%, evaluation C at least 70%, evaluation D at least 60%, evaluation E rating of at least 50% of the points. Credits shall not be granted to a student who receives less than 50% of the points.

Learning outcomes:
Students become familiar with the tasks, methods of problem solving, solving strategies and with specific problems of teaching mathematics at primary and secondary schools.

Brief outline of the course:
Basic knowledge of school mathematics. Number theory tasks, tasks to optimize, word problems.

Recommended literature:
Hecht, T., Sklenáriková, Z., Metódy riešenia matematických úloh, Bratislava, SPN, 1992.
Hecht, T. a kol., Matematika pre 1.-4. ročník gymnázií a SOŠ, OrbisPictusIstropolitana, Bratislava 1999-2002.
Krantz, S.G., Techniques of Problem Solving, AMS, 1997.
Larson, L.C., Metódy riešenia matematických problémov, Bratislava, Alfa, 1990.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 54

A	B	C	D	E	FX
62.96	37.04	0.0	0.0	0.0	0.0

Provides: doc. RNDr. Matúš Harminc, CSc.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

Conditions for course completion:
passing a final test

Learning outcomes:
Mastering of standard Slovak in spoken and written discouse. Becoming familiarized with codification manuals, acquiring skills related to bibliography and quotation standards. Mastering of written communication in accordance with current orthographical rules. Mastering of basic characteristics of expressions of text and style and fundamentals of text composition.

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:
Krátky slovník slovenského jazyka. Bratislava: Veda 1997.
Slovník súčasného slovenského jazyka. Bratislava: Veda 2006.
Slovník súčasného slovenského jazyka. Bratislava: Veda 2011.
Pravidlá slovenského pravopisu. Bratislava: Veda 2000.
KRÁĽ, Á.: Pravidlá slovenskej výslovnosti. Bratislava, SPN 1984; 1988. 632 s.
ONDRUŠ, Š. – SABOL, J.: Úvod do štúdia jazykov. 3. vyd. Bratislava, SPN 1987. 343s.
SABOL, J.- SLANČOVÁ, D. - SOKOLOVÁ, M.: Kultúra hovoreného slova. Prešov, FF UPJŠ 1989.
SABOL, J. – BÓNOVÁ, I. – SOKOLOVÁ, M.: Kultúra hovoreného prejavu. Prešov: FF PU 2006.
FINDRA, J.: Štylistika slovenčiny. Martin : Osveta, 2004.
FINDRA, Ján: Štylistika slovenčiny v cvičeniach. Martin : Osveta, 2005.
SLANČOVÁ, D.: Praktická štylistika. 2., upravené a doplnené vydanie. Prešov: Slovacontact

1996. 178 s. ISBN 80-901417-9-X.

Course language:

Notes:

Course assessment
Total number of assessed students: 96

A	B	C	D	E	FX
14.58	29.17	33.33	12.5	10.42	0.0

Provides: PhDr. Iveta Bónová, PhD., PhDr. Lucia Jasinská, PhD., Mgr. Lena Ivančová, PhD.

Date of last modification: 15.05.2019

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/FKS/15	**Course name:** Solid State Physics

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: 1.

Course level: II.

Prerequisities:

Conditions for course completion:
oral examination

Learning outcomes:
A general introductory course in solid state physics and material science.

Brief outline of the course:
Crystal structures and methods of structure analysis. Defects in crystalline solids. Chemical bonding in solids. Thermal properties of crystal lattice. "Free" electrons in metals. The electronic band structure of solids. Transport phenomena in metals and semiconductors. Superconductivity and superfluidity. Magnetic properties of solids. New problems of condensed matter physics.

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:

Notes:

Course assessment
Total number of assessed students: 12

A	B	C	D	E	FX
41.67	41.67	8.33	8.33	0.0	0.0

Provides: Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., prof. Ing. Martin Orendáč, CSc.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/ TRS/15	**Course name:** Special Theory of Relativity

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.

Prerequisities:

Conditions for course completion:

Learning outcomes:
To acquaint students with principles of a special theory of relativity.

Brief outline of the course:
Galilean transformations and Galilean principle of relativity. Ether's hypothesis. Michelson experiment. Einstein's principles of the special theory of relativity. Lorentz transformation and its physical consequences. Interval and light cone. Proper time. Minkowski's space-time. Mathematical apparatus of special relativity. Relativistic electrodynamics. Relativistic mechanics.

Recommended literature:
1. Greiner W.: Classical Mechanics-Point Particles and Relativity, Springer-Verlag, New York, 2004.
2. Goldstein H., Poole Ch., Safko J.: Classical Mechanics, Addison Wesley, San Francisco, 2002.
3. Landau L.D., Lifšic E.M.: The Classical Theory of Fields, Pergamon Press, Oxford, 1975.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 42

A	B	C	D	E	FX
33.33	40.48	9.52	9.52	7.14	0.0

Provides: prof. RNDr. Andrej Bobák, DrSc.

Date of last modification: 10.07.2017

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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:** combined, present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course: 1.	
Course level: I., I.II., II.	
Prerequisities:	
Conditions for course completion: Conditions for course completion: Min. 80% of active participation in classes.	
Learning outcomes: Learning outcomes: Increasing physical condition and performance within individual sports. Strengthening the relationship of students to the selected sports activity and its continual improvement.	
Brief outline of the course: Brief outline of the course: Within the optional subject, the Institute of Physical Education and Sports of Pavol Jozef Šafárik University provides for students the following sports activities: aerobics, basketball, badminton, floorball, yoga, pilates, swimming, body-building, indoor football, self-defence and karate, table tennis, sports for unfit persons, streetball, tennis, and volleyball. In the first two semesters of the first level of education students will master basic characteristics and particularities of individual sports, motor skills, game activities, they will improve level of their physical condition, coordination abilities, physical performance, and motor performance fitness. Last but not least, the important role of sports activities is to eliminate swimming illiteracy and by means of a special program of medical physical education to influence and mitigate unfitness. In addition to these sports, the Institute offers for those who are interested winter and summer physical education trainings with an attractive program and organises various competitions, either at the premises of the faculty or University or competitions with national or international participation.	
Recommended literature:	
Course language:	
Notes:	

Course assessment

Total number of assessed students: 14050

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
88.48	0.07	0.0	0.0	0.0	0.04	7.51	3.9

Provides: Mgr. Dana Dračková, PhD., Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Marcel Čurgali, Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD.

Date of last modification: 18.03.2019

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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: combined, present

Number of ECTS credits: 2

Recommended semester/trimester of the course: 2.

Course level: I., I.II., II.

Prerequisities:

Conditions for course completion:
Conditions for course completion:
Final assessment and active participation in classes - min. 75%.

Learning outcomes:
Learning outcomes:
Increasing physical condition and performance within individual sports. Strengthening the relationship of students to the selected sports activity and its continual improvement.

Brief outline of the course:
Brief outline of the course:
Within the optional subject, the Institute of Physical Education and Sports of Pavol Jozef Šafárik University provides for students the following sports activities: aerobics, basketball, badminton, floorball, yoga, pilates, swimming, body-building, indoor football, self-defence and karate, table tennis, sports for unfit persons, streetball, tennis, and volleyball.
In the first two semesters of the first level of education students will master basic characteristics and particularities of individual sports, motor skills, game activities, they will improve level of their physical condition, coordination abilities, physical performance, and motor performance fitness. Last but not least, the important role of sports activities is to eliminate swimming illiteracy and by means of a special program of medical physical education to influence and mitigate unfitness.
In addition to these sports, the Institute offers for those who are interested winter and summer physical education trainings with an attractive program and organises various competitions, either at the premises of the faculty or University or competitions with national or international participation.

Recommended literature:

Course language:

Notes:

Course assessment

Total number of assessed students: 11330

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
85.75	0.56	0.02	0.0	0.0	0.05	9.87	3.75

Provides: Mgr. Dana Dračková, PhD., Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Marcel Čurgali, Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD.

Date of last modification: 18.03.2019

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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: combined, present

Number of ECTS credits: 2

Recommended semester/trimester of the course: 3.

Course level: I., I.II., II.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 8383

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
90.11	0.05	0.01	0.0	0.0	0.02	4.04	5.76

Provides: Mgr. Marcel Čurgali, Mgr. Dana Dračková, PhD., Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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: combined, present

Number of ECTS credits: 2

Recommended semester/trimester of the course: 4.

Course level: I., I.II., II.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 5101

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
85.2	0.29	0.04	0.0	0.0	0.0	6.76	7.7

Provides: Mgr. Marcel Čurgali, Mgr. Dana Dračková, PhD., Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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:

Course level: II.

Prerequisities:

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: 45

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

Provides:

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ SVK/10	**Course name:** Students 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:

Course level: I., II.

Prerequisities:

Conditions for course completion:

Learning outcomes:
Individual scientific work of students. Publishing of obtained results in a written form and as a public presentation.

Brief outline of the course:

Recommended literature:
With respect to the research problematics (article in journals, books).

Course language:
Slovak or English

Notes:

Course assessment
Total number of assessed students: 94

A	B	C	D	E	FX
98.94	1.06	0.0	0.0	0.0	0.0

Provides:

Date of last modification: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/ SJF1/15	**Course name:** Subnuclear 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: 2.

Course level: II.

Prerequisities:

Conditions for course completion:
written test and thesis
exam

Learning outcomes:
Preview of basic characteristics and classification of elementary particles, their structures, theoretical description and experimental technique.

Brief outline of the course:
Historical introduction to the particle physics. The forces in nature. Elementary and composite particles..Classification of particles. Symmetrics and conservation laws. Standard model.

Recommended literature:
1. Close F.: The Cosmic Onion - Quarks and the Nature of the Universe, Oxford, 1990.
2. Hajko V. and team of authors, Physics in experiments, Bratislava, 1997.
3. Kapitonov I.M., Vvedenije v fiziku jadra i chastic (Russian), Moscow, 2004.
4. Brandt S., The harvest of a century, Discoveries of modern physics in 100 episodes, Oxford, 2009.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 34

A	B	C	D	E	FX
32.35	5.88	5.88	23.53	23.53	8.82

Provides: prof. RNDr. Stanislav Vokál, DrSc., doc. RNDr. Janka Vrláková, PhD.

Date of last modification: 30.03.2020

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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: Per study period:** 36s **Course method:** combined, present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course:	
Course level: I., II.	
Prerequisities:	
Conditions for course completion: Conditions for course completion: Attendance Final assessment: Raft control on the waterway (attended/not attended)	
Learning outcomes: Learning outcomes: Students have knowledge of rafts (canoe) and their control on waterway.	
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:	
Course language:	
Notes:	

Course assessment Total number of assessed students: 153	
abs	n
45.75	54.25
Provides: Mgr. Dávid Kaško, PhD.	
Date of last modification: 18.03.2019	
Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.	

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.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 503

abs	n
100.0	0.0

Provides: doc. PhDr. Beata Gajdošová, PhD., PaedDr. Renáta Orosová, PhD., Mgr. Katarína Petríková, PhD.
Date of last modification: 12.02.2021
Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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: Per study period:** 36s **Course method:** combined, present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course:	
Course level: I., II.	
Prerequisities:	
Conditions for course completion: Conditions for course completion: Attendance Final assessment: continuous fulfilment of all tasks within the course	
Learning outcomes: Learning outcomes: Students will be familiarized with principles of safe stay and movement in extreme natural conditions as they will obtain theoretical knowledge and practical skills to solve the extraordinary and demanding situations connected with survival and minimization of damage to health. The course develops team work and students will learn how to manage and face the situations that require overcoming of obstacles.	
Brief outline of the course: Brief outline of the course: Lectures: 1. Principles of behaviour and safety for movement and stay in unknown mountains 2. Preparation and leadership of tour 3. Objective and subjective danger in mountains 4. Principles of hygiene and prevention of damage to health in extreme conditions Exercises: 1. Movement in terrain, orientation and navigation in terrain (compasses, GPS) 2. Preparation of improvised overnight stay 3. Water treatment and food preparation.	
Recommended literature:	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 393

abs	n
44.53	55.47

Provides: MUDr. Peter Dombrovský, Mgr. Marek Valanský

Date of last modification: 15.03.2019

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 550

A	B	C	D	E	FX
27.27	28.55	25.64	13.27	4.55	0.73

Provides: PaedDr. Renáta Orosová, PhD., Mgr. Katarína Petríková, PhD., PaedDr. Janka Ferencová, PhD.

Date of last modification: 12.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

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.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 105

A	B	C	D	E	FX
92.38	1.9	3.81	0.95	0.95	0.0

Provides: Mgr. Ondrej Kalina, PhD.

Date of last modification: 15.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: KPPaPZ/ZMPPV/15	**Course name:** The Fundamentals of Pedagogico-Psychological Research Methodology

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.

Prerequisities: KPPaPZ/PPgU/15,KPE/PDU/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: 447

A	B	C	D	E	FX
18.79	26.4	23.49	19.02	12.08	0.22

Provides: Mgr. Mária Bačíková, PhD., PhDr. Anna Janovská, PhD.

Date of last modification: 16.02.2021

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ VMV1/15	**Course name:** Using Multimedia in Education

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: 3.

Course level: II.

Prerequisities:

Conditions for course completion:
9. moduls assignments: 45 points
presentation and discussion about the project 55 points
A 100-90 B 89-80 C 79-70 D 69-60 E 59-50 F 49-0

Learning outcomes:
Studenat will have overview and skills in field of using multimedia in education.

Brief outline of the course:
1. Computer graphics as visualisation tools
2. Preparation and using of graphic elements
3. Computer animation
4. Digital audio and educational activities
5. Educational video
6. Interactive multimedia
7. Videotechnologies in education
8. Computer based school laboratory
9. Interactove acitvites in multimedia classroom
10. Educational project creation
11. Educational project creation
12. Project presentation

Recommended literature:
1. Kireš, M.., Šnajder Ľ., Kalakay, R.: Multimédiá pre učiteľa, Asociácia projektu Infovek, UIPŠ Bratislava 2002, 96 strán, 400 ks, ISBN 80-7098-317-5
2. Kireš, M. a kol.: IKT pre učiteľa fyziky, Asociácia projektu Infovek, UIPŠ Bratislava 2002, 79 strán, 400 ks, ISBN 80-7098-316-7
3. Šnajder, Ľ., Kireš, M.: Práca s multimédiami pre stredné školy, tematický zošit, SPN Bratislava, 2005, 48 strán, 1. vydanie: ISBN 80-10-00422-7, 2006, 1.vydanie maďarská jazyková mutácia: ISBN 80-10-01031-6, 2007, 2.vydanie: ISBN 978-80-10-01224-4

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: 03.05.2015

Approved: prof. RNDr. Peter Kollár, DrSc., prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Jozef Doboš, CSc.