**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:**
kontrolný písomný test, aktivita na hodine
záverečný písomný test
povolené max. 2 absencie
stupnica hodnotenia: A 93-100, B 86-92, C 79-85, D 72-78, E 65-71, FX 64 a menej
aktivita na hodine
predmet končí hodnotením, t.j. povolený je 1 opravný test

**Learning outcomes:**
Osvojenie si a rozvíjanie užitočných techník akademického písomného ako aj ústneho prejavu so zameraním na rozvoj jazykových kompetencií študenta, na upevňovanie a rozvíjanie všetkých jazykových zručností na stredne pokročilej až pokročilej úrovni ovládania jazyka (B2/C1 podľa Spoločného európskeho referenčného rámca pre jazyky). Predmet kladie dôraz na používanie akademickej angličtiny v akademickom prostredí.

**Brief outline of the course:**
Akademická angličtina a jej charakteristiky
Čítanie odborných článkov, analýza, parafrázovanie
Spájacie slová v akademickom písaní
Formálna a neformálna angličtina a ich črty
Vyjadrovanie príčiny, následku v akademickom jazyku
Čítanie odbornej publikácie, analýza, parafrázovanie
Slovotvorba v anglickom jazyku- predpony a prípony
Ako prezentovať v angličtine
Parafrázovanie a definovanie
Ako písať abstrakt
Slovosled v akademickom diškurze

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 292

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 29.11 | 22.26 | 16.1 | 11.3 | 8.22 | 13.01 |

**Provides:** PaedDr. Gabriela Bednáriková

**Date of last modification:** 06.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/AOS1/07 | **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.

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

**Prerequisities:** ÚINF/OSY1/11

**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:**
Introduction to OS Linux, history, communication interfaces, directory structure, devices, user administration, UID, GID, permissions, text editors, common commands, installation, LILO, GRUB, configuration after installation, division of disk space, mounting, backups, starting system, crontab, network connection configuration, network monitoring, firewall. Deamons and systems services SSH, Apache, FTP, Samba, NFS, NTP, postfix/sendmail, DHCP, DNS. Compiling the Linux core, configuration, testing.

**Recommended literature:**
NEMETH, E., SNYDER, G., HEIN, T. R.: Linux Administration Handbook, Prentice Hall PTR, 2002
SIEVER, E., WEBER, A., FIGGINS, S., LOVE, R., ROBBINS, A.: Linux in a Nutshell, 5th Edition, 2005

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 64

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 51.56 | 23.44 | 3.13 | 6.25 | 7.81 | 7.81 |

**Provides:** RNDr. Peter Gurský, PhD., RNDr. JUDr. Pavol Sokol, PhD.

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KPE/ ALP/06 | **Course name:** Alternative Pedagogy |
|---|---|

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 54

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 85.19 | 12.96 | 0.0 | 0.0 | 0.0 | 1.85 |

**Provides:** Mgr. Ján Juščák, PhD.

**Date of last modification:** 04.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KFaDF/AFS/05 | **Course name:** Antique Philosophy and Present Times |
|---|---|

**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., II.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 30

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 83.33 | 6.67 | 6.67 | 0.0 | 3.33 | 0.0 |

**Provides:** doc. PhDr. Pavol Tholt, PhD., mim.prof., Doc. PhDr. Peter Nezník, CSc.

**Date of last modification:** 26.01.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ AST/13 | **Course name:** Astronomy |
|---|---|

**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:** 4

**Recommended semester/trimester of the course:** 3.

**Course level:** II.

**Prerequisities:**

**Conditions for course completion:**
Test; seminar paper.
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

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 17

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 76.47 | 17.65 | 5.88 | 0.0 | 0.0 | 0.0 |

**Provides:** doc. RNDr. Rudolf Gális, PhD.

**Date of last modification:** 31.01.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/ KKV1/06 | **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:** 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:**

**Notes:**

**Course assessment**
Total number of assessed students: 65

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 24.62 | 27.69 | 12.31 | 20.0 | 10.77 | 4.62 |

**Provides:** doc. RNDr. Gabriel Semanišin, PhD., RNDr. Zuzana Bednárová, PhD.

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KPE/MT/09 | **Course name:** Class Management |
|---|---|

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 2.

**Course level:** II.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 351

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 58.4 | 30.48 | 8.55 | 1.14 | 0.28 | 1.14 |

**Provides:** PaedDr. Renáta Orosová, PhD.

**Date of last modification:** 04.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KPPaPZ/KK/07 | **Course name:** Communication and Cooperation |
|---|---|

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 281

| abs | n | z |
|---|---|---|
| 98.22 | 1.78 | 0.0 |

**Provides:** Mgr. Ondrej Kalina, PhD.

**Date of last modification:** 04.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KGER/ NJKK/07 | **Course name:** Communication Competence in the 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:**

**Notes:**

**Course assessment**
Total number of assessed students: 42

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 57.14 | 14.29 | 7.14 | 4.76 | 14.29 | 2.38 |

**Provides:** Mgr. Eva Černáková, PhD.

**Date of last modification:** 05.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## 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:**
ontrolný písomný test, aktivita na hodine
záverečný písomný test
stupnica hodnotenia A 93-100, B 86 - 92, C 79-85, D 72-78, E 65-71, FX menej ako 64
Povolené max. 2 absencie počas semestra
predmet končí hodnotením, možnosť jedného opravného testu

**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 - úroveň B2.

**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:**

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

**Course language:**

**Notes:**

**Course assessment**

Total number of assessed students: 174

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 36.78 | 22.41 | 18.39 | 9.77 | 8.05 | 4.6 |

**Provides:** PaedDr. Gabriela Bednáriková, Mgr. Silvia Marcinová, PhD.

**Date of last modification:** 06.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## 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:**
kontrolná písomná práca,
záverečná písomná práca
stupnica hodnotenia: A 93-100, B 86-92, C 79-85, D 65-71, 64 a menej - FX
aktivita na hodinách, povolené 2 absencie
predmet je ukončený hodnotením, možnosť jedného opravného testu

**Learning outcomes:**
Identifikovanie a odstránenie najfrekventovanejších gramatických chýb v ústnom prejave, ako aj v písomnom styku. Rozvoj jazykových kompetencií študenta so zameraním na funkcie gramatiky anglického jazyka v každodennej interakcii, v komunikačnom akte na stredne pokročilej úrovni ovládania jazyka (B2 podľa Spoločného európskeho referenčného rámca pre jazyky).

**Brief outline of the course:**
Zvieratá a rastliny na zemi
Zločin a trest
Cestovanie po mori a vzduchom
Jedlá a reštaurácie, národná kuchyňa
Vzdelanie na vysokých školách
História a viera
Vybrané problémy anglickej výslovnosti, gramatiky ( nepriama reč, slovotvorba, predložkové väzby, anglická syntax, kondicionály v angličtine a slovnej zásoby príslušného zamerania
Vybrané funkcie praktického odborného jazyka potrebné na prácu s odborným textom

**Recommended literature:**
Misztal M.: Thematic Vocabulary, 1994
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:**

**Notes:**

**Course assessment**
Total number of assessed students: 378

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 39.42 | 18.25 | 17.2 | 8.73 | 5.82 | 10.58 |

**Provides:** PaedDr. Gabriela Bednáriková

**Date of last modification:** 06.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ FEP1/04 | **Course name:** Computer Aided School Physical Experiment |
|---|---|

**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:**
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 physics. He gains skills to use and develop activities on measuring data with the help of datalogging, measuring on picture and viderecording 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 physics with the help of datalogging, videomeasurement and modelling tools. Mathematical modelling is based on dynamical modeling of physical phenomena. Within the course students carry out computer-based experiments and videomeasurements and create corresponding models. The activities involves selected topics of secondary schools physics (mechanics, electricity, magnetism, thermal physics, ideal gas laws, optics and acoustics).

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

**Course language:**
Slovak

**Notes:**

**Course assessment**
Total number of assessed students: 32

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 46.88 | 46.88 | 6.25 | 0.0 | 0.0 | 0.0 |

**Provides:** doc. RNDr. Zuzana Ješková, PhD.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ MPPb/03 | **Course name:** Continuous Teaching Practice I |
|---|---|

**Course type, scope and the method:**
**Course type:** Practice
**Recommended course-load (hours):**
**Per week: Per study period:** 3t
**Course method:** present

**Number of credits:** 1

**Recommended semester/trimester of the course:** 2.

**Course level:** II.

**Prerequisities:**

**Conditions for course completion:**
Verbal: trainer-teacher assessment of student's outcomes in analysis of the lesson
Written evaluation of the work of the student trainer-teacher.

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

**Brief outline of the course:**
The practice lasts three weeks at primary or at secondary school. During practice students visit lessons of Physics and assist teacher during lessons. They teach at least five lessons of Physics stand-alone. Required is also an analysis of lessons with a trainer-teacher. Students are required to participate in school life and in the activities organized by the school.

**Recommended literature:**
J. Janovič a kol.: Didaktika fyziky, MFF UK Bratislava, 1990
J. Janovič a kol.: Vybrané kapitoly didaktiky fyziky, MFF UK Bratislava, 1999
E. Kašpar a kol.: Didaktika fyziky, SPN Praha, 1978
Current curriculum and Physics textbooks in Slovakia.

**Course language:**
Slovak

**Notes:**

**Course assessment**
Total number of assessed students: 53

| abs | n |
|---|---|
| 100.0 | 0.0 |

**Provides:** RNDr. Ľudmila Onderová, PhD., PhDr. Silvia Kontírová, PhD., Mgr. Mária Sarková, PhD.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** ÚFV/ MPPc/03 | **Course name:** Continuous Teaching Practice II |

**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/03 and ÚFV/DF1a/04 or ÚFV/DF1a/10

**Conditions for course completion:**
Verbal assessment of outcomes by trainer-teacher during the analysis of the lesson.
A written evaluation of the student work by the trainer-teacher.

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

**Brief outline of the course:**
The practice lasts four weeks at primary or at secondary school. During practice students visit lessons of Physics and assist teacher during lessons. They teach18 lessons of Physics stand-alone. Required is also an analysis of lessons with a trainer-teacher. Students are required to participate in school life and in the activities organized by the school.

**Recommended literature:**
J. Janovič a kol.: Didaktika fyziky, MFF UK Bratislava, 1990
J. Janovič a kol.: Vybrané kapitoly didaktiky fyziky, MFF UK Bratislava, 1999
E. Kašpar a kol.: Didaktika fyziky, SPN Praha, 1978
Učebnice fyziky pre ZŠ, SŠ a G
J. Janovič a kol.: Didaktika fyziky, MFF UK Bratislava, 1990
J. Janovič a kol.: Vybrané kapitoly didaktiky fyziky, MFF UK Bratislava, 1999
E. Kašpar a kol.: Didaktika fyziky, SPN Praha, 1978
Physics textbooks for primary and secondary school

**Course language:**
Slovak

**Notes:**

**Course assessment**
Total number of assessed students: 51

| abs | n |
|---|---|
| 100.0 | 0.0 |

**Provides:** PhDr. Silvia Kontírová, PhD., Mgr. Mária Sarková, PhD., RNDr. Ľudmila Onderová, PhD.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/MPPd/05 | **Course name:** Continuous Teaching Practice III |
|---|---|

**Course type, scope and the method:**
**Course type:** Practice
**Recommended course-load (hours):**
**Per week: Per study period:** 3t
**Course method:** present

**Number of credits:** 2

**Recommended semester/trimester of the course:** 4.

**Course level:** II.

**Prerequisities:** (ÚFV/MPPc/03 or ÚFV/MPPc/15) and ÚFV/DF1b/04 or ÚFV/DF1b/10

**Conditions for course completion:**
Verbal assessment of outcomes by trainer-teacher during the analysis of the lesson.
A written evaluation of the student work by the trainer-teacher.

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

**Brief outline of the course:**
The practice lasts three weeks at primary or at secondary school. During practice students visit lessons of Physics and teach lessons of Physics stand-alone. Required is also an analysis of lessons with a trainer-teacher. Students are required to participate in school life and in the activities organized by the school.

**Recommended literature:**
Physics textbooks for primary and secondary school

**Course language:**
Slovak

**Notes:**

**Course assessment**
Total number of assessed students: 58

| abs | n |
|---|---|
| 100.0 | 0.0 |

**Provides:** PhDr. Silvia Kontírová, PhD., Mgr. Mária Sarková, PhD., RNDr. Ľudmila Onderová, PhD.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/ KRS/13 | **Course name:** Cryptographic systems and their applications |
|---|---|

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

**Number of credits:** 6

**Recommended semester/trimester of the course:** 1.

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 84

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 13.1 | 10.71 | 9.52 | 11.9 | 34.52 | 20.24 |

**Provides:** doc. RNDr. Jozef Jirásek, PhD., RNDr. Rastislav Krivoš-Belluš, PhD.

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KAE/ KAp/03 | **Course name:** Cultural Anthropology |
|---|---|

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 126

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 84.92 | 14.29 | 0.79 | 0.0 | 0.0 | 0.0 |

**Provides:** Mgr. Adriana Jesenková, PhD.

**Date of last modification:** 29.01.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/ TSM1a/09 | **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:** 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 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. CHALUPA, R. Fotografie, hudba a video ve Windows XP. 2005. ISBN 8072269313.
2. KŘÍŽ, M. Zvuk na PC. 2002. ISBN 8086593061.
3. RUBIN, M. Digitální video pro úplné začátečníky. 2003. ISBN 8025100316.
4. REBENSCHIED, S. Macromedia Flash 8 Professional. 2007. ISBN 80-251-1696-8.

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 36

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 22.22 | 19.44 | 36.11 | 13.89 | 2.78 | 5.56 |

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

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

**COURSE INFORMATION LETTER**

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/ TSM1b/09 | **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:** 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:**

**Notes:**

**Course assessment**
Total number of assessed students: 22

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 13.64 | 22.73 | 27.27 | 4.55 | 13.64 | 18.18 |

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

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** KPPaPZ/RSEI/03 | **Course name:** Development of Social and Emotional Intelligence |
| **Course type, scope and the method:**<br>**Course type:** Practice<br>**Recommended course-load (hours):**<br>**Per week:** 2 **Per study period:** 28<br>**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:** | |
| **Notes:** | |

**Course assessment**
Total number of assessed students: 319

| abs | n |
|---|---|
| 97.18 | 2.82 |

| |
|---|
| **Provides:** Mgr. Lucia Hricová |
| **Date of last modification:** 04.02.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/ DIN1a/04 | **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:**
Report on teaching selected topics of algorithms and programming. Microteaching of selected topics of algorithms and programming exploiting selected activating didactical methods.
Collection of graded tasks from selected topic of algorithms and programming with methodological comments.

**Learning outcomes:**
- To acquire an overview of the objectives, content, modern methods of teaching computer science (activating methods, inquiry based learning).
- To solve selected algorithmic problems, 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. Activating methods of teaching computer science Preparation for teaching. Analysis and evaluation of continuous teaching practise.. Methodology of inquiry-based learning of selected topics of algorithms and programming (sorting, searching, coding, encryption, compression, checksums, recursion).

**Recommended literature:**
FELLOWS, M., Bell, T., Witten, I. Computer Science Unplugged. Computer Science Unplugged, 2002.
KALAŠ, I. et al. Informatika pre stredné školy, Bratislava : SPN, 2001. ISBN 80-10-00157-0.
TOMCSÁNYIOVÁ, M. a kol.: Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika - Riešenie problémov a základy programovania 1. 2009. ISBN 978-80-8118-023-1
GUNIŠ, J., SUDOLSKÁ, M., ŠNAJDER, Ľ.: Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika - Aktivizujúce metódy vo vyučbe školskej informatiky. 2009. ISBN 978-80-89225-96-5
ŠNAJDER, Ľ. Vykonávatele (procesory) algoritmov. In Matematika Informatika Fyzika. Prešov : Metodicko-pedagogické centrum Prešov, 2003. ISSN 1335-7794. s. 35-41.

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 55

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 20.0 | 12.73 | 27.27 | 23.64 | 14.55 | 1.82 |

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

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/ DIN1b/03 | **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 - conceptual map, learning objectives list, motivation, practising , systemization and testing tasks). Written exam focused on the issue of teaching computer science in elementary and secondary schools.
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 graded tasks with solutions and methodological commentaries and didactical test).

**Learning outcomes:**
- To acquire skills in setting learning objectives, tasks, systems development, teaching test preparation.
- To understand the methodology used to teach selected chapters of computer science.

**Brief outline of the course:**
Process of creating concepts in computer science. Specifying of learning objectives. A level informatics standard. Roles of questions and tasks in computer science education, didactical functions and formulations of questions and tasks. Creation of stepwise assignments unit. Assessment of learning objectives of pupils, didactical tests. Teaching of structural and object-oriented programming. Specifics of computer arithmetic, its consequences and solutions. Mathematical modelling and simulation.Methodology of teaching selected topics of computer science (Information about us, Communication through ICT, Principles of ICT operation, Information Society, Procedures, problem solving, algorithmic thinking). Computer science competitions.

**Recommended literature:**
KALAŠ, I. et al. Informatika pre stredné školy, Bratislava : SPN, 2001. ISBN 80-10-00157-0.
Roland Mittermeir (Ed.): Informatics Education - The Bridge between Using and Understanding Computers, International Conference in Informatics in Secondary Schools - Evolution and Perspectives, ISSEP 2006, Vilnius, Lithuania, November 7-11, 2006, Proceedings. Springer 2006, ISBN 3-540-48218-0.

Didaktický časopis Matematika-fyzika-informatika. Praha : Nakladatelství Prometheus, s.r.o. ISSN 1210-1761.
Didaktický časopis Matematika Informatika Fyzika. Prešov : Metodicko-pedagogické centrum Prešov. ISSN 1335-7794.
Tematické zošity Tvorivá informatika pre základné školy, SPN
Tematické zošity Informatika pre stredné školy, SPN

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 136

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 17.65 | 30.88 | 25.0 | 17.65 | 8.09 | 0.74 |

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

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ DF1a/10 | **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:** 5

**Recommended semester/trimester of the course:** 2.

**Course level:** II.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 31

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 61.29 | 25.81 | 6.45 | 6.45 | 0.0 | 0.0 |

**Provides:** doc. RNDr. Marián Kireš, PhD.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ DF1b/10 | **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:** 5

**Recommended semester/trimester of the course:** 3.

**Course level:** II.

**Prerequisities:** ÚFV/DF1a/04 or ÚFV/DF1a/10

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 26

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 88.46 | 3.85 | 3.85 | 3.85 | 0.0 | 0.0 |

**Provides:** doc. RNDr. Marián Kireš, PhD.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## 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

**Notes:**

**Course assessment**
Total number of assessed students: 4

| abs | n |
|---|---|
| 100.0 | 0.0 |

**Provides:**

**Date of last modification:** 17.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** ÚINF/ DPP1/14 | **Course name:** Diploma Project I |
| **Course type, scope and the method:**<br>**Course type:**<br>**Recommended course-load (hours):**<br>**Per week: Per study period:**<br>**Course method:** present | |
| **Number of credits:** 1 | |
| **Recommended semester/trimester of the course:** 1. | |
| **Course level:** II. | |
| **Prerequisities:** | |
| **Conditions for course completion:** | |
| **Learning outcomes:** | |
| **Brief outline of the course:** | |
| **Recommended literature:** | |
| **Course language:** | |
| **Notes:** | |
| **Course assessment**<br>Total number of assessed students: 4 | |

| abs | n |
|---|---|
| 100.0 | 0.0 |

| |
|---|
| **Provides:** RNDr. Ľubomír Šnajder, PhD. |
| **Date of last modification:** 17.02.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## 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

**Notes:**

**Course assessment**
Total number of assessed students: 4

| abs | n |
|---|---|
| 100.0 | 0.0 |

**Provides:**

**Date of last modification:** 17.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** ÚINF/ DPP2/14 | **Course name:** Diploma Project II |
| **Course type, scope and the method:**<br>**Course type:**<br>**Recommended course-load (hours):**<br>**Per week: Per study period:**<br>**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:** | |
| **Notes:** | |
| **Course assessment**<br>Total number of assessed students: 4 | |

| abs | n |
|---|---|
| 100.0 | 0.0 |

| |
|---|
| **Provides:** RNDr. Ľubomír Šnajder, PhD. |
| **Date of last modification:** 17.02.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## 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

**Notes:**

**Course assessment**
Total number of assessed students: 8

| abs | n |
|---|---|
| 100.0 | 0.0 |

**Provides:**

**Date of last modification:** 17.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** ÚINF/ DPP3/14 | **Course name:** Diploma Project III |
| **Course type, scope and the method:**<br>**Course type:**<br>**Recommended course-load (hours):**<br>**Per week: Per study period:**<br>**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:** | |
| **Notes:** | |
| **Course assessment**<br>Total number of assessed students: 1 | |

| abs | n |
|---|---|
| 100.0 | 0.0 |

| |
|---|
| **Provides:** RNDr. Ľubomír Šnajder, PhD. |
| **Date of last modification:** 17.02.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ DSD/04 | **Course name:** Diploma Seminar |
|---|---|

**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:**

**Notes:**

**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:** doc. RNDr. Marián Kireš, PhD.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ DSD2/08 | **Course name:** Diploma Seminar |
|---|---|

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 4

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

**Provides:** doc. RNDr. Marián Kireš, PhD.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/ 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:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 0

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

**Provides:**

**Date of last modification:** 17.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## 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:**

**Notes:**

**Course assessment**
Total number of assessed students: 7

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

**Provides:**

**Date of last modification:** 17.03.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KPE/APV/09 | **Course name:** Educational Action Research |
|---|---|

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 29

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 86.21 | 13.79 | 0.0 | 0.0 | 0.0 | 0.0 |

**Provides:** prof. Volodymyr Starosta, DrSc.

**Date of last modification:** 04.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KPE/ SL1/05 | **Course name:** Education-related Legislation |
|---|---|

**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., II.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 337

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 39.17 | 31.16 | 16.91 | 4.15 | 1.78 | 6.82 |

**Provides:** PaedDr. Renáta Orosová, PhD., Mgr. Zuzana Nováková, PhD.

**Date of last modification:** 04.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/FO1/04 | **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.

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 71

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 30.99 | 12.68 | 23.94 | 12.68 | 14.08 | 5.63 |

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

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KPE/ ZMPPV/12 | **Course name:** Fundamentals of Educational and 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:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 372

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 20.97 | 27.42 | 22.85 | 20.43 | 7.53 | 0.81 |

**Provides:** PhDr. Anna Janovská, PhD., Mgr. Zuzana Nováková, PhD., Mgr. Mária Bačíková, PhD.

**Date of last modification:** 04.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KAE/ ZET2/07 | **Course name:** Fundamentals of Ethics 2 |
|---|---|

**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:** 3

**Recommended semester/trimester of the course:** 2.

**Course level:** II.

**Prerequisities:** KAE/ZE1/07

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 50

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 94.0 | 6.0 | 0.0 | 0.0 | 0.0 | 0.0 |

**Provides:** PhDr. Andrea Klimková, PhD.

**Date of last modification:** 29.01.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ VBF2/08 | **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:** 4

**Recommended semester/trimester of the course:**

**Course level:** II.

**Prerequisities:**

**Conditions for course completion:**

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 9

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

**Provides:** doc. Mgr. Daniel Jancura, PhD.

**Date of last modification:** 10.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KPE/ VPD/03 | **Course name:** General Pedagogy and Didactics |
|---|---|

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 958

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 10.65 | 21.71 | 25.99 | 21.82 | 10.33 | 9.5 |

**Provides:** PaedDr. Renáta Orosová, PhD., Mgr. Zuzana Nováková, PhD.

**Date of last modification:** 04.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ TRV1/00 | **Course name:** General 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:** 3

**Recommended semester/trimester of the course:** 2.

**Course level:** II.

**Prerequisities:**

**Conditions for course completion:**
In the eighth week the test of the mathematical problem.
Individual report at the end of the semester.
Oral examination.

**Learning outcomes:**

**Brief outline of the course:**
Overview of the special theory of relativity (STR). Uniformly accelerated motion in STR. Local principle of equivalence - Eotvos experiment. Tensor calculus in pseudoriemann's metric. Einstein equations of gravitational field. Schwarzschild's solution for spherically symetric field. Experimental tests of the general theory of relativity. Black holes. Solutions for homogeneous and isotropic distribution of mass. Cosmological applications.

**Recommended literature:**
1. Hughston, L. P., Tod K. P.: An Introduction to General Relativity, London Mathenatical Society Student Texts 5. CUP, Cambridge, 1990.
2. Wald, R.W.: General Relativity, University of Chicago Press, Chicago, 1984.
3. Misner, C.W., Thorne, K.S., Wheller, J.A.: Gravitation, Freeman, San Francisco, 1973.
4. Landau L.D., Lifshitz E.M.: The classical theory of fields. Addison- Wesley, Reading, Mass., USA, 1977.

**Course language:**
1. Slovak,
2. English

**Notes:**

**Course assessment**
Total number of assessed students: 70

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 94.29 | 4.29 | 1.43 | 0.0 | 0.0 | 0.0 |

**Provides:** prof. RNDr. Andrej Bobák, DrSc., RNDr. Marián Jurčišin, PhD.

| |
|---|
| **Date of last modification:** 31.01.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

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

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 46

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 54.35 | 13.04 | 8.7 | 4.35 | 10.87 | 8.7 |

**Provides:** Dr. rer. pol. Michaela Kováčová

**Date of last modification:** 05.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## 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:**

**Notes:**

**Course assessment**
Total number of assessed students: 11

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 63.64 | 18.18 | 18.18 | 0.0 | 0.0 | 0.0 |

**Provides:** prof. RNDr. Stanislav Vokál, DrSc.

**Date of last modification:** 11.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KFaDF/ KDF/05 | **Course name:** Chapters from History of Philosophy of 19th and 20th Centuries (General Introduction) |
|---|---|

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 2.

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 10

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 50.0 | 20.0 | 10.0 | 0.0 | 10.0 | 10.0 |

**Provides:** doc. PhDr. Pavol Tholt, PhD., mim.prof.

**Date of last modification:** 26.01.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KFaDF/FVp/04 | **Course name:** Chapters from Philosophy of Education |
|---|---|

**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., II.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 3

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

**Provides:** doc. PhDr. Pavol Tholt, PhD., mim.prof.

**Date of last modification:** 26.01.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KPPaPZ/SDaM/09 | **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:** 4.

**Course level:** II.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 704

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 49.01 | 29.83 | 15.48 | 3.69 | 1.56 | 0.43 |

**Provides:** PhDr. Zlatica Buocová, CSc., Mgr. Alexander Onufrák, PhD.

**Date of last modification:** 04.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** R UPJŠ/ IB10/14 | **Course name:** IB10 - Medzinárodný certifikát ECo-C |
| **Course type, scope and the method:**<br>**Course type:**<br>**Recommended course-load (hours):**<br>**Per week: Per study period:**<br>**Course method:** present | |
| **Number of credits:** 16 | |
| **Recommended semester/trimester of the course:** | |
| **Course level:** I., I.II., II. | |
| **Prerequisities:** | |
| **Conditions for course completion:** | |
| **Learning outcomes:** | |
| **Brief outline of the course:** | |
| **Recommended literature:** | |
| **Course language:** | |
| **Notes:** | |

**Course assessment**
Total number of assessed students: 0

| abs | n | neabs |
|---|---|---|
| 0.0 | 0.0 | 0.0 |

| |
|---|
| **Provides:** |
| **Date of last modification:** 11.08.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** R UPJŠ/ IB11/14 | **Course name:** IB11 - Medzinárodný certifikát ECDL |
| **Course type, scope and the method:**<br>**Course type:**<br>**Recommended course-load (hours):**<br>**Per week: Per study period:**<br>**Course method:** present | |
| **Number of credits:** 14 | |
| **Recommended semester/trimester of the course:** | |
| **Course level:** I., I.II., II. | |
| **Prerequisities:** | |
| **Conditions for course completion:** | |
| **Learning outcomes:** | |
| **Brief outline of the course:** | |
| **Recommended literature:** | |
| **Course language:** | |
| **Notes:** | |

**Course assessment**
Total number of assessed students: 0

| abs | n | neabs |
|---|---|---|
| 0.0 | 0.0 | 0.0 |

| |
|---|
| **Provides:** |
| **Date of last modification:** 11.08.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** R UPJŠ/ IB12/14 | **Course name:** IB12 - Používanie, administrácia a vývoj v systéme SAP |
|---|---|

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

**Number of credits:** 54

**Recommended semester/trimester of the course:**

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 0

| abs | n | neabs |
|---|---|---|
| 0.0 | 0.0 | 0.0 |

**Provides:**

**Date of last modification:** 11.08.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** R UPJŠ/ IB1/14 | **Course name:** IB1 - Etika v biomedicínskych vedách pre zdravotnícku prax |
|---|---|

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

**Number of credits:** 16

**Recommended semester/trimester of the course:**

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 0

| abs | n | neabs |
|---|---|---|
| 0.0 | 0.0 | 0.0 |

**Provides:**

**Date of last modification:** 11.08.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** R UPJŠ/ IB2/14 | **Course name:** IB2 - Právne minimum – súkromnoprávne aspekty |
|---|---|

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

**Number of credits:** 16

**Recommended semester/trimester of the course:**

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 0

| abs | n | neabs |
|---|---|---|
| 0.0 | 0.0 | 0.0 |

**Provides:**

**Date of last modification:** 11.08.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

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|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** R UPJŠ/ IB3/14 | **Course name:** IB3 - Právne minimum – verejnoprávne aspekty |
| **Course type, scope and the method:**<br>**Course type:**<br>**Recommended course-load (hours):**<br>**Per week: Per study period:**<br>**Course method:** present | |
| **Number of credits:** 16 | |
| **Recommended semester/trimester of the course:** | |
| **Course level:** I., I.II., II. | |
| **Prerequisities:** | |
| **Conditions for course completion:** | |
| **Learning outcomes:** | |
| **Brief outline of the course:** | |
| **Recommended literature:** | |
| **Course language:** | |
| **Notes:** | |

**Course assessment**
Total number of assessed students: 0

| abs | n | neabs |
|---|---|---|
| 0.0 | 0.0 | 0.0 |

| |
|---|
| **Provides:** |
| **Date of last modification:** 11.08.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

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|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** R UPJŠ/ IB4/14 | **Course name:** IB4 - Projektový manažment |
| **Course type, scope and the method:**<br>**Course type:**<br>**Recommended course-load (hours):**<br>**Per week: Per study period:**<br>**Course method:** present | |
| **Number of credits:** 20 | |
| **Recommended semester/trimester of the course:** | |
| **Course level:** I., I.II., II. | |
| **Prerequisities:** | |
| **Conditions for course completion:** | |
| **Learning outcomes:** | |
| **Brief outline of the course:** | |
| **Recommended literature:** | |
| **Course language:** | |
| **Notes:** | |

**Course assessment**
Total number of assessed students: 0

| abs | n | neabs |
|---|---|---|
| 0.0 | 0.0 | 0.0 |

| |
|---|
| **Provides:** |
| **Date of last modification:** 11.08.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** R UPJŠ/ IB5/14 | **Course name:** IB5 - Manažérska ekonomika |
|---|---|

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

**Number of credits:** 16

**Recommended semester/trimester of the course:**

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 0

| abs | n | neabs |
|---|---|---|
| 0.0 | 0.0 | 0.0 |

**Provides:**

**Date of last modification:** 11.08.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

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|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** R UPJŠ/ IB6/14 | **Course name:** IB6 - Riešenie konfliktných a krízových situácií v školskej praxi |
| **Course type, scope and the method:**<br>**Course type:**<br>**Recommended course-load (hours):**<br>**Per week: Per study period:**<br>**Course method:** present | |
| **Number of credits:** 16 | |
| **Recommended semester/trimester of the course:** | |
| **Course level:** I., I.II., II. | |
| **Prerequisities:** | |
| **Conditions for course completion:** | |
| **Learning outcomes:** | |
| **Brief outline of the course:** | |
| **Recommended literature:** | |
| **Course language:** | |
| **Notes:** | |

**Course assessment**
Total number of assessed students: 0

| abs | n | neabs |
|---|---|---|
| 0.0 | 0.0 | 0.0 |

| |
|---|
| **Provides:** |
| **Date of last modification:** 11.08.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

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|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** R UPJŠ/ IB7/14 | **Course name:** IB7 - Štatistika pre prax |
| **Course type, scope and the method:**<br>**Course type:**<br>**Recommended course-load (hours):**<br>**Per week: Per study period:**<br>**Course method:** present | |
| **Number of credits:** 16 | |
| **Recommended semester/trimester of the course:** | |
| **Course level:** I., I.II., II. | |
| **Prerequisities:** | |
| **Conditions for course completion:** | |
| **Learning outcomes:** | |
| **Brief outline of the course:** | |
| **Recommended literature:** | |
| **Course language:** | |
| **Notes:** | |

**Course assessment**
Total number of assessed students: 0

| abs | n | neabs |
|---|---|---|
| 0.0 | 0.0 | 0.0 |

| |
|---|
| **Provides:** |
| **Date of last modification:** 11.08.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

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|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** R UPJŠ/ IB8/14 | **Course name:** IB8 - Environmentálne aspekty záťaže životného prostredia |

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

**Number of credits:** 16

**Recommended semester/trimester of the course:**

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 0

| abs | n | neabs |
|---|---|---|
| 0.0 | 0.0 | 0.0 |

**Provides:**

**Date of last modification:** 11.08.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

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|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** R UPJŠ/ IB9/14 | **Course name:** IB9 - Medzinárodný certifikát TOEFL |
| **Course type, scope and the method:**<br>**Course type:**<br>**Recommended course-load (hours):**<br>**Per week: Per study period:**<br>**Course method:** present | |
| **Number of credits:** 17 | |
| **Recommended semester/trimester of the course:** | |
| **Course level:** I., I.II., II. | |
| **Prerequisities:** | |
| **Conditions for course completion:** | |
| **Learning outcomes:** | |
| **Brief outline of the course:** | |
| **Recommended literature:** | |
| **Course language:** | |
| **Notes:** | |

**Course assessment**
Total number of assessed students: 0

| abs | n | neabs |
|---|---|---|
| 0.0 | 0.0 | 0.0 |

| |
|---|
| **Provides:** |
| **Date of last modification:** 11.08.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KFaDF/IH1/03 | **Course name:** Idea Humanitas 1 (General Introduction) |
|---|---|

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 2.

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 9

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 55.56 | 11.11 | 0.0 | 11.11 | 22.22 | 0.0 |

**Provides:** Doc. PhDr. Peter Nezník, CSc.

**Date of last modification:** 26.01.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/EUIA/14 | **Course name:** Informatics and didactics of informatics |
|---|---|

**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/03 and (ÚINF/OOP1/14 or ÚINF/OOP1/04) and (ÚINF/UGR1/04 or ÚINF/KRS/13 or ÚINF/UKR1/09 or ÚINF/UNS1/04 or ÚINF/FO1/04)

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 2

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

**Provides:**

**Date of last modification:** 09.04.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** KPE/ MPPa/12 | **Course name:** Interim Pedagogical-Psychological Training |
| **Course type, scope and the method:**<br>**Course type:** Practice<br>**Recommended course-load (hours):**<br>**Per week: Per study period:** 36s<br>**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:** | |
| **Notes:** | |
| **Course assessment**<br>Total number of assessed students: 691 | |

| abs | n |
|---|---|
| 99.86 | 0.14 |

| |
|---|
| **Provides:** PhDr. Beáta Gajdošová, PhD., PaedDr. Renáta Orosová, PhD., Mgr. Ján Juščák, PhD., Mgr. Zuzana Nováková, PhD. |
| **Date of last modification:** 04.02.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/ VIV1/04 | **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 a teleproject, on-line competition, webquest, e-learning course, a lesson exploiting several Internet sources and tools).

**Learning outcomes:**
- To acquire an overview of the possibilities of using the Internet in education.
- To enhance skills for searching, acquiring, exchanging and presenting information via the Internet.
- To design, develop and verify an Internet activity (teleproject, online competition, WebQuest, e-learning courses, 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:**
MANN, B. L. Selected Styles in Web-based Educational. Information Science Pub, 2005. ISBN 15-9140-732-X.
BARANOVIČ, R. et al. Internet pre stredné školy - Učebnica Internetu. Praha : Computer Press, 2003. 275 s. ISBN 80-251-0088-X.
ŠNAJDER, Ľ. et al. Edukačné teleprojekty. Košice : Prírodovedecká fakulta UPJŠ v Košiciach, 2000. ISBN 80-7097-450-8.
web pages of organizations and projects ESPA, I*EARN, Kidlink, European Schoolnet, Global SchoolHouse, ThinkQuest.

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 141

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 14.18 | 31.91 | 22.7 | 14.89 | 12.77 | 3.55 |

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

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/UGR1/04 | **Course name:** Introduction to computer graphics |
|---|---|

**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.

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 216

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 13.43 | 7.87 | 12.5 | 24.07 | 32.41 | 9.72 |

**Provides:** RNDr. Rastislav Krivoš-Belluš, PhD.

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ UNT1/99 | **Course name:** Introduction to Low Temperature 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:** 3

**Recommended semester/trimester of the course:** 1.

**Course level:** II., III.

**Prerequisities:**

**Conditions for course completion:**
Successful passing final exam

**Learning outcomes:**
The course addresses fundamental concepts of physics of solid state. The students acquire information on the state of the art knowledge of selected structural, thermal, electric and magnetic properties of crystalline systems. Beside the standard materials an attention will be paid also to nonconventional systems. Basic experimental methods appropriate for studies of the mentioned properties will be overviewed.

**Brief outline of the course:**
Crystal structure. Wave diffraction and the reciprocal lattice. Crystal binding. Lattice vibrations, phonons. Fermi gases and liquids. Energy bands. Fermi surfaces. Superconductivity. Superconducting materials. Nonconventional superconductivity. Fundamental magnetic orders. Strong electron correlations.

**Recommended literature:**
1. Ch. Kittel: Introduction to Solid State Physics, 8th edition, John Wiley and sons, New York 2005.
2. H.Ibach, H.Luth: Solid-State Physics, Springer, Berlin 1996.
3. R. Kužel et al.: Úvod do fyziky kovú II, SNTL, Praha 1985.
4. P.Grosse: Svobodnyje elektrony v tverdych telach, Mir, Moskva, 1982
5. M Tinkham: Introduction to Superconductivity, 2-nd edition, Mc Graw- Hill, New York 1996.
6. S. Takács a L.Cesnak.: Supravodivosť, Alfa , Bratislava 1979
7. K. Fossheim, A. Sudbo, Superconductivity. Physics and Applications, John Wiley & Sons, Chichester, 2004.
8. James F. Annett, Superconductivity, Superfluids and Condensates, Oxford University Press, Oxford, UK.

**Course language:**
Slovak, English

**Notes:**

**Course assessment**
Total number of assessed students: 22

| A | B | C | D | E | FX | N | P |
|---|---|---|---|---|---|---|---|
| 81.82 | 9.09 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.09 |

**Provides:** Dr.h.c. prof. RNDr. Alexander Feher, DrSc.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/ UNS1/04 | **Course name:** Introduction to neural networks |
|---|---|

**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:** 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:**

**Notes:**

**Course assessment**
Total number of assessed students: 336

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 8.04 | 15.18 | 23.81 | 21.43 | 27.08 | 4.46 |

**Provides:** doc. RNDr. Gabriela Andrejková, CSc.

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/ LOP1/04 | **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.

**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

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 211

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 19.43 | 10.9 | 15.64 | 24.64 | 27.01 | 2.37 |

**Provides:** RNDr. Ondrej Krídlo, PhD.

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## 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

**Notes:**

**Course assessment**
Total number of assessed students: 34

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

**Provides:** doc. RNDr. Zuzana Ješková, PhD.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ MDT06/06 | **Course name:** Modern Didactical Technics |
|---|---|

**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:** 3

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

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 76

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 97.37 | 1.32 | 0.0 | 0.0 | 0.0 | 1.32 |

**Provides:** doc. RNDr. Marián Kireš, PhD.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ MFDF/08 | **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 / 2 **Per study period:** 28 / 28
**Course method:** present

**Number of credits:** 4

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

**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 Q: Particles Behave Like Waves, 2nd ed., Mc Graw Hill, Boston, 2003
2. Feynman, R.P., QED - The Strange theory of Light and Matter, Princeton University Press, Princeton, 1985
3. Hey, A., Walters, P., New Quantum Universe, Cambridge University Press, 2003
4. Taylor, E. F, Wheeler, J. A., Space-time Physics-Introduction to Special Relativity, 2nd ed., W.H. Freeman and Company, New York, 1992
5. Thorne, K. S., Black Holes and Time Warps, W.W. Norton, New York, 1995
6. Relevant resources from recent journal literature (American Journal of Physics, European Journal of Physics, Scientific American...)

**Course language:**
Slovak

**Notes:**

**Course assessment**
Total number of assessed students: 26

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 26.92 | 30.77 | 23.08 | 15.38 | 3.85 | 0.0 |

**Provides:** Doc. RNDr. Jozef Hanč, PhD.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** ÚTVŠ/ NJ//13 | **Course name:** Naval Yachting |
| **Course type, scope and the method:**<br>**Course type:** Practice<br>**Recommended course-load (hours):**<br>**Per week:** 36 **Per study period:** 504<br>**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:** | |
| **Notes:** | |

**Course assessment**
Total number of assessed students: 2

| abs | n |
|---|---|
| 100.0 | 0.0 |

| |
|---|
| **Provides:** doc. Mgr. Rastislav Feč, PhD. |
| **Date of last modification:** 15.01.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ NET1/04 | **Course name:** Nontraditional View on Selected Problems of General Physics I |
|---|---|

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 96

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 73.96 | 16.67 | 2.08 | 5.21 | 1.04 | 1.04 |

**Provides:** doc. RNDr. Marián Kireš, PhD.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/NFY1/03 | **Course name:** Nontraditional View on Selected Problems of General Physics II |
|---|---|

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

**Number of credits:** 3

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

**Course level:** II.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 60

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 75.0 | 15.0 | 8.33 | 0.0 | 0.0 | 1.67 |

**Provides:** doc. RNDr. Marián Kireš, PhD.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ JZP1/03 | **Course name:** Nuclear Radiation in Environment |
|---|---|

**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:** 3

**Recommended semester/trimester of the course:** 2.

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

**Prerequisities:**

**Conditions for course completion:**
term project
examination

**Learning outcomes:**
Basic knowledge of the nuclear radiation in the environment and consequences for health.

**Brief outline of the course:**
Sources of radiation. Interaction of radiation with matter. Dosimetry units. Biological effects of ionizing radiation and radiological protection. Natural sources of radiation. Man-made sources of radionuclides.Application of radionuclides.
Nuclear weapons. Nuclear plants. The risk of accidents. Nuclear waste. Reprocessing. Radiation and health.

**Recommended literature:**
1. Cooper J.R, Randle K., Sokhi R.S.: Radioactive releases in the environment, J.Wiley &Sons, Ltd. 2003
2. R. L. Murray, Nuclear Energy, An Introduction to th Concepts, Systems, and Applications of Nuclear Processes, 6th edition,Elsevier, 2009
3. P.A.Tipler, R.A.Llewellyn: Modern Physics, 6th Edition,W.H.Freeman and Company, 2012

**Course language:**
slovak

**Notes:**

**Course assessment**
Total number of assessed students: 44

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 54.55 | 20.45 | 9.09 | 9.09 | 2.27 | 4.55 |

**Provides:** RNDr. Janka Vrláková, PhD.

**Date of last modification:** 11.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

**COURSE INFORMATION LETTER**

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** ÚINF/ OOP1/04 | **Course name:** Object-oriented programming |

**Course type, scope and the method:**
**Course type:** Practice
**Recommended course-load (hours):**
**Per week:** 4 **Per study period:** 56
**Course method:** present

**Number of credits:** 4

**Recommended semester/trimester of the course:** 1.

**Course level:** II.

**Prerequisities:**

**Conditions for course completion:**
Imagine:
Evaluation of partial assignments.
Evaluation of the final project.
Lazarus:
Test of theoretical knowledge in the middle of the semester.
Evaluation of the semestral project.
Written and oral exam.

**Learning outcomes:**
Acquire knowledge and skills about object-oriented programming in Imagine Logo (turtle graphics, data types, control statements, procedures, graphic components, events, processes, classes, objects, network applications, multimedia).
Programming in an object-oriented language Pascal in the Lazarus environment.
The aim is to prepare students for teaching programming in environment Lazarus.

**Brief outline of the course:**
Programming in Imagine Logo:
Basics of turtle graphics, custom procedures
Events of turtles, more turtles
The shape of turtles, processes
Data Types in Imagine Logo
Different objects in Imagine
Cartoon turtle shapes, classes
network Applications
Classes and objects, subclasses and inheritance. Instance and class variables and methods. Redefinition of methods, overfitting and encapsulation of data. Abstract classes. Polymorfism and its using in programming. Exceptions. Applets and aplications. Programming in concrete object oriented language.

**Recommended literature:**
Bezáková, D. – Lovászová, G. – Kučera, P.: Programovanie 1, ŠPÚ, Bratislava, 2009, ISBN 978-80-89225-65-1

Bezáková, D. – Lovászová, G. – Kučera, P. – Tomcsányi, P.: Programovanie 4 (Imagine), ŠPÚ, Bratislava, 2009, ISBN 978-80-8118-017-0

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 79

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 44.3 | 10.13 | 20.25 | 13.92 | 10.13 | 1.27 |

**Provides:** RNDr. Ľubomír Šnajder, PhD., RNDr. František Galčík, PhD.

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ MAFV/06 | **Course name:** Out of School Physics Educational Activities |
|---|---|

**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:**

**Notes:**

**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:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/ MPPb/03 | **Course name:** Pedagogical practice |
|---|---|

**Course type, scope and the method:**
**Course type:** Practice
**Recommended course-load (hours):**
**Per week: Per study period:** 3t
**Course method:** present

**Number of credits:** 1

**Recommended semester/trimester of the course:** 2.

**Course level:** II.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**
Students carry on their teaching practice MPPb in primary and secondary schools according distribution. During this 3 weeks lasting teaching practice students undergo 8 hours classroom visits, 5 hours of teaching assistant activities and 5 hours of own teaching lessons in the frame of lessons of a teacher trainer. Students keep a visitation records and create written preparation for each lesson that they consult with a teacher trainer. Students participate in meetings of subject commission, help the teacher trainer in cabinet, in pedagogical supervision and complete tasks under the rules of procedure of the school.

**Recommended literature:**
KONTÍROVÁ, S. a kol. Pedagogická prax študentov akademických predmetov (elektronické skriptum), 2. prepracované a doplnené vydanie, 978-80-7097-904-4. Dostupné na Internete: http://www.upjs.sk/public/media/3839/skripta_aktualizacia.pdf
BAJTOŠ, J. Teória a prax didaktiky. Žilina : EDIS - vydavateľstvo ŽU, 2003. ISBN 80-8070-130-X.
KALHOUS, Z. - OBST, O. Školní didaktika. Praha : Nakladatelství Portál, 2002. ISBN 80-7178-253-X.
KYRIACOU, Ch. Klíčové dovednosti učitele – cesty k lepšímu vyučování. Praha : Nakladatelství Portál, 2004. ISBN 80-7178-965-8.
PETTY, G. Moderní vyučování, Portál, Praha, 2004

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 55

| abs | n |
|---|---|
| 100.0 | 0.0 |

| |
|---|
| **Provides:** RNDr. Ľubomír Šnajder, PhD., PaedDr. Ján Guniš, PhD. |
| **Date of last modification:** 03.02.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/ MPPc/05 | **Course name:** Pedagogical practice |
|---|---|

**Course type, scope and the method:**
**Course type:** Practice
**Recommended course-load (hours):**
**Per week: Per study period:** 2t
**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:**
Students carry on their teaching practice MPPc in primary and secondary schools according distribution on the other type of school as continuous teaching practice ÚINF/MPPb. During this 4 weeks lasting teaching practice students undergo 6 hours classroom visits and 18 hours of own teaching lessons in the frame of lessons of a teacher trainer. Students keep a visitation records and create written preparation for each lesson that they consult with a teacher trainer. Students participate in meetings of subject commission, help the teacher trainer in cabinet, in pedagogical supervision and complete tasks under the rules of procedure of the school.

**Recommended literature:**
KONTÍROVÁ, S. a kol. Pedagogická prax študentov akademických predmetov (elektronické skriptum), 2. prepracované a doplnené vydanie, 978-80-7097-904-4. Dostupné na Internete: http://www.upjs.sk/public/media/3839/skripta_aktualizacia.pdf
BAJTOŠ, J. Teória a prax didaktiky. Žilina : EDIS - vydavateľstvo ŽU, 2003. ISBN 80-8070-130-X.
KALHOUS, Z. - OBST, O. Školní didaktika. Praha : Nakladatelství Portál, 2002. ISBN 80-7178-253-X.
KYRIACOU, Ch. Klíčové dovednosti učitele – cesty k lepšímu vyučování. Praha : Nakladatelství Portál, 2004. ISBN 80-7178-965-8.
PETTY, G. Moderní vyučování, Portál, Praha, 2004

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 70

| abs | n |
|---|---|
| 100.0 | 0.0 |

| |
|---|
| **Provides:** RNDr. Ľubomír Šnajder, PhD., PaedDr. Ján Guniš, PhD. |
| **Date of last modification:** 03.02.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/MPPd/05 | **Course name:** Pedagogical practice |
|---|---|

**Course type, scope and the method:**
**Course type:** Practice
**Recommended course-load (hours):**
**Per week: Per study period:** 3t
**Course method:** present

**Number of credits:** 2

**Recommended semester/trimester of the course:** 4.

**Course level:** II.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**
Students carry on their teaching practice MPPd in primary and secondary schools according distribution on the other type of school as continuous teaching practice ÚINF/MPPb and ÚINF/MPPd. During this 3 weeks lasting teaching practice students undergo 4 hours classroom visits and 15 hours of own teaching lessons in the frame of lessons of a teacher trainer. Students keep a visitation records and create written preparation for each lesson that they consult with a teacher trainer. Students participate in meetings of subject commission, help the teacher trainer in cabinet, in pedagogical supervision and complete tasks under the rules of procedure of the school.

**Recommended literature:**
KONTÍROVÁ, S. a kol. Pedagogická prax študentov akademických predmetov (elektronické skriptum), 2. prepracované a doplnené vydanie, 978-80-7097-904-4. Dostupné na Internete: http://www.upjs.sk/public/media/3839/skripta_aktualizacia.pdf
BAJTOŠ, J. Teória a prax didaktiky. Žilina : EDIS - vydavateľstvo ŽU, 2003. ISBN 80-8070-130-X.
KALHOUS, Z. - OBST, O. Školní didaktika. Praha : Nakladatelství Portál, 2002. ISBN 80-7178-253-X.
KYRIACOU, Ch. Klíčové dovednosti učitele – cesty k lepšímu vyučování. Praha : Nakladatelství Portál, 2004. ISBN 80-7178-965-8.
PETTY, G. Moderní vyučování, Portál, Praha, 2004

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 73

| abs | n |
|---|---|
| 100.0 | 0.0 |

| |
|---|
| **Provides:** RNDr. Ľubomír Šnajder, PhD., PaedDr. Ján Guniš, PhD. |
| **Date of last modification:** 03.02.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

**COURSE INFORMATION LETTER**

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** ÚINF/ PES1/04 | **Course name:** Pedagogical software |

**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 - a review of selected educational software, specification of own educational software.
In final exam students will demonstrate an overview of types, evaluation and life cycle of educational software in written form and they will present and defend their own final project - educational interactive hypertext project (containing motivation, interactive simulation, collection of tasks, vocabulary, autotest), respectively an educational game (labyrinth, pexeso, quiz, crossword, interactive story, simulation) including methodological guide for teachers.including methodological guide for teachers.

**Learning outcomes:**
- To acquire an overview of the types of educational software, its evaluation, process development and use in education.
- To create your own educational interactive hypertext, respectively an educational game including methodological guide for teachers.

**Brief outline of the course:**
Typology of educational software, its evaluation, process development and use in education. Creation of educational interactive hypertext (containing motivation, interactive simulation, collection of tasks, vocabulary, autotest), respectively an educational game (labyrinth, pexeso, quiz, crossword, interactive story, simulation) including methodological guide for teachers.

**Recommended literature:**
LACHS, V. Making Multimedia in the Classroom. London : RoutledgeFalemer, 2000. ISBN 0415216842.
GÖBEL, S. et al. Technologies for Interactive Digital Storytelling and Entertainment (LNCS 4326). Darmstadt : Springer, 2006. ISBN 3540499342.
SCHURMANN, E. M., PARDI, W. J. Dynamické HTML v akci. Praha : Computer Press, 2001. ISBN 807226401X.
KOSEK, J. Téměř vše o WWW. [online] Dostupné na internete: <http://www.kosek.cz>.

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 94

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 23.4 | 28.72 | 26.6 | 8.51 | 10.64 | 2.13 |

**Provides:** RNDr. Ľubomír Šnajder, PhD.

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** KPE/ PP/14 | **Course name:** Pedagogy and Psychology |
| **Course type, scope and the method:**<br>**Course type:**<br>**Recommended course-load (hours):**<br>**Per week: Per study period:**<br>**Course method:** present | |
| **Number of credits:** 1 | |
| **Recommended semester/trimester of the course:** | |
| **Course level:** II. | |
| **Prerequisities:** KPE/VPD/03 and KPPaPZ/PPGS/04 or KPPaPZ/PaSPP/09 | |
| **Conditions for course completion:** | |
| **Learning outcomes:** | |
| **Brief outline of the course:** | |
| **Recommended literature:** | |
| **Course language:** | |
| **Notes:** | |

**Course assessment**
Total number of assessed students: 133

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 16.54 | 30.83 | 28.57 | 21.05 | 1.5 | 1.5 |

| |
|---|
| **Provides:** |
| **Date of last modification:** 04.02.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KPE/ PVC/09 | **Course name:** Pedagogy of Leisure Time |
|---|---|

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 222

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 75.68 | 16.67 | 6.31 | 0.0 | 1.35 | 0.0 |

**Provides:** Mgr. Ján Juščák, PhD.

**Date of last modification:** 04.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## 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:** 1., 3.

**Course level:** II.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 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:** 17.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ FPK1/07 | **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:** 4

**Recommended semester/trimester of the course:** 2.

**Course level:** II.

**Prerequisities:**

**Conditions for course completion:**
Examination

**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:**
1. Slovak,
2. English

**Notes:**

**Course assessment**
Total number of assessed students: 87

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 65.52 | 9.2 | 9.2 | 11.49 | 4.6 | 0.0 |

**Provides:** prof. RNDr. Andrej Bobák, DrSc.

**Date of last modification:** 31.01.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/FYU1/10 | **Course name:** Physical Problems |
|---|---|

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 31

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 58.06 | 29.03 | 9.68 | 3.23 | 0.0 | 0.0 |

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

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/FDFA/14 | **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/DF1b/10 and ÚFV/TRS/03 and ÚFV/SEV/10)

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 0

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

**Provides:**

**Date of last modification:** 17.03.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/FDFB/14 | **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/DF1b/10 and ÚFV/VKL/07 and ÚFV/FPK1/07)

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 2

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

**Provides:**

**Date of last modification:** 17.03.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/FDFC/14 | **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/DF1b/10 and ÚFV/SJF1/03 and ÚFV/VBF2/08)

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 1

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

**Provides:**

**Date of last modification:** 17.03.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/FDFD/14 | **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/DF1b/10 and (ÚFV/NFY1/07 or ÚFV/NFY1/03) and ÚFV/MFDF/08

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 4

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

**Provides:**

**Date of last modification:** 17.03.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/FMJ/06 | **Course name:** Physics of Magnetic Phenomena |
|---|---|

**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:** 3

**Recommended semester/trimester of the course:** 1.

**Course level:** I., II., III.

**Prerequisities:**

**Conditions for course completion:**
Exam

**Learning outcomes:**
The aim of the subject is to give overview to the physical mechanism of the magnetization process.

**Brief outline of the course:**
Basic units for magnetic material characterization. Magnetic materials. Magnetic anisotropies. Magnetic parameters. Domain structure. Magnetization processes. Dynamics of magnetization processes.

**Recommended literature:**
1; B.D. Cullity and C.D. Graham, Introduction to magnetic materials, Willey-IEEE Press, 2007
2; S. Chikazumi, Physics of Ferromagnetism, Claredon Press, 1997
3; C.W. Chen, Magnetism and metallurgy of soft magnetic materials, Dover Publ.,1986

**Course language:**
slovak or english

**Notes:**

**Course assessment**
Total number of assessed students: 44

| A | B | C | D | E | FX | N | P |
|---|---|---|---|---|---|---|---|
| 65.91 | 4.55 | 2.27 | 2.27 | 0.0 | 0.0 | 0.0 | 25.0 |

**Provides:** doc. RNDr. Rastislav Varga, DrSc.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/JAC1/11 | **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:** 3.

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

**Prerequisities:** ÚINF/PAZ1a/10

**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:**
Procedural paradigm in C, low-level concepts and their implementation, nonautomatic memory handling and allocation. Data structures in C.

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 92

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 53.26 | 22.83 | 6.52 | 2.17 | 10.87 | 4.35 |

**Provides:** RNDr. Peter Gurský, PhD., RNDr. Zuzana Bednárová, PhD.

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/ PDSI1/04 | **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:**

**Notes:**

**Course assessment**
Total number of assessed students: 527

| abs | n |
|---|---|
| 99.81 | 0.19 |

**Provides:** doc. RNDr. Gabriela Andrejková, CSc., doc. RNDr. Jozef Jirásek, PhD.

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KPPaPZ/PPGS/04 | **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:**

**Notes:**

**Course assessment**
Total number of assessed students: 790

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 10.13 | 17.22 | 21.39 | 22.03 | 24.81 | 4.43 |

**Provides:** Prof. PhDr. Oľga Orosová, CSc., PhDr. Karolína Barinková, PhD., Mgr. Lucia Hricová, PhDr. Anna Janovská, PhD.

**Date of last modification:** 04.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** ÚINF/ PPU1a/04 | **Course name:** Running practice |
| **Course type, scope and the method:**<br>**Course type:** Practice<br>**Recommended course-load (hours):**<br>**Per week:** 2 **Per study period:** 28<br>**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:** | |
| **Notes:** | |

**Course assessment**
Total number of assessed students: 116

| abs | n |
|---|---|
| 99.14 | 0.86 |

| |
|---|
| **Provides:** RNDr. JUDr. Pavol Sokol, PhD. |
| **Date of last modification:** 03.02.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## 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:**<br>**Course type:** Practice<br>**Recommended course-load (hours):**<br>**Per week:** 36 **Per study period:** 504<br>**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:** | |
| **Notes:** | |

**Course assessment**
Total number of assessed students: 7

| abs | n |
|---|---|
| 57.14 | 42.86 |

| |
|---|
| **Provides:** Mgr. Alena Buková, PhD., Mgr. Agata Horbacz, PhD. |
| **Date of last modification:** 15.01.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

**COURSE INFORMATION LETTER**

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

**Course ID:** ÚFV/ DEX/04

**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:** 4

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 27

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 62.96 | 14.81 | 14.81 | 0.0 | 7.41 | 0.0 |

**Provides:** RNDr. Ľudmila Onderová, PhD.

| |
|---|
| **Date of last modification:** 18.02.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ VKL/07 | **Course name:** Selected Topics from Condensed Mater 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:** 4

**Recommended semester/trimester of the course:** 1.

**Course level:** II.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**
Explanation of the nature of physical phenomena which appears in macroscopic quantum systems, in systems with magnetic ordering and also in the interaction between electromagnetic radiation and matter. Discussion of physical principles of radiospectroscopic techniques and neutron scattering applied for the investigation of properties of matter. Introduction in modern trends of electron microscopy and applications of the experimental techniques in applied solid state physics.

**Brief outline of the course:**
Macroscopic quantum effects: Bose-Einstein condensation. Non-Fermi liquid behaviour of electrons. Unconventional superconductivity. Physics in dimensions smaller than 3. Magnetic ordering:Ferromagnetism. Antiferromagnetism. Ferrimagnetism. Parasitic ferromagnetism. Miktomagnetism and spin glasses. Spectroscopy:Electron paramagnetic resonance. Nuclear magnetic resonance. Neutron scattering and scan tunelling spectroscopy
Modern trends in electron microscopy (transmission and scanning EM): Electron microprobe analysis: WDX spectrometer, EDX spectrometer, Auger electron spectrometer. Self-emission microscopy. Convergent beam diffraction. Using synchrotron X- ray in material science.

**Recommended literature:**
Encyclopedia of Chemical Physics and Physical Chemistry, Vol. 2, edited by J. H. Moore and N.D.Spencer, Institute of Physics Publishing, Bristol, 2001.
S. Amelincks, D.van Dyck, J. van Landyut, Electron Microscopy – Principles and Fundamentals, VCH, 1997.
M.H. Loretto, Electrom beam analysis of materials. Springer, 2002.
S. Chikazumi: Physics of Magnetism, J. Willey and Sons, Inc. New York, London, Sydney, 1997.
J. F. Annett: Superconductivity, Superfluids and Condensates, Oxford University Press, New York, USA, 2004
Scientific journals.

**Course language:**
slovak, english

**Notes:**

**Course assessment**
Total number of assessed students: 78

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 46.15 | 19.23 | 15.38 | 10.26 | 8.97 | 0.0 |

**Provides:** RNDr. Erik Čižmár, PhD., prof. RNDr. Pavol Sovák, CSc., Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/ DSU1a/03 | **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:**

**Learning outcomes:**
To learn currently work on the diploma thesis, to present partial results of the research work on it.

**Brief outline of the course:**
Seminar is oriented to an individual work with students which have the diploma theses in the area: didactics of informatics.

**Recommended literature:**
MEŠKO, D., KATUŠČÁK, D. Akademická príručka. 1. vyd. Vydavateľstvo Osveta : Martin, 2004. 316 s. ISBN 80-8063-150-6
Special and research literature connected to Diplomaa theses according to recommendations of supervisor.
Katuščák, D.: Ako písať vysokoškolské a kvalifikačné práce, 2. vydanie Bratislava, 1998
ISO 690: 1987 Documentation - Bibliographic references. Content, form and structure.
ISO 2145: 1978 Documentation - Numbering of divisions and subdivisions in written documents.

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 24

| abs | n |
|---|---|
| 100.0 | 0.0 |

**Provides:** RNDr. Ľubomír Šnajder, PhD.

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/DSU1b/03 | **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/03

**Conditions for course completion:**

**Learning outcomes:**
To learn currently work on the diploma thesis, to present partial results of the research work on it.

**Brief outline of the course:**
Seminar is oriented to an individual work with students which have the diploma theses in the area: didactics of informatics.

**Recommended literature:**
MEŠKO, D., KATUŠČÁK, D. Akademická príručka. 1. vyd. Vydavateľstvo Osveta : Martin, 2004. 316 s. ISBN 80-8063-150-6
Special and research literature connected to Diplomaa theses according to recommendations of supervisor.
Katuščák, D.: Ako písať vysokoškolské a kvalifikačné práce, 2. vydanie Bratislava, 1998
ISO 690: 1987 Documentation - Bibliographic references. Content, form and structure.
ISO 2145: 1978 Documentation - Numbering of divisions and subdivisions in written documents.

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 21

| abs | n |
|---|---|
| 100.0 | 0.0 |

**Provides:** RNDr. Ľubomír Šnajder, PhD.

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚINF/DSU1c/03 | **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:** 4.

**Course level:** II.

**Prerequisities:** ÚINF/DSU1a/03 and ÚINF/DSU1b/03

**Conditions for course completion:**

**Learning outcomes:**
To learn currently work on the diploma thesis, to present partial results of the research work on it.

**Brief outline of the course:**
Seminar is oriented to an individual work with students which have the diploma theses in the area: didactics of informatics.

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 6

| abs | n |
|---|---|
| 100.0 | 0.0 |

**Provides:** RNDr. Ľubomír Šnajder, PhD.

**Date of last modification:** 03.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## 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

**Notes:**

**Course assessment**
Total number of assessed students: 58

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 34.48 | 25.86 | 22.41 | 8.62 | 5.17 | 3.45 |

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

| |
|---|
| **Date of last modification:** 18.02.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## 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

**Notes:**

**Course assessment**
Total number of assessed students: 56

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 44.64 | 12.5 | 33.93 | 5.36 | 1.79 | 1.79 |

| |
|---|
| **Provides:** doc. RNDr. Zuzana Ješková, PhD., doc. RNDr. Marián Kireš, PhD., RNDr. Ľudmila Onderová, PhD. |
| **Date of last modification:** 18.02.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## 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

**Notes:**

**Course assessment**
Total number of assessed students: 2

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

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

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KPPaPZ/SPVKE/07 | **Course name:** Social-Psychological Training of Coping with Critical Life Situations |
|---|---|

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 101

| abs | n | z |
|---|---|---|
| 97.03 | 2.97 | 0.0 |

**Provides:**

**Date of last modification:** 04.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ TRS/03 | **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:** 3

**Recommended semester/trimester of the course:** 1.

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

**Prerequisities:** ÚFV/TEP1/03

**Conditions for course completion:**
Final examination

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

**Brief outline of the course:**
Galilean transformation 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:**
1. Slovak,
2. English

**Notes:**

**Course assessment**
Total number of assessed students: 158

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 51.9 | 22.78 | 13.29 | 6.33 | 5.06 | 0.63 |

**Provides:** prof. RNDr. Andrej Bobák, DrSc.

**Date of last modification:** 31.01.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚTVŠ/TVa/11 | **Course name:** Sports Activities I. |
|---|---|

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 1.

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 7160

| abs | n | neabs |
|---|---|---|
| 88.42 | 7.82 | 3.76 |

**Provides:** PaedDr. Imrich Staško, doc. PhDr. Ivan Šulc, CSc., doc. Mgr. Rastislav Feč, PhD., Mgr. Ivan Matúš, PhD., Mgr. Zuzana Küchelová, Mgr. Peter Bakalár, PhD., doc. PaedDr. Ivan Uher, PhD., PaedDr. Milena Švedová, PhD., Mgr. Agata Horbacz, PhD., Mgr. Marek Valanský, Mgr. Dávid Kaško

**Date of last modification:** 15.01.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚTVŠ/ TVb/11 | **Course name:** Sports Activities II. |
|---|---|

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 2.

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 6364

| abs | n | neabs |
|---|---|---|
| 84.95 | 11.06 | 3.99 |

**Provides:** PaedDr. Imrich Staško, doc. Mgr. Rastislav Feč, PhD., doc. PhDr. Ivan Šulc, CSc., Mgr. Ivan Matúš, PhD., Mgr. Zuzana Küchelová, doc. PaedDr. Ivan Uher, PhD., Mgr. Peter Bakalár, PhD., PaedDr. Milena Švedová, PhD., Mgr. Agata Horbacz, PhD., Mgr. Marek Valanský, Mgr. Dávid Kaško

**Date of last modification:** 15.01.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚTVŠ/ TVc/11 | **Course name:** Sports Activities III. |
|---|---|

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 3.

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 4191

| abs | n | neabs |
|---|---|---|
| 89.91 | 4.72 | 5.37 |

**Provides:** PaedDr. Imrich Staško, doc. Mgr. Rastislav Feč, PhD., doc. PhDr. Ivan Šulc, CSc., Mgr. Ivan Matúš, PhD., Mgr. Zuzana Küchelová, doc. PaedDr. Ivan Uher, PhD., PaedDr. Milena Švedová, PhD., Mgr. Peter Bakalár, PhD., Mgr. Agata Horbacz, PhD., Mgr. Marek Valanský, Mgr. Dávid Kaško

**Date of last modification:** 15.01.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚTVŠ/ TVd/11 | **Course name:** Sports Activities IV. |
|---|---|

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 4.

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 3363

| abs | n | neabs |
|---|---|---|
| 86.14 | 6.78 | 7.08 |

**Provides:** PaedDr. Imrich Staško, doc. Mgr. Rastislav Feč, PhD., doc. PhDr. Ivan Šulc, CSc., Mgr. Ivan Matúš, PhD., Mgr. Zuzana Küchelová, PaedDr. Milena Švedová, PhD., Mgr. Peter Bakalár, PhD., doc. PaedDr. Ivan Uher, PhD., Mgr. Agata Horbacz, PhD., Mgr. Marek Valanský, Mgr. Dávid Kaško

**Date of last modification:** 15.01.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ SVKD/04 | **Course name:** Student Scientific Conference |
|---|---|

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

**Number of credits:** 4

**Recommended semester/trimester of the course:** 2.

**Course level:** II.

**Prerequisities:**

**Conditions for course completion:**
presentation of results of studnets´ research work at Students´ scientific conference

**Learning outcomes:**
Student gains experience and skills in processing and presentation of results of his research work.

**Brief outline of the course:**
Presentation of results of studnets´ research work at Students´ scientific conference.

**Recommended literature:**
Based on the recommendations of supervisor

**Course language:**
Slovak

**Notes:**

**Course assessment**
Total number of assessed students: 42

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

**Provides:** doc. RNDr. Zuzana Ješková, PhD.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ SJF1/03 | **Course name:** Subnuclear 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:** 5

**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. Leptons and hadrons. Strange particles. Mass and neutrino oscillations. Antiparticles.Stable baryons and resonances.Classification of particles.The eightfold way. Symmetrics and conservation laws. Structure of hadrons.Quarks and gluons. Quantum chromodynamics - theory of quarks.Unification of weak and electromagnetic forces. Standard model.Beyond the standard model. Cosmology, particle physics and Big-Bang. Subnuclear physics and experimental techniques.

**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:**

**Notes:**

**Course assessment**
Total number of assessed students: 49

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 20.41 | 16.33 | 16.33 | 18.37 | 20.41 | 8.16 |

**Provides:** prof. RNDr. Stanislav Vokál, DrSc.

**Date of last modification:** 11.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** ÚTVŠ/ LKSp//13 | **Course name:** Summer Course-Rafting of TISA River |
| **Course type, scope and the method:**<br>**Course type:** Practice<br>**Recommended course-load (hours):**<br>**Per week:** 36 **Per study period:** 504<br>**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:** | |
| **Notes:** | |
| **Course assessment**<br>Total number of assessed students: 63 | |

| abs | n |
|---|---|
| 41.27 | 58.73 |

| |
|---|
| **Provides:** Mgr. Peter Bakalár, PhD. |
| **Date of last modification:** 15.01.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** ÚTVŠ/ KP/12 | **Course name:** Survival Course |
| **Course type, scope and the method:**<br>**Course type:** Practice<br>**Recommended course-load (hours):**<br>**Per week:** 36 **Per study period:** 504<br>**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:** | |
| **Notes:** | |

**Course assessment**
Total number of assessed students: 185

| abs | n |
|---|---|
| 41.62 | 58.38 |

| |
|---|
| **Provides:** Mgr. Marek Valanský |
| **Date of last modification:** 15.01.2014 |
| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** KPPaPZ/UPR/03 | **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., 4.

**Course level:** II.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 47

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 87.23 | 4.26 | 2.13 | 2.13 | 0.0 | 4.26 |

**Provides:** Mgr. Ondrej Kalina, PhD.

**Date of last modification:** 04.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

**University:** P. J. Šafárik University in Košice

**Faculty:** Faculty of Science

| **Course ID:** ÚFV/ VMV1/04 | **Course name:** Using Multimedia 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:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
Total number of assessed students: 85

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 85.88 | 10.59 | 0.0 | 0.0 | 1.18 | 2.35 |

**Provides:** doc. RNDr. Marián Kireš, PhD., RNDr. Rastislav Adamek, PhD.

**Date of last modification:** 18.02.2014

**Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc.

## COURSE INFORMATION LETTER

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|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** ÚTVŠ/ ZKLS//13 | **Course name:** Winter Ski Training Course |
| **Course type, scope and the method:**<br>**Course type:** Practice<br>**Recommended course-load (hours):**<br>**Per week:** 36 **Per study period:** 504<br>**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:** | |
| **Notes:** | |

**Course assessment**
Total number of assessed students: 59

| abs | n |
|---|---|
| 25.42 | 74.58 |

| |
|---|
| **Provides:** PaedDr. Imrich Staško, doc. PhDr. Ivan Šulc, CSc. |
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| **Approved:** doc. RNDr. Stanislav Krajči, PhD., prof. RNDr. Andrej Bobák, DrSc., prof. Volodymyr Starosta, DrSc. |