COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ AOS1/15	**Course name:** Administration of OS

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 credits: 2

Recommended semester/trimester of the course: 1., 3.

Course level: I., II.

Prerequisities:

Conditions for course completion:

Learning outcomes:
To be able to install Linux based system, divide disks, to know how to install, configure and manage several network deamons.

Brief outline of the course:
1. Introduction to network services
2. SSH
3. Routing and NAT
4. Introduction to Firewall
5. Advanced firewall settings
6. DHCP server
7. Web server (apache, php, mysql)
8. Monitoring Server (SNMP, MRTG)
9. Samba Server
10. Mail server (smtp, imap, postfix)
11. Proxy server
12. Windows server
13. Windows Server II.
14. Introduction to Virtualization (Hyper-V OpenVZ)

Recommended literature:
1. Linux Documentation Project, 4 updated edition. Brno: Computer Press (2008).
2. Stanek, W.: Windows Server 2012 Inside Out. Microsoft Press (2013)
3. Shah, S. Soyinka, W. Administration Linux. Grade (2007)
4. Nemeth, E., et al.: Linux. Brno: Computer Press (2008)

Course language:

Course assessment
Total number of assessed students: 83

A	B	C	D	E	FX
51.81	24.1	6.02	4.82	7.23	6.02

Provides: RNDr. JUDr. Pavol Sokol, PhD.
Date of last modification: 25.02.2018
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

Course assessment
Total number of assessed students: 8

A	B	C	D	E	FX
87.5	12.5	0.0	0.0	0.0	0.0

Provides: doc. RNDr. Rudolf Gális, PhD.

Date of last modification: 23.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 24

A	B	C	D	E	FX
83.33	8.33	8.33	0.0	0.0	0.0
Provides: prof. RNDr. Stanislav Vokál, DrSc.					
Date of last modification: 26.09.2017					
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

Course assessment
Total number of assessed students: 2

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

Provides: PaedDr. Iveta Štefančínová, Ph.D.

Date of last modification: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

Course assessment
Total number of assessed students: 9

A	B	C	D	E	FX
55.56	44.44	0.0	0.0	0.0	0.0

Provides: doc. RNDr. Marián Kireš, PhD., PaedDr. Iveta Štefančínová, Ph.D.
Date of last modification: 01.03.2018
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

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., PaedDr. Iveta Štefančínová, Ph.D.

Date of last modification: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ DIN1a/15	**Course name:** Didactics of informatics

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 credits: 3

Recommended semester/trimester of the course: 2.

Course level: II.

Prerequisities:

Conditions for course completion:
Computer science teaching plan at secondary grammar school. Conceptual map and cognitive objectives of chosen topic. Solving of algorithmic problem with the description of used problem solving strategies. Collection of tasks with increasing complexity. Video recorded from microteaching of chosen topic using activating methods. Applet to the teaching of algorithms and programming. Worksheet to programming chosen game in Scratch. Activity in discussion forums.

Learning outcomes:
1. To acquire an overview of the objectives, content, modern methods of teaching computer science.
2. To create conceptual map, cognitive objectives and tasks collection with increasing complexity for chosen topic.
3. To solve selected algorithmic problems using various problem solving strategies.
4. To master the methodology of teaching of algorithms and programming using selected algorithmic simulations, games, programming environments.

Brief outline of the course:
The objectives and content of computer science education. Solving algorithmic problems exploiting algorithmic games and children's programming environment. Teaching task, its forms and parameters. Creation of tasks collection with increasing complexity. Activating methods of teaching computer science. Methodology of teaching selected topics of algorithms and programming (recursion, sorting, searching, coding, encryption, compression, checksums). Methodology of teaching programming in Scratch.

Recommended literature:
1. HAZZAN, Orit - LAPIDOT, Tami - RAGONIS, Noa (2011). Guide to teaching computer science : an activity-based approach. London ; New York : Springer, ©2011. ISBN 978-0-85729-443-2.
2. BELL, Tim - MORGAN, Jack (2014). Computer Science Field Guide. University of Canterbury, New Zealand. http://www.cosc.canterbury.ac.nz/csfieldguide/index.html
3. BELL, Tim - WITTEN, Ian H. - FELLOWS, Mike (2005). Computer Science Unplugged: An enrichment and extension programme for primary-aged children. Computer Science Unplugged. 2005. http://ir.canterbury.ac.nz/bitstream/10092/247/1/12584508_Main.pdf

4. KALAŠ, Ivan et al. (2001). Informatika pre stredné školy, Bratislava : SPN, 2001. ISBN 80-10-00157-0.
5. TOMCSÁNYIOVÁ, Monika et al. (2009). Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika - Riešenie problémov a základy programovania 1. 2009. ISBN 978-80-8118-023-1.
6. GUNIŠ, Ján - SUDOLSKÁ, Miloslava - ŠNAJDER, Ľubomír (2009). Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika - Aktivizujúce metódy vo vyučbe školskej informatiky. 2009. ISBN 978-80-89225-96-5.

Course language:

Course assessment
Total number of assessed students: 64

A	B	C	D	E	FX
26.56	15.63	23.44	20.31	12.5	1.56

Provides: doc. RNDr. Ľubomír Šnajder, PhD., PaedDr. Ján Guniš, PhD.

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ DIN1b/15	**Course name:** Didactics of informatics

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 credits: 5

Recommended semester/trimester of the course: 3.

Course level: II.

Prerequisities:

Conditions for course completion:
The preliminary assessment shall be based on the results of independent work of student on computers for a number of sub-assignments (course and evaluation of own inquiry activity, didactical quiz, interactive modelling applet, inquiry-based worksheet with tasks and questions). In final exam students will demonstrate an overview of the theoretical knowledge in the field of computer science education in written form and they will present and defend their own educational project for the chosen topic of the computer science (containing objectives, system of tasks with increasing complexity, tasks solutions and methodological commentaries and didactical quiz).

Learning outcomes:
1. For the chosen topic of school informatics create didactic quiz, inquiry-based worksheet with tasks and questions, implement and evaluate own inquiry activity.
2. To create an interactive model for the chosen natural phenomenon or computer science concept.
3. To create a lesson preparation using modern teaching methods and aids, to implement it in practice and evaluate.

Brief outline of the course:
Teaching paradigms. Inquiry based computer science education. Process of creating concepts in computer science. Assessment of learning objectives of pupils, didactical quizes. Programming teaching (paradigms, environments, data types, commands, variables). Specifics of computer arithmetics. Mathematical modelling and simulation. Methodology of teaching selected topics of computer science (multimedia, internet). Computer science competitions.

Recommended literature:
1. HAZZAN, Orit - LAPIDOT, Tami - RAGONIS, Noa (2011). Guide to teaching computer science : an activity-based approach. London ; New York : Springer, ©2011. ISBN 978-0-85729-443-2.
2. BELL, Tim - MORGAN, Jack (2014) Computer Science Field Guide. University of Canterbury, New Zealand. http://www.cosc.canterbury.ac.nz/csfieldguide/index.html
3. SALANCI, Ľubomír - TOMCSÁNYIOVÁ, Monika - BLAHO, Andrej (2010). Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika : Didaktika programovania 2. Bratislava : Štátny pedagogický ústav, 2010. 36 s. ISBN 978-80-8118-053-8.

4. GUNIŠ, Ján - ŠNAJDER, Ľubomír (2009). Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika : Didaktika predmetu Informatika 2. Bratislava : Štátny pedagogický ústav, 2009. 45 s. ISBN 978-80-8118-021-7.

Course language:

Course assessment
Total number of assessed students: 148

A	B	C	D	E	FX
16.89	33.78	24.32	16.22	8.11	0.68

Provides: doc. RNDr. Ľubomír Šnajder, PhD., PaedDr. Ján Guniš, PhD.

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

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: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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	
Course assessment Total number of assessed students: 10	

abs	n
100.0	0.0

Provides:
Date of last modification: 01.03.2018
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

Course assessment
Total number of assessed students: 10

abs	n
100.0	0.0

Provides:

Date of last modification: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

Course assessment
Total number of assessed students: 18

abs	n
100.0	0.0

Provides:

Date of last modification: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ DSU1a/15	**Course name:** Seminar to diploma theses in informatics XI

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 credits: 2

Recommended semester/trimester of the course: 2.

Course level: II.

Prerequisities:

Conditions for course completion:
Elaboration and presentation of papers on selected areas of computer science education.
Present the interim results of the diploma thesis.

Learning outcomes:
Get an overview of the results of educational research in the field of computer science education.
To learn currently work on the diploma thesis, to present partial results of the pedagogical research work on it.

Brief outline of the course:
Educational research in the field of computer science education. Study of educational literature (conference proceedings, journals, studies) focusing on selected issues of computer science education.
Presentations of interim results of students' diploma theses.

Recommended literature:
1. KATUŠČÁK, D. Ako písať vysokoškolské a kvalifikačné práce: ako písať seminárne práce a ročníkové práce, práce študentskej vedeckej a odbornej činnosti, diplomové, záverečné a atestačné práce a dizertácie. 3. vyd. Nitra : Enigma, 2004. 162 s. ISBN 80-89132-10-3.
2. ISO 690: 1987 Documentation - Bibliographic references. Content, form and structure.
3. ISO 2145: 1978 Documentation - Numbering of divisions and subdivisions in written documents.
4. ECO, U. Jak napsat diplomovou práci. Olomouc : Votobia, 1997. 278 s. ISBN 80-7098-173-7.
5. Digital libraries (ACM Digital Library, IEEExplore, DOAJ)
6. Scientific literature relevant to diploma thesis according of recommendation of supervisor.

Course language:
Slovak

Course assessment
Total number of assessed students: 6

abs	n
100.0	0.0

Provides: doc. RNDr. Ľubomír Šnajder, PhD.
Date of last modification: 25.02.2018
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/DSU1b/15

Course name: Seminar to diploma theses in informatics XI

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 credits: 2

Recommended semester/trimester of the course: 3.

Course level: II.

Prerequisities: ÚINF/DSU1a/15

Conditions for course completion:

Learning outcomes:
Get an experience with design, realization and evaluation of own educational research in the field of computer science education. To learn currently work on the diploma thesis, to present partial results of the pedagogical research work on it.

Brief outline of the course:
Educational research in the field of computer science education. Study of educational literature (conference proceedings, journals, studies) focusing on selected issues of computer science education. Design, realization and evaluation of own educational research in the field of computer science education. Presentations of interim results of students' diploma theses.

Recommended literature:
1. HENDL, Jan (2005). Kvalitativní výzkum - základní metody a aplikace. Praha : Portál, 2005. ISBN 80-7367-040-2.
2. ŠVAŘÍČEK, Roman - ŠEĎOVÁ, Klára et al. (2007). Kvalitativní výzkum v pedagogických vědách. Praha : Portál, 2007. ISBN 978-80-7367-313-0.
3. GAVORA, Peter et al. (2010). Elektronická učebnica pedagogického výskumu. [online]. Bratislava : Univerzita Komenského, 2010. Dostupné na: http://www.e-metodologia.fedu.uniba.sk/ ISBN 978–80–223–2951–4.
4. BELL, Tim - MORGAN, Jack (2014). Computer Science Field Guide. University of Canterbury, New Zealand. Dostupné na: http://www.cosc.canterbury.ac.nz/csfieldguide/index.html
5. Digital libraries (ACM Digital Library, IEEExplore, DOAJ)
6. Scientific literature relevant to diploma thesis according of recommendation of supervisor.

Course language:
Slovak

Course assessment
Total number of assessed students: 30

abs	n
100.0	0.0

Provides: doc. RNDr. Ľubomír Šnajder, PhD.
Date of last modification: 25.02.2018
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

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: 01.03.2018					
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

Course assessment
Total number of assessed students: 8

A	B	C	D	E	FX
87.5	12.5	0.0	0.0	0.0	0.0
Provides: doc. RNDr. Zuzana Ješková, PhD.					
Date of last modification: 01.03.2018					
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 7

A	B	C	D	E	FX
42.86	42.86	14.29	0.0	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: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/FO1/15	**Course name:** Formal languages and automata

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 credits: 5

Recommended semester/trimester of the course: 1., 3.

Course level: II.

Prerequisities:

Conditions for course completion:

Learning outcomes:
To provide theoretical background for studying computer science in general, by giving the necessary knowledge in theory of automata.

Brief outline of the course:
Greibach normal structure of contextfree gramars.Deterministic pushdown automata. Context-sensitive grammars and linearly-bounded Turing machines. Deterministic linearly-bounded Turing machines. Space bounded machines. Phrase-structure grammars and Turing machines. Post correspondence problem. Undecidable problems in the theory of formal languages.

Recommended literature:

Course language:

Course assessment
Total number of assessed students: 10

A	B	C	D	E	FX
30.0	40.0	20.0	10.0	0.0	0.0

Provides: prof. RNDr. Viliam Geffert, DrSc., Mgr. Alexander Szabari, PhD.

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

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: 23.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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
16.http://kekule.science.upjs.sk/fyzika
17.http://physedu.science.upjs.sk

Course language:
Slovak, English

Course assessment
Total number of assessed students: 10

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: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ JAC1/15	**Course name:** Programming language C

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 credits: 2

Recommended semester/trimester of the course: 1., 3.

Course level: I., II.

Prerequisities:

Conditions for course completion:
Practics attendance and activity. Home assigment
Final project.

Learning outcomes:
Become skilled in language C and get knowledge of the theoretical concepts that are used in the development in low-level software.

Brief outline of the course:
1. Installing and setting up the development environment. Simple program in C, compiling and running.
2. Loops, conditions. Introduction to arrays. Numeric functions from numeric library. Compiling with `gcc` and setting up the warnings and hints.
3. Functions. Statically allocated arrays. Array gotchas in C. Makefiles for complex projects.
4. Basic I/O functions. Functions with array parameters and specifics.
5. Dynamic memory allocation as a mechanism for dynamic arrays. Strings as a special case of arrays. Strings and file I/O.
6. String manipulation principles and functions from standard library.
7. Working with binary files.
8. Custom data types. Structs.
9. Dynamic data structures. Linked lists. Stacks and operations with these structs.
10. Additional operations with dynamic data structures. Parameter passing with values and name.
11. Useful tricks and hints: passing parameters from operating system, exit codes. Multidimensional arrays.
12. Function pointers. Generic pointers. Unions.

Recommended literature:
1. A. D. Marshall: Programming in C: UNIX System Calls and Subroutines using C. [online] <http://www.cs.cf.ac.uk/Dave/C/CE.html>
2. J. Maasen: C for Java Programmers. [online] <http://www.cs.vu.nl/~jason/college/dictaat.pdf>
3. Bruce Eckel: Thinking in C. [online] <http://mindview.net/CDs/ThinkingInC>

Course language:

Course assessment

Total number of assessed students: 178

A	B	C	D	E	FX
37.08	20.22	15.73	12.36	10.67	3.93

Provides: RNDr. PhDr. Peter Pisarčík

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

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: 28.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ KKV1/15	**Course name:** Classical and quantum computations

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 credits: 6

Recommended semester/trimester of the course: 1., 3.

Course level: II.

Prerequisities:

Conditions for course completion:
Written work
Writen and oral examination

Learning outcomes:
To provide information on quantum computer and quantum computations. To compare classical and quantum models and methods.

Brief outline of the course:
The basics of classical theory of computation: Turing machines, Boolean circuits, parallel algorithms, probabilistic computation, NP-complete problems, and the idea of complexity of an algorithm. Introduction of general quantum formalism (pure states, density matrices, and superoperators), universal gate sets and approximation theorems. Grover's algorithm, Shor's factoring algorithm, and the Abelian hidden subgroup problem. Parallel quantum computation, a quantum analogue of NP-completeness, and quantum error-correcting codes.

Recommended literature:
1. BERMAN,G.P., DOOLEN,G.D., MAINIERI, R., TSIFRINOVIC, V.I. Introduction to Quantum Computers. World Scientific, 2003.
2. GRUSKA, J. Quantum Computing. McGraw-Hill, 1999.
3. JOHNSON, G. A Shortcut Through Time: The Path to the Quantum Computer, Knopf 2003.
4. KITAEV, A.Y., SHEN, A.H., VYALYI, M.N. Classical and Quantum Computation. American Mathematical Society, 2002.
5. NIELSEN, M.A., CHUANG, I.L. Quantum Computation and Quantum Information. Cambridge University Press, 2000.
6. HIRVENSALO, M., Quantum Computing, Springer 2004

Course language:

Course assessment
Total number of assessed students: 117

A	B	C	D	E	FX
23.08	35.04	14.53	13.68	7.69	5.98

Provides: prof. RNDr. Gabriel Semanišin, PhD.
Date of last modification: 26.09.2017
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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: present

Number of 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:

Course assessment
Total number of assessed students: 365

abs	n
44.38	55.62

Provides: MUDr. Peter Dombrovský, Mgr. Marek Valanský
Date of last modification: 18.08.2017
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 credits: 2

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

Course level: II.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Course assessment
Total number of assessed students: 281

A	B	C	D	E	FX
94.66	4.63	0.71	0.0	0.0	0.0

Provides: Mgr. Lucia Hricová, PhD.

Date of last modification: 21.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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: present

Number of 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:

Course assessment
Total number of assessed students: 142

abs	n
41.55	58.45

Provides: Mgr. Peter Bakalár, PhD.
Date of last modification: 18.08.2017
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ LOP1/15	**Course name:** Logic programming

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 credits: 5

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

Course level: I., II.

Prerequisities:

Conditions for course completion:

Learning outcomes:
To learn bases of declarative programming (as complementary method to procedural programming) and basic methods of implementations of logic programming languages.

Brief outline of the course:
Facts and rules in Prolog. Unification of terms (Robinson's unification algorithm). Recursion and backtrack in Prolog. Computational step and computational tree. Classification of terms. Lists. Functors and operators in composed terms. Predicates for input and output. Dynamic database. Cycles (repeat-fail, for). Predicates related to backtrack. Cut. Predicates evaluating of arithmetic expressions.

Recommended literature:
Bratko, I.: Prolog – programming for artificial intelligence, third edition. Addison-Wesley, 2001
Nilsson U., Maluszynski J.: Logic, Programming and Prolog, John Wiley & Sons Ltd. 1995
Nienhuys-Cheng Sh.H., Wolf R.: Foundations of Inductive Logic Programming, Springer-Verlag, 1997

Course language:

Course assessment
Total number of assessed students: 255

A	B	C	D	E	FX
21.57	10.98	13.73	24.71	27.06	1.96

Provides: RNDr. Ondrej Krídlo, PhD.

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ MDT06/15	**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 credits: 2

Recommended semester/trimester of the course: 2.

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

Course assessment
Total number of assessed students: 44

A	B	C	D	E	FX
34.09	45.45	11.36	4.55	4.55	0.0

Provides: doc. RNDr. Jozef Hanč, PhD.

Date of last modification: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

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: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:	
Course assessment Total number of assessed students: 692	

abs	n
99.86	0.14

Provides: doc. PhDr. Beata Gajdošová, PhD., PaedDr. Renáta Orosová, PhD., Mgr. Katarína Petríková, PhD.
Date of last modification: 05.02.2018
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ 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 credits: 1

Recommended semester/trimester of the course: 2.

Course level: II.

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

Conditions for course completion:
During the practice students observe 11 computer science lessons and leads one own computer science hour under the guidance of a teacher trainer. Confirmation of classroom visits. Written assessment from the teacher trainer.

Learning outcomes:
Students acquire knowledge by observing the practical application of teaching skills for teaching the subject of computer science and getting to know the organization of school work.
Introduction into practical implementation of computer science lesson.

Brief outline of the course:
Students observe the process of teaching computer science at primary and secondary school and analysed it with teacher trainer. Practice takes place continuously during the course of the semester. Practice is scheduled once a week at the time of first to third lesson in schools.
The first two hours observation/teaching, the third hour analysing process under the guidance of a teacher trainer.

Recommended literature:
Current computer science textbooks for primary and secondary schools in Slovakia.

Course language:
Slovak

Course assessment
Total number of assessed students: 64

abs	n
100.0	0.0

Provides: doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 credits: 1

Recommended semester/trimester of the course: 2.

Course level: II.

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

Conditions for course completion:
Student observes 11 physics lessons and leads one own physics lesson under the guidance of a teacher trainer. Confirmation of classroom visits. Written assessment made by teacher trainer.

Learning outcomes:
Students acquire knowledge by observing the practical applications of teaching skills for teaching the subject of physics and getting known about the organization of school work. 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

Course assessment
Total number of assessed students: 61

abs	n
100.0	0.0

Provides: doc. RNDr. Jozef Hanč, PhD.

Date of last modification: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

Course assessment
Total number of assessed students: 12

abs	n
100.0	0.0

Provides: doc. RNDr. Jozef Hanč, PhD.

Date of last modification: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/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 credits: 2

Recommended semester/trimester of the course: 3.

Course level: II.

Prerequisities: ÚINF/MPPb/15

Conditions for course completion:
A certified statement of classroom visits and own taught lessons as proof of a practice within the range prescribed 6 hours classroom visits and 18 taught computer science lessons. Observation records and lesson preparations.

Learning outcomes:
The student under supervision of an experienced teacher trainer teaching practical skills for computer science teaching. Student is familiar with the life of the school, extra-curricular and other activities.

Brief outline of the course:
Observations of teacher trainer lessons, consultations of lesson preparations of students, teaching aids, teaching own lessons, methodological and scientific analysis of lessons, active participation in extracurricular and other activities of training school.

Recommended literature:
Current computer science textbooks for primary and secondary schools in Slovakia.

Course language:
Slovak

Course assessment
Total number of assessed students: 12

abs	n
100.0	0.0

Provides: doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

Course assessment
Total number of assessed students: 8

abs	n
100.0	0.0

Provides: doc. RNDr. Jozef Hanč, PhD.

Date of last modification: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ 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 credits: 2

Recommended semester/trimester of the course: 4.

Course level: II.

Prerequisities: ÚINF/MPPc/15

Conditions for course completion:
A certified statement of classroom visits and own taught lessons as proof of a practice within the range prescribed 8 hours classroom visits and 30 taught computer science lessons. Observation records and lesson preparations.

Learning outcomes:
The student under supervision of an experienced teacher trainer teaching practical skills for computer science teaching. Student is familiar with the life of the school, extra-curricular and other activities.

Brief outline of the course:
Observations of teacher trainer lessons, consultations of lesson preparations of students, teaching aids, teaching own lessons, methodological and scientific analysis of lessons, active participation in extracurricular and other activities of training school.

Recommended literature:
Current computer science textbooks for primary and secondary schools in Slovakia.

Course language:
Slovak

Course assessment
Total number of assessed students: 9

abs	n
100.0	0.0

Provides: doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 credits: 1

Recommended semester/trimester of the course:

Course level: II.

Prerequisities: (ÚFV/DF1a/15 and ÚFV/FKS/15 and ÚFV/SJF1/15 and ÚFV/DF1b/15 and 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

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: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ MSSUI/15	**Course name:** Informatika a didaktika informatiky
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 1	
Recommended semester/trimester of the course:	
Course level: II.	
Prerequisities: ÚINF/DIN1b/15 and ÚINF/TIK1/15 and (ÚINF/UGR1/15 or ÚINF/KKV1/15 or ÚINF/UNS1/15 or ÚINF/FO1/15)	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	

Course assessment
Total number of assessed students: 13

A	B	C	D	E	FX
38.46	23.08	23.08	7.69	7.69	0.0

Provides:
Date of last modification: 25.02.2018
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 474

A	B	C	D	E	FX
53.38	33.76	9.49	1.69	0.63	1.05

Provides: PaedDr. Renáta Orosová, PhD.

Date of last modification: 05.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:	

Course assessment

Total number of assessed students: 48

A	B	C	D	E	FX
54.17	12.5	10.42	4.17	10.42	8.33

Provides: PaedDr. Ingrid Puchalová, PhD., Mgr. Barbora Molokáčová
Date of last modification: 25.08.2017
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ ODPU/15	**Course name:** Defence of diploma thesis

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

Number of credits: 15

Recommended semester/trimester of the course:

Course level: II.

Prerequisities: ÚINF/DSU1b/15

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Course assessment
Total number of assessed students: 10

A	B	C	D	E	FX
50.0	0.0	50.0	0.0	0.0	0.0

Provides:

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 24

A	B	C	D	E	FX
87.5	12.5	0.0	0.0	0.0	0.0

Provides: PhDr. Anna Janovská, PhD.

Date of last modification: 21.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 14

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

Provides: PaedDr. Janka Ferencová, PhD.

Date of last modification: 05.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 26

A	B	C	D	E	FX
80.77	15.38	3.85	0.0	0.0	0.0

Provides: Mgr. Katarína Petríková, PhD.

Date of last modification: 05.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ PDSI1/15	**Course name:** Pro-seminar to diploma thesis in informatics

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 credits: 2

Recommended semester/trimester of the course: 1.

Course level: II.

Prerequisities:

Conditions for course completion:

Learning outcomes:
To inform students about areas of informatics they are suitable to work in diploma theses. In the end of semester students have to prepared themes of diploma theses, goals and recommended study literature.

Brief outline of the course:
The seminar is oriented to problems prospective to preparations of Diploma theses.

Recommended literature:
MEŠKO, D., KATUŠČÁK, D. Akademická príručka. 1. vyd. Vydavateľstvo Osveta : Martin, 2004. 316 s. ISBN 80-8063-150-6
ISO 690: 1987 Documentation - Bibliographic references. Content, form and structure.
ISO 2145: 1978 Documentation - Numbering of divisions and subdivisions in written documents.
Eco, U.: Jak napsat diplomovou práci, z taliančiny Come si fa una tesi di laures, Milano, 1977, Olomouc, Votobiax.
Odborná a vedecká literatúra týkajúca sa diplomovej práce podľa odporúčania vedúceho diplomovej práce.

Course language:

Course assessment
Total number of assessed students: 439

abs	n
99.32	0.68

Provides: doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:	

Course assessment

Total number of assessed students: 1361

A	B	C	D	E	FX
11.83	25.2	27.48	19.99	8.52	6.98

Provides: PaedDr. Renáta Orosová, PhD., Mgr. Katarína Petríková, PhD.
Date of last modification: 05.02.2018
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

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 credits: 2

Recommended semester/trimester of the course:

Course level: I., II., N

Prerequisities:

Conditions for course completion:
Active classroom participation, 2 absences tolerated (4x45 min.) tolerated. 2 tests (5th/6th week and 12th/13th week), no retake. Minipresentation on chosen topic. Final evaluation- average assessment of tests and presentation. 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.

Course assessment
Total number of assessed students: 344

A	B	C	D	E	FX
30.81	23.55	15.99	11.05	7.27	11.34

Provides: Mgr. Zuzana Naďová

Date of last modification: 06.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:
Misztal M.: Thematic Vocabulary, Fragment, 1998
McCarthy, O'Dell: English Vocabulary in Use, 1994
Alexander L.G.: Longman English Grammar, Longman, 1988
Jones I. - Communicative Grammar Practice, CUP, 1992
Vince M.: Macmillan Grammar in Context, Macmillan, 2008
www.bbclearningenglish.com
Gráf T., Peters S.: Time to practise, Polyglot, 2007

Course language:

Course assessment
Total number of assessed students: 394

A	B	C	D	E	FX
39.34	18.53	17.01	8.88	6.09	10.15

Provides: Mgr. Lenka Klimčáková

Date of last modification: 06.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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.
2 credit tests (presumably in weeks 6/7 and 12/13) and short academic presentations in English on selected topics.
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

Course assessment

Total number of assessed students: 220

A	B	C	D	E	FX
36.36	21.82	20.45	10.45	7.27	3.64

Provides: Mgr. Zuzana Naďová

Date of last modification: 06.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 credits: 1	
Recommended semester/trimester of the course:	
Course level: II.	
Prerequisities: KPE/PDU/15 and KPPaPZ/PPgU/15	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	

Course assessment

Total number of assessed students: 355

A	B	C	D	E	FX
29.01	24.79	25.07	15.77	3.66	1.69

Provides:
Date of last modification: 21.08.2017
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ PPU1a/15	**Course name:** Running 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 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:	
Course assessment Total number of assessed students: 168	
abs	n
97.02	2.98
Provides: RNDr. JUDr. Pavol Sokol, PhD.	
Date of last modification: 25.02.2018	
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: Dek. PF UPJŠ/PPZ/13	**Course name:** Personality Development and Key Competences for Success on a Labour Market

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

Number of credits: 2

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:

Course assessment
Total number of assessed students: 39

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

Provides: RNDr. Peter Stefányi, PhD.

Date of last modification: 19.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 1287

A	B	C	D	E	FX
10.18	18.57	22.46	22.84	22.84	3.11

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

Date of last modification: 21.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

Course assessment
Total number of assessed students: 69

A	B	C	D	E	FX
44.93	21.74	18.84	7.25	4.35	2.9

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

Date of last modification: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

Course assessment
Total number of assessed students: 65

A	B	C	D	E	FX
52.31	10.77	29.23	4.62	1.54	1.54

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

Date of last modification: 01.03.2018
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 18

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

Provides: Mgr. Lucia Hricová, PhD.

Date of last modification: 21.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 257

A	B	C	D	E	FX
48.25	43.19	7.78	0.78	0.0	0.0

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

Date of last modification: 21.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 61

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: 21.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 844

A	B	C	D	E	FX
50.0	29.74	15.28	3.32	1.3	0.36

Provides: Mgr. Alexander Onufrák, PhD.

Date of last modification: 28.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

Course assessment
Total number of assessed students: 32

A	B	C	D	E	FX
31.25	3.13	6.25	25.0	25.0	9.38

Provides: prof. RNDr. Stanislav Vokál, DrSc.

Date of last modification: 22.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 credits: 2

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:

Course assessment
Total number of assessed students: 109

A	B	C	D	E	FX
77.06	20.18	1.83	0.92	0.0	0.0

Provides: Mgr. Mária Bačíková, PhD.

Date of last modification: 21.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ SVK1/15	**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 credits: 4

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

Course level: I., II.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Course assessment
Total number of assessed students: 156

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

Provides:

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

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: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ TIK1/15	**Course name:** Information theory, encoding

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 credits: 4

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:

Course assessment
Total number of assessed students: 68

A	B	C	D	E	FX
61.76	11.76	11.76	4.41	0.0	10.29

Provides: doc. RNDr. Stanislav Krajči, PhD.

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

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: 23.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ TSM1a/15	**Course name:** Development and processing of multimedia

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 credits: 2

Recommended semester/trimester of the course: 1., 3.

Course level: II.

Prerequisities:

Conditions for course completion:
Assessment of preliminary assignments - static images, animations, sounds, videos.
Assessment of the final multimedia project for the selected topic of computer science.

Learning outcomes:
To acquire basic principles about multimedia and procedures for the creation and processing of multimedia (still images, animation, audio, video).

Brief outline of the course:
Principles of creation and processing of computer graphics, audio and video by the help of selected multimedia editors (LogoMotion, Pixlr, Go Animate, Diagramly, InkScape, Audacity, Anvil Studio, Magix Music Maker, CamStudio, Windows Movie Maker, FormatFactory).

Recommended literature:
1. LACHS, V. Making Multimedia in the Classroom. London : RoutledgeFalemer, 2000. ISBN 0415216842.
2. GÖBEL, S. et al. Technologies for Interactive Digital Storytelling and Entertainment (LNCS 4326). Darmstadt : Springer, 2006. ISBN 3540499342.
3. ADÁMEK, R. et al. Moderná didaktická technika v práci učiteľa. Elfa, s.r.o., Košice. 2010. ISBN 978-80-8086-135-3.
4. CHALUPA, R. Fotografie, hudba a video ve Windows XP. 2005. ISBN 8072269313.

Course language:

Course assessment
Total number of assessed students: 10

A	B	C	D	E	FX
30.0	30.0	20.0	10.0	10.0	0.0

Provides: doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ TSM1b/15	**Course name:** Development and processing of multimedia

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 credits: 2

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

Course level: II.

Prerequisities:

Conditions for course completion:
Evaluation of particular assignments.
100% / 0%
Project containing programmed multimedia.

Learning outcomes:
Program design and multimedia applications.
Understand the basic principles and procedures for multimedia programming.

Brief outline of the course:
Principles of Programming bitmap graphics, bitmap animation, vector graphics, vector animation, audio and video.

Recommended literature:
DUNN, J. R. Digitální video. 2003. ISBN 8025100383.
Audacity: Programování v Conquista. [online] Dostupné na internete: <http://audacity.sourceforge.net/help/nyquist2>.
ARMSTRONG, J., DEHAAN, J. Macromedia Flash 8 - výukový průvodce. 2006. ISBN 8025103358.

Course language:

Course assessment
Total number of assessed students: 5

A	B	C	D	E	FX
20.0	60.0	20.0	0.0	0.0	0.0

Provides: PaedDr. Ján Guniš, PhD.

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 129

A	B	C	D	E	FX
51.94	31.01	10.85	4.65	1.55	0.0

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

Date of last modification: 05.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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: present

Number of 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:

Course assessment
Total number of assessed students: 11672

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
88.42	0.01	0.0	0.0	0.0	0.03	7.59	3.96

Provides: Mgr. Peter Bakalár, PhD., Mgr. Dana Dračková, PhD., Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Marcel Čurgali, Ing. Iveta Cimboláková, PhD.
Date of last modification: 18.08.2017
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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: present

Number of 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:

Course assessment
Total number of assessed students: 10971

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
85.37	0.57	0.02	0.0	0.0	0.05	10.13	3.86

Provides: Mgr. Peter Bakalár, PhD., Mgr. Dana Dračková, PhD., Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Marcel Čurgali, Ing. Iveta Cimboláková, PhD.
Date of last modification: 18.08.2017
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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: present

Number of 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:

Course assessment
Total number of assessed students: 6910

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
89.84	0.04	0.0	0.0	0.0	0.03	4.23	5.86

Provides: Mgr. Marcel Čurgali, Mgr. Peter Bakalár, PhD., Mgr. Dana Dračková, PhD., Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Ing. Iveta Cimboláková, PhD.

Date of last modification: 18.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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: present

Number of 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:

Course assessment
Total number of assessed students: 5045

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
85.09	0.3	0.04	0.0	0.0	0.0	6.82	7.75

Provides: Mgr. Marcel Čurgali, Mgr. Peter Bakalár, PhD., Mgr. Dana Dračková, PhD., Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Ing. Iveta Cimboláková, PhD.

Date of last modification: 18.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ UGR1/15	**Course name:** Introduction to computer graphics

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 credits: 5

Recommended semester/trimester of the course: 1., 3.

Course level: I., II.

Prerequisities:

Conditions for course completion:

Learning outcomes:
To provide the students with knowledge of graphics algorithms and basic principles of computer graphics.

Brief outline of the course:
Graphics hardware, input and output devices. Color models, palettes. Raster graphics algorithms for drawing 2D primitives. Filling and clipping. Curve modeling, interpolations and approximations, spline forms, Bézier curves, B-splines, surfaces. Homogenous coordinates, affine transformations, perspective and parallel projections. Visible-surface determination, illumination and shading. Rendering techniques, photorealism, textures, ray tracing, radiosity. Object representations, computer animation, virtual reality.

Recommended literature:
FOLEY, J. D., van DAM, A., FEINER, S., HUGHES, J.: Computer Graphics: Principles and Practice, Addison-Wesley, 1991
MORTENSON, M.E.: Geometric modeling, 2.ed., Willey, 1997

Course language:

Course assessment
Total number of assessed students: 287

A	B	C	D	E	FX
14.29	10.1	12.89	23.34	30.66	8.71

Provides: prof. RNDr. Gabriel Semanišin, PhD., RNDr. Rastislav Krivoš-Belluš, PhD.

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ UNS1/15	**Course name:** Introduction to neural networks

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 credits: 5

Recommended semester/trimester of the course: 1., 3.

Course level: I., II.

Prerequisities:

Conditions for course completion:

Learning outcomes:
To understand and to know applications of basic paradigms of neural networks. To learn working with software for neural network models.

Brief outline of the course:
Basic models of computational units - neurons (linear threshold gates, polynomial threshold gates, perceptrons), their computational capability, algorithms of adaptations. Feed-forward neural networks, back propagation algorithm. Hopfield neural networks. ART neural networks. Using neural networks to solving of problems. Genetic and evolution algorithms.

Recommended literature:
J. Hertz, A.Krogh, R.G. Palmer: Introduction to the theory of neural computation, Addison Wesley, 1991
HASSOUN, M. H.: Fundamentals of artificial neural networks, The MIT Press, 1995

Course language:

Course assessment
Total number of assessed students: 407

A	B	C	D	E	FX
11.3	16.22	23.34	20.39	24.08	4.67

Provides: doc. RNDr. Gabriela Andrejková, CSc., RNDr. Ľubomír Antoni, PhD.

Date of last modification: 26.09.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 5

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: 21.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 84

A	B	C	D	E	FX
90.48	2.38	4.76	1.19	1.19	0.0

Provides: Mgr. Ondrej Kalina, PhD.

Date of last modification: 21.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

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: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ VIV1/15	**Course name:** Internet in 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 credits: 4

Recommended semester/trimester of the course: 2.

Course level: II.

Prerequisities:

Conditions for course completion:
Assessment of preliminary assignments - design of a teleproject, design of an e-learning course lesson, design and implementation of a video-conference activity.
In final exam students will demonstrate an overview of using the Internet in education in written form and they will present and defend their final work focused on using the Internet in education (design and implementation of an e-learning course, teleproject, webquest, on-line competition, lesson exploiting several Internet sources and tools).

Learning outcomes:
1. To acquire an overview of the possibilities of using the Internet in education.
2. To enhance skills for searching, acquiring, exchanging and presenting information via the Internet.
3. To design, develop and verify an Internet activity (e-learning course, teleproject, WebQuest, online competition, video lecture).

Brief outline of the course:
Overview of using the Internet in education. Educational Web sites and search engines. Design, implementation and evaluation of e-learning courses. Educational teleprojects, online competitions, teleexperiments. Communicating via the Internet - forums, blogs, videoconferences, social networking. Social, medical, ethical and legal aspects of using the Internet.

Recommended literature:
1. CONRAD, Rita-Marie - DONALDSON, J. Ana (2011). Engaging the Online Learner: Activities and Resources for Creative Instruction. Jossey-Bass; Updated Edition edition 2011. ISBN 978-1118018194.
2. FREEDMAN, Terry (2010) The Amazing Web 2.0 Projects Book. http://www.terry-freedman.org.uk/web2_2010/Amazing%20Web%202%20Projects%202%20online%20version.pdf
3. MANN, B. L. Selected Styles in Web-based Educational Research. Information Science Pub, 2005. ISBN 15-9140-732-X.
4. BARANOVIČ, R. et al. Internet pre stredné školy - Učebnica Internetu. Praha : Computer Press, 2003. 275 s. ISBN 80-251-0088-X.

Course language:

Course assessment
Total number of assessed students: 150

A	B	C	D	E	FX
15.33	33.33	21.33	14.67	12.0	3.33

Provides: doc. RNDr. Ľubomír Šnajder, PhD., PaedDr. Ján Guniš, PhD.

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/VKN/15

Course name: Computational and cognitive neuroscience

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 credits: 5

Recommended semester/trimester of the course:

Course level: II.

Prerequisities:

Conditions for course completion:
project, exam

Learning outcomes:
Advanced topics in study of the central nervous system and cognitive processes in human, with focus on computational concepts important in the study of cognitive and neural sciences. Prerequisite: Intro to Neurosicence

Brief outline of the course:
Selected topics in cognitive science (following up on Intro to Neuroscience). Overview of the methods of theoretical study in cognitive and neural science, including connectionistic, statistical and system-theory principles in modeling of cognitive processes and neural circuits. Selected models of the human visual and auditory systems, learning, thinking, attention, development and plasticity.

Recommended literature:
HERTZ, J., KROGH, A. and PALMER R. G.: Introduction to the theory of neural computation. Addison-Wesley 1991
KANDEL, E. R., SCHWARTZ, J. H. and JESSELL, T.M.: Principles of Neural Science. McGraw-Hill, 2000
DAYAN, P. and ABBOTT, L. F.: Theoretical Neuroscience – Computa-tional and Mathematical Modeling of Neural Systems. MIT Press, 2001

Course language:
Slovak or English

Course assessment
Total number of assessed students: 5

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

Provides: doc. Ing. Norbert Kopčo, PhD., Ing. Beáta Tomoriová, PhD.

Date of last modification: 25.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

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: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 133

A	B	C	D	E	FX
60.15	24.81	9.02	4.51	1.5	0.0

Provides: PhDr. Anna Janovská, PhD.

Date of last modification: 21.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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 30 bodov
semestral presentation 30 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

Course assessment
Total number of assessed students: 7

A	B	C	D	E	FX
85.71	14.29	0.0	0.0	0.0	0.0

Provides: doc. RNDr. Marián Kireš, PhD.

Date of last modification: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

Course assessment
Total number of assessed students: 6

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: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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

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: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 24

A	B	C	D	E	FX
50.0	33.33	8.33	8.33	0.0	0.0

Provides: Mgr. Mária Bačíková, PhD.

Date of last modification: 21.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 57

A	B	C	D	E	FX
17.54	33.33	24.56	17.54	7.02	0.0

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

Date of last modification: 24.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ VYZ1/15	**Course name:** Computational complexity

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 credits: 4

Recommended semester/trimester of the course: 3.

Course level: II.

Prerequisities:

Conditions for course completion:
Oral examination.

Learning outcomes:
To give the students the theoretical background in computational complexity and theory of NP-completeness.

Brief outline of the course:
Deterministic and nondeterministic algorithms with polynomial time, NP-completeness. Deterministic simulation of a nondeterministic Turing machine. Satisfiability of Boolean formulae. Another NP-complete problems: satisfiability of a formula in a conjunctive normal form, 3-satisfiability, 3-colorability of a graph, 3-colorability of a planar graph, knapsack problem, balancing, ... Space bounded computations, classes L, NL, PSPACE. Deterministic simulation - Savitch theorem. Closure under complement.
Complete problems for classes NL, P, and PSPACE.

Recommended literature:
J.E. Hopcroft, R.Motwani, J.D. Ullman: Introduction to automata theory, languages, and computation, Addison-Wesley, 2007.
M. Sipser: Introduction to the Theory of Computation, Thomson, 2nd edition, 2006.
L.A.Hemaspaandra, M.Ogihara: Complexity theory companion, EATCS series, texts in computer science, Springer-Verlag, 2002.
S. Arora, B. Barak: Computational Complexity: A Modern Approach, Cambridge Univ. Pess, 2009.
G.Brassard, P.Bradley: Fundamentals of algorithmics, Prentice Hall, 1996.
D.P.Bovet, P.Crescenzi: Introduction to the theory of complexity, Prentice Hall, 1994.
C. Calude and J. Hromkovič: Complexity: A Language-Theoretic Point of View, in G. Rozenberg and A. Salomaa, Handbook of Formal Languages II, Springer, 1997.

Course language:

Course assessment
Total number of assessed students: 309

A	B	C	D	E	FX
57.28	15.53	11.65	7.44	7.77	0.32
Provides: prof. RNDr. Viliam Geffert, DrSc.					
Date of last modification: 25.02.2018					
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 credits: 4

Recommended semester/trimester of the course: 2.

Course level: II.

Prerequisities: KPPaPZ/PPgU/15 and KPE/PDU/15

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Course assessment
Total number of assessed students: 381

A	B	C	D	E	FX
15.49	23.62	25.2	21.52	13.91	0.26

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

Date of last modification: 21.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 279

A	B	C	D	E	FX
44.8	32.26	15.77	5.73	1.43	0.0

Provides: Mgr. Katarína Petríková, PhD.

Date of last modification: 05.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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 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:

Course assessment
Total number of assessed students: 213

A	B	C	D	E	FX
39.44	42.25	15.96	2.35	0.0	0.0

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

Date of last modification: 05.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, 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: present

Number of 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:

Course assessment
Total number of assessed students: 33

abs	n
12.12	87.88

Provides: Mgr. Alena Buková, PhD., Mgr. Agata Horbacz, PhD.

Date of last modification: 18.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.

COURSE INFORMATION LETTER

<table>
<tr><td colspan="2">University: P. J. Šafárik University in Košice</td></tr>
<tr><td colspan="2">Faculty: Faculty of Science</td></tr>
<tr><td>Course ID:
KSSFaK/
ČGUAP/15</td><td>Course name: Reading Literacy in Educational Process</td></tr>
<tr><td colspan="2">Course type, scope and the method:
Course type: Lecture
Recommended course-load (hours):
Per week: 2 Per study period: 28
Course method: present</td></tr>
<tr><td colspan="2">Number of credits: 2</td></tr>
<tr><td colspan="2">Recommended semester/trimester of the course: 2.</td></tr>
<tr><td colspan="2">Course level: II.</td></tr>
<tr><td colspan="2">Prerequisities:</td></tr>
<tr><td colspan="2">Conditions for course completion:</td></tr>
<tr><td colspan="2">Learning outcomes:</td></tr>
<tr><td colspan="2">Brief outline of the course:</td></tr>
<tr><td colspan="2">Recommended literature:</td></tr>
<tr><td colspan="2">Course language:</td></tr>
<tr><td colspan="2">Course assessment
Total number of assessed students: 18</td></tr>
<tr><td colspan="2"><table>
<tr><td>abs</td><td>n</td></tr>
<tr><td>100.0</td><td>0.0</td></tr>
</table></td></tr>
<tr><td colspan="2">Provides: doc. PaedDr. Ivica Hajdučeková, PhD.</td></tr>
<tr><td colspan="2">Date of last modification: 28.08.2017</td></tr>
<tr><td colspan="2">Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteedoc. RNDr. Stanislav Krajči, PhD.Guaranteeprof. PhDr. Oľga Orosová, CSc.</td></tr>
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