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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ ATC/10	**Course name:** Algebra and number theory

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: 4.

Course level: I.

Prerequisities: ÚMV/ALG2b/10

Conditions for course completion:
It is based on the results of written checks carried out during the semester. Final evaluation is based on the results of written checks carried out during the semester, of test, written and oral exam.

Learning outcomes:
Obtain basic knowledge about groups and from the elementary number theory.

Brief outline of the course:
Groups, subgroups, quotient groups, homomorphism theorems for groups, selected topics of the number theory.

Recommended literature:
G.Birkoff, S.Mac Lane: A Survey of Modern Algebra, New York 1965
I.R. Shafarevich: Basic Notions of Algebra, Springer, 2005

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 100

A	B	C	D	E	FX
11.0	16.0	29.0	21.0	17.0	6.0

Provides: doc. RNDr. Matúš Harminc, CSc.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ ALGa/10	**Course name:** Algebra I

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

Number of credits: 7

Recommended semester/trimester of the course: 1.

Course level: I.

Prerequisities:

Conditions for course completion:
According to the results from the semester and in view of the results of the written and oral final exam..

Learning outcomes:
To obtain basic knowledge from number theory concerning divisibility and from linear algebra concerning systems of linear equations. To be able to apply it in concrete excercises.

Brief outline of the course:
Divisibility in Z. Fields. Systems of linear equations, Gauss elimination. Maps, permutations. Computing with matrices. Determinants, Cramer rule.

Recommended literature:
T.S Blyth, E.F. Robertson: Basic linear algebra, Springer Verlag, 2001.
K. Jänich: Linear algebra, Springer Verlag, 1991.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 1205

A	B	C	D	E	FX
10.79	11.12	17.34	17.76	29.79	13.2

Provides: prof. RNDr. Danica Studenovská, CSc., RNDr. Igor Fabrici, Dr. rer. nat., RNDr. Miroslava Černegová, RNDr. Katarína Furcoňová, PhD., RNDr. Anna Mišková, RNDr. Peter Hudák, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ ALG2b/10	**Course name:** Algebra II

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 4 / 2 **Per study period:** 56 / 28
Course method: present

Number of credits: 7

Recommended semester/trimester of the course: 2.

Course level: I.

Prerequisities: ÚMV/ALGa/10

Conditions for course completion:
According to tests and to the exam.

Learning outcomes:
To obtain basic knowledge on matrices, linear spaces, linear transformations and polynomials and their roots over a field; to be able to apply the theory in concrete excercises.

Brief outline of the course:
Linear spaces, bases. Rank of a matrix. Systems of homogeneous linear equations. Linear transformations.
Ring, fields. Polynomials over a field. Factorization into irreducible factors, roots. Roots of complex numbers. Cubic equations. Polynomials with several unknowns, symmetric polynomials.

Recommended literature:
A. Kurosh: Higher Algebra, Mir Publishers, 1975.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 466

A	B	C	D	E	FX
12.45	11.8	17.81	17.81	29.18	10.94

Provides: prof. RNDr. Danica Studenovská, CSc., doc. RNDr. Matúš Harminc, CSc.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

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: 6.

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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ AFJ1a/03	**Course name:** Automata and formal languages

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: 4.

Course level: I.

Prerequisities:

Conditions for course completion:
Oral examination.

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:
Chomsky hierarchy of grammars and languages. Finite-state transducers and mapping, construction of a reduced automaton. Finite-state acceptors, nondeterministic acceptors, regular expressions. Closure properties of regular languages. Context-free grammars, Chomsky and Greibach normal forms. Pushdown automata, Pumping lemma. Closure properties of context-free languages.

Recommended literature:
J.E.Hopcroft and J.D.Ullman. Formal languages and their relation to automata. Addison-Wesley. (Slovak translation published by ALFA, Bratislava, 1978).
M.Chytil. Automata and grammars. SNTL, 1984. (In Czech).
J.van Leeuwen (ed.): Handbook of theoretical computer science. North-Holland, 1990.

Course language:

Notes:

Course assessment
Total number of assessed students: 718

A	B	C	D	E	FX
22.7	17.69	24.65	18.8	10.72	5.43

Provides: Mgr. Alexander Szabari, PhD., prof. RNDr. Viliam Geffert, DrSc., RNDr. Juraj Šebej, RNDr. Zuzana Bednárová, PhD.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ ZPIRa/04	**Course name:** Bachelor thesis
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: 5.	
Course level: I.	
Prerequisities: ÚINF/PBS/07	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 168

abs	n
100.0	0.0

Provides: RNDr. Peter Gurský, PhD., doc. RNDr. Jozef Jirásek, PhD., doc. RNDr. Gabriela Andrejková, CSc.
Date of last modification: 03.02.2014
Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ ZPIRb/04	**Course name:** Bachelor thesis
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: 6	
Recommended semester/trimester of the course: 6.	
Course level: I.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 167	

abs	n
99.4	0.6

Provides: RNDr. Peter Gurský, PhD., RNDr. František Galčík, PhD., doc. RNDr. Gabriela Andrejková, CSc.
Date of last modification: 03.02.2014
Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ BPO/14	**Course name:** Bachelor 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: 4

Recommended semester/trimester of the course:

Course level: I.

Prerequisities:

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: 17.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ OBP/10	**Course name:** Bachelor thesis defence

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

Number of credits: 0

Recommended semester/trimester of the course:

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 77

A	B	C	D	E	FX
64.94	16.88	9.09	5.19	2.6	1.3

Provides:

Date of last modification: 26.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ BPMa/10	**Course name:** Bachelor thesis I
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: 5.	
Course level: I.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 86	

abs	n
100.0	0.0

Provides:
Date of last modification: 26.02.2014
Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ BPMb/10	**Course name:** Bachelor thesis II
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 6	
Recommended semester/trimester of the course: 6.	
Course level: I.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 83

abs	n
100.0	0.0

Provides:
Date of last modification: 26.02.2014
Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ BDD/05	**Course name:** Biology of Children and Adolescents

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 2 / 0 **Per study period:** 28 / 0
Course method: present

Number of credits: 2

Recommended semester/trimester of the course: 4., 6.

Course level: I.

Prerequisities:

Conditions for course completion:
Written test

Learning outcomes:
The aim of the subject is to gain the particular level of knowledge about human body and its development. It is neccessary for the understanding of specific biological characteristics of children and adolescents linked to development.

Brief outline of the course:
Human ontogenesis. Postnatal development. Age specific features of skeletal and muscalar, circulatory, respiratory, gastrointestinal and urinary systems. Reproductive system. Endocrine system. Nervous system. Age specifics of selected diseases and drug dependence arise. Human population and environment.

Recommended literature:
Drobný I., Drobná M.: Biológia dieťaťa pre špeciálnych pedagógov I. a II. Bratislava, PdF UK, 2000
Lipková V.: Somatický a fyziologický vývoj dieťaťa. Osveta Bratislava, 1980
Malá H., Klementa J.: Biológia detí a dorastu. Bratislava, SPN, 1989

Course language:

Notes:

Course assessment
Total number of assessed students: 1069

A	B	C	D	E	FX
36.3	23.48	16.0	15.9	7.86	0.47

Provides: doc. RNDr. Monika Kassayová, CSc.

Date of last modification: 13.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: CJP/ PFAJKKA/07	**Course name:** Communicative Competence in English

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

Number of credits: 2

Recommended semester/trimester of the course:

Course level: I., II., N

Prerequisities:

Conditions for course completion:
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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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

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

Number of credits: 2

Recommended semester/trimester of the course:

Course level: I., II., N

Prerequisities:

Conditions for course completion:
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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/TVY/10	**Course name:** Computability theory

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: 5.

Course level: I., II.

Prerequisities:

Conditions for course completion:

Learning outcomes:
To provide theoretical background for studying computer science in general, by familiarising students with basic knowledge of the theory of computability.

Brief outline of the course:
Turing machine as a formalisation of the notion of an algorithm. Partial recursive functions. Kleene's normal form theorem. The equivalences of the notion of a function calculable by a Turing machine, partial recursive and calculable by a computer program. Algorithmical undecidability of the halting problem of a Turing machine and a computer program.

Recommended literature:
MACHTEY, M. and YOUNG, P.: An Introduction to the General Theory of Algorithms, North--Holland, Amsterdam 1978.
BRIDGES, D. S.: Computability, A Mathematical Sketch book, Springer--Verlag 1994

Course language:

Notes:

Course assessment
Total number of assessed students: 751

A	B	C	D	E	FX
17.04	10.65	19.17	18.38	11.19	23.57

Provides: doc. RNDr. Stanislav Krajči, PhD., RNDr. Ľubomír Antoni, PhD.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/PSIN/13	**Course name:** Computer network Internet

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: 5

Recommended semester/trimester of the course: 4.

Course level: I.

Prerequisities: ÚINF/PAZ1a/10 or ÚINF/ePAZ1a/11

Conditions for course completion:
Activity at excercises, home work, test.
verbal exam, final test

Learning outcomes:
To understand ISO OSI reference model for network communication, to analyze communication channels parameters, to understand different access methods, to be familiar with the function of center network devices (hub, switch, router), to understand IP protocol, IP addresses and the transfer of internet packets, to understand reliable data transfer of the TCP protocol, to be able to use Sockets, to know basic application protocols and use them in own applications.

Brief outline of the course:
ISO OSI reference model. Web and HTTP, e-mail and SMTP, domain names and DNS, Peer-to-peer applications. Security in computer networks. Transport layer services, multiplexing and demultiplexing, protocol UDP, reliable data transfer, connection oriented transport protocol TCP, congestion control. Network Layer: Internet protocol IPv4 and IPv6, addressing, network address translation, routing algorithms and protocols. Link layer: error detection, multiple access methods CSMA/CD and CSMA/CA, Ethernet, 802.11 Wireless LAN, link layer addressing, VLANs, mobility, mobile technologies. Communication channels parameters, digital and analog encoding.

Recommended literature:
1. J. F. Kurose, Keith W. Ross: Computer Networking: A Top-Down Approach, 5. edícia, 2010
2. A. S. Tanenbaum: Computer Networks, Prentice Hall, 2002
3. W. Stallings: Local and Metropolitan Area Networks, Prentice Hall, 2000
4. E. Comer, R.E. Droms: Computer Networks and Internets, Prentice Hall, 2003
5. W. R. Stevens: TCP/IP Illustrated, Vol.1: The Protocols, Addison-Wesley, 1994

Course language:

Notes:

Course assessment
Total number of assessed students: 625

A	B	C	D	E	FX
9.6	4.48	10.08	15.52	38.24	22.08

Provides: RNDr. Peter Gurský, PhD.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

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: 3., 5.

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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ DBS1a/03	**Course name:** Database systems

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: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:
Acquired basic concepts and techniques of relational database theory and corresponding software.

Brief outline of the course:
Data models. Languages for defining and manipulating data (DDL, DML). Tables, attributes and integrity constraints. Queries: select, where, group by, aggregate and system functions. Nested queries and several tables: join, union, primary, foreign key. Relational algebra.

Recommended literature:
- S. Krajčí: Databázové systémy, UPJŠ, 2005
- J. ULLMAN: Principles of database and knowledge – base systems, Comp. Sci. Press., 1988
- R. Ramakrishnan, J. Gehrke, Database Management Systems, McGraw-Hill, 2003
- Itzik Ben-Gun, Microsoft SQL Server 2012 T-SQL Fundamentals, O'Reilly, 2012
- HENDERSON, K.: The Guru's Guide to Transact SQL, Addison Wesley Professional, 2000

Course language:

Notes:

Course assessment
Total number of assessed students: 718

A	B	C	D	E	FX
11.56	9.19	16.85	22.56	31.48	8.36

Provides: doc. RNDr. Csaba Török, CSc., Mgr. Maroš Andrejko, RNDr. Lukáš Miňo

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ DBS1b/03	**Course name:** Database systems

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: 6

Recommended semester/trimester of the course: 4.

Course level: I.

Prerequisities: ÚINF/DBS1a/03 or ÚINF/eDBS1a/11

Conditions for course completion:

Learning outcomes:
Mastering the basic techniques of effective design, normalization and programmable extension of relational databases.

Brief outline of the course:
Database modelling. Functional dependency and normalization. Recursion and transitive closure. Cursors. Stored procedures. Indices and B-trees. Triggers. Transaction. XML, SDL, XPath, XQuery.

Recommended literature:
- S. Krajčí: Databázové systémy, UPJŠ, 2005 2. J.
- Date C.J., Database Design and Relational Theory, O'Reilly, 2012
- Atkinson, P., Vierra, R., BEGINNING MICROSOFT SQL SERVER 2012 PROGRAMMING, John Wiley - Wrox, 2012
- Itzik Ben-Gan, Microsoft SQL Server, 2012 T-SQL Fundamentals, O'Reilly, 2012
- L. Davidson, J.M. Moss, Pro SQL Server 2012 Relational database Design and Implementation, APRESS, 2012

Course language:

Notes:

Course assessment
Total number of assessed students: 608

A	B	C	D	E	FX
10.36	7.73	10.86	22.2	36.84	12.01

Provides: doc. RNDr. Csaba Török, CSc.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/OZP/04	**Course name:** Defence of bachelor thesis

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

Number of credits: 0

Recommended semester/trimester of the course:

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 139

A	B	C	D	E	FX
43.88	20.14	18.71	6.47	8.63	2.16

Provides:

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ DSMa/10	**Course name:** Discrete mathematics 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: 3.

Course level: I.

Prerequisities:

Conditions for course completion:
Examination.

Learning outcomes:
To be familiar with some factual knowledge of combinatorics and graph theory. To understand an appreciate mathematical notions, definitions, and proofs, to solve problems requiring more than just standard recipes, and to express mathematical thoughts precisely and more rigorously.

Brief outline of the course:
Basic principles.
Counting and binomial coefficients, Binomial theorem, polynomial theorem.
Recurrence: Some miscellaneous problems, Fibonacci-type relations, Using generating functions, miscellaneous methods.
The inclusion-exclusion principle. Rook polynomials.
Introduction to graphs: The concept of graphs, paths in graphs. Connectivity. Trees, bipartite graphs. Planarity. Polyhedra.
Traveling round a graph: Eulerian graphs, Hamiltonian graphs.
Partitions and colourings: Vertex colourings of graphs. Edge colourings of graphs

Recommended literature:
1. I. Anderson, A first course in discrete mathematics, Springer-Verlag London, 2001.
2. J. Matoušek and J. Nešetřil, Invitation to discrete mathematics, Oxford University Press Inc. , New York 1999.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 495

A	B	C	D	E	FX
12.53	10.91	17.37	22.63	27.88	8.69

Provides: prof. RNDr. Stanislav Jendroľ, DrSc., RNDr. Mária Maceková
Date of last modification: 14.02.2014
Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ DSMb/10	**Course name:** Discrete mathematics 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: 4.

Course level: I.

Prerequisities: ÚMV/DSMa/10 or ÚMV/DSM3a/10

Conditions for course completion:
Two tests during the semester
It is made on the base of results of two tests during the semester (50%)and a final written exam and an oral exam (50%)

Learning outcomes:
Mastered funamental methods of graph theory. To be familiar with some possibilities of applications of graph theory

Brief outline of the course:
Introduction to graphs.
Connectivity and distance in graphs.
Trees, spanning subgraphs
Independence and coverings.
Introduction to the Ramsey theory.
Introduction to the extremal graph theory.
Matchings: Theorem of Hall, theorem of Berge, optimal assignment problems.
Vertex colorings: Theorem of Brooks, Theorem of Erdos and Szekeres.
Chromatic polynomials.
Edge colourings, Theorem of Koenig.
Introduction to directed graphs: Basic notions, connectivities, tounaments, acyclic graphs, base and kernel of a graph.
Introduction to applications of graphs.

Recommended literature:
1. A. Bondy and U.S.R. Murty: Graph theory, Springer-Verlag 2008
2. G. Chartrand, L. Lesniak, and P. Zhang, Graphs and digraphs, CRC Press, Boca Raton 2011
3. R. Diestel: Graph Theory, Springer-Verlag, New York, Inc. 1997
4.M.N.S. Swamy and K. Thulasiraman: Graphs, Networks and Algorithms.
Willey Interscience Publ., New York 1981

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 350

A	B	C	D	E	FX
11.71	8.86	15.71	19.14	29.43	15.14

Provides: prof. RNDr. Stanislav Jendroľ, DrSc., RNDr. Michaela Vrbjarová

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

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: 6.

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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: CJP/ PFAJ4/07	**Course name:** English Language of Natural Science

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.

Prerequisities:

Conditions for course completion:
test na slovnú zásobu, ústna prezentácia, záverečný písomný test, účasť na seminároch (max. 2 absencie)
stupnica hodnotenia: A 93-100, B 86-92, C 79-85, D 72-78, E 65-71, FX 64 a menej

Learning outcomes:
Rozvoj jazykových kompetencií študentov príslušného študijného odboru, upevňovanie a rozvíjanie všetkých jazykových zručností (hovorenie, písanie, čítanie, počúvanie) predovšetkým v odbornej/profesnej angličtine, na stredne pokročilej úrovni ovládania jazyka (B2). Dôraz sa kladie na aktívne správne používanie odbornej/profesnej angličtiny.

Brief outline of the course:
ANGLICKÝ JAZYK PRE GEOGRAFOV:
Veda a výskum. Odbor geografia.
Planéta Zem. Naša slnečná sústava. Litosféra, hydrosféra, atmosféra, biosféra.
Zem - dynamická planéta. Tektonické platne. Sopečná činnosť.
Zemetrasenia.
Svetové oceány. Morské prúdy. Tsunami.
Veľký koralový útes.
Atmosféra - zloženie atmosféry.
Kontinenty. Európa - krajiny, národnosti.
ANGLICKÝ JAZYK PRE EKOLÓGOV:
Veda a výskum. Odbor ekológia.
Životné prostredie. Znečistenie a dôsledky.
Sopečná činnosť, zemetrasenia.
Great Pacific Garbage Patch.
Globálne otepľovanie a dôsledky. Ľadovce.
Počasie a klíma. Búrky, hurikány, tsunami.
Život na Zemi. Ohrozené rastlinné a živočíšne druhy.
ANGLICKÝ JAZYK PRE BIOLÓGOV:
veda a výskum, odbor biológia
morfológia rastlín, koreň

stonka, list
rozmnožovanie rastlín, kvet
biológia človeka - telesné sústavy
slovná zásoba z oblasti botanickej a zoologickej nomenklatúry
ANGLICKÝ JAZYK PRE MATEMATIKOV:
Veda a výskum, odbor matematika
čísla a tvary v matematike
Elementárna algebra
Elementárna geometria
Výpočty v matematike
Pytagoras, Pytagorova veta
Grafy a diagramy
Štatistika
ANGLICKÝ JAZYK PRE FYZIKOV
Veda a výskum, odbor fyzika
Atómy a molekuly
Hmota a jej premeny
Elektrina, jej využitie
Zvuka, jeho prenos
Svetlo
Solárny systém
Matematické operácie
ANGLICKÝ JAZYK PRE CHEMIKOV:
Veda a výskum, odbor chémia:
História, alchímia
Nomenklatúra
Laboratórium a jeho vybavenie
Periodická tabuľka
Hmota a jej premeny
Organická chémia
Anorganická chémia
ANGLICKÝ JAZYK PRE INFORMATIKOV:
Veda a výskum, informatika
Život s počítačom
Typický PC
Zdravie a bezpečnosť, ergonomika
Programovanie
Emailovanie
Cybercrime
Trendy budúcnosti

Recommended literature:

študijné materiálny dodané vyučujúcim
Velebná, V. English for Chemists.
Redman, S.: English Vocabulary in Use, Pre-intermetdiate, Intermediate. Cambridge University Press. 2003.
Powel, M.: Dynamic Presentations. CUP, 2010
Armer, T.: Cambridge English for Scientists. CUP, 2011
Wharton J.: Academic Encounters. The Natural World, CUP: 2009.
Murphy, R.: English Grammar in Use. Cambridge University Press. 1994.

Redman, s.: English Vocabulary in Use, Pre-intermetdiate, Intermediate. Cambridge University Press. 2003.
P. Fitzgerald : English for ICT studies, Garnet Publishing, 2011

Course language:

Notes:

Course assessment
Total number of assessed students: 1860

A	B	C	D	E	FX
31.72	25.54	18.28	11.94	9.52	3.01

Provides: PhDr. Helena Petruňová, CSc., PaedDr. Gabriela Bednáriková, Mgr. Marianna Škultétyová, Mgr. Silvia Marcinová, PhD.

Date of last modification: 06.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: KPE/ ZSKP/05	**Course name:** Essentials of School Pedagogy

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

Number of credits: 2

Recommended semester/trimester of the course: 6.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 268

A	B	C	D	E	FX
11.19	16.42	26.49	19.03	5.6	21.27

Provides: PaedDr. Renáta Orosová, PhD.

Date of last modification: 04.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ZAL/10	**Course name:** Foundations of algorithmization

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: 5.

Course level: I.

Prerequisities:

Conditions for course completion:
Two tests elaborated by a computer and final test.

Learning outcomes:
To develop algorithmic thinking of students enhancing the ability to solve problems. Lead students to precise formulation of mathematical problems and to formalism of writing their solutions. To teach students to create and write algorithms from different areas of mathematics in programming languages Logo and Delphi.

Brief outline of the course:
The conception of turtle geometry and basic commands of algorithmic language Logo. Defining commands with parameters for the construction of basic geometric shapes and their combination to create more complex constructions. Algorithmic problem formulation, algorithmic constructions for writing of algorithms, creation and verification of algorithms. Algorithms in number theory, approximate calculations in the set of real numbers, iterative algorithms for solving equations in the language Delphi. The use of type array to search and algorithms for operation in number systems with different bases.

Recommended literature:
J. Hvorecký, J. Kelemen: Algoritmizácia, Alfa Bratislava, 1983.
M. Tomcsányiová: Programujeme v Comenius logu, MC Bratislava, 1998.
R. Ochranová: Úvod do programování, SPN Praha, 1980.
S. Písek: Delphi, Začínáme programovat, Grada, 2002.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 19

A	B	C	D	E	FX
52.63	15.79	5.26	21.05	5.26	0.0

Provides: doc. RNDr. Stanislav Lukáč, PhD.
Date of last modification: 14.02.2014
Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ BUI/01	**Course name:** Foundations 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: 0

Recommended semester/trimester of the course:

Course level: I.

Prerequisities: ÚINF/AFJ1a/03 and ÚINF/PAZ1b/03 and (ÚINF/PSE1/03 or ÚINF/PSIN/13) and ÚINF/SLO1a/06 and ÚINF/OSY1/11

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 73

A	B	C	D	E	FX
6.85	4.11	20.55	21.92	42.47	4.11

Provides:

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/FUN1/14	**Course name:** Functional 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: 4

Recommended semester/trimester of the course: 3., 5.

Course level: I., II.

Prerequisities: ÚINF/PAZ1c/03

Conditions for course completion:

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

Brief outline of the course:
Principles of functional programming. Lambda calculus from the functional programming languages point of view. Properties of functional programming languages. Programming language Haskell: the structure of the language and basic computational rule, basic data types, lists, recursion and induction, trees

Recommended literature:
BIRD, R., WADLER, P.: Introduction to Functional Programming. Prentice Hall International, 1988.
LIPOVAČA, M.: Learn You Haskell for Great Good!. Free from http://learnyouahaskell.com/

Course language:

Notes:

Course assessment
Total number of assessed students: 4

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

Provides: doc. Ing. Štefánia Gallová, CSc.

Date of last modification: 25.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ GEO2a/10	**Course name:** Geometry I

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: 6.

Course level: I.

Prerequisities:

Conditions for course completion:
Two written tests.
Written and oral examinations
For continuous evaluation - max. 40 points
for the written test - max. 20 points
for oral exams - max. 40 points)
Final score:
A: 100-91 points, B: 90-81, C: 80-71, D: 70-61, E: 60-51, F: less than 51 points
Note: In each of the student needs to have at least 40% max. number of points

Learning outcomes:
To acquaint students with the analytical geometry of linear and quadratic figures in Afinne and Euclidean space.

Brief outline of the course:
Affine n-dimensional space - definition.
Linear coordinate system.
Subspaces, the parametric and non-parametric representation.
The relative position of the two subspaces.
Bundles of lines.
The arrangement of points on the line.
Convex sets.
Changing the system of linear coordinates.
Euclidean space - definition of (scalar and outer product).
Euclidean distances and deviations subspaces.
The rate of the size of convex sets.
Triangle and trigonometric theorems.
Conic and line.

Recommended literature:
1. M.Sekanina, L.Boček, M.Kočandrle, J.Šedivý: Geometrie 1, SPN Praha 1986
2. M.Hejný, V.Zaťko, P.Kršňák: Geometria 1, SPN Bratislava 1985
3. J.Eliaš, J.Horváth, J.Kajan: Zbierka úloh z vyššej matematiky 1, Alfa Bratislava

4. M.Trenkler: Materiály uvedené na Internete.

Course language:

Notes:

Course assessment
Total number of assessed students: 317

A	B	C	D	E	FX
13.56	13.88	24.92	25.87	16.4	5.36

Provides: doc. RNDr. Dušan Šveda, CSc.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: KGER/ OJPV1/07	**Course name:** German Language for Specific Purposes - German in Natural Sciences 1

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.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 120

A	B	C	D	E	FX
19.17	20.83	27.5	23.33	8.33	0.83

Provides: Mgr. Eva Černáková, PhD., Dr. rer. pol. Michaela Kováčová

Date of last modification: 05.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: KFaDF/DF1/05	**Course name:** History of Philosophy and Philosophy of Education - Cultural and Socio-Anthropological Relations

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: 5.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 392

A	B	C	D	E	FX
63.52	16.58	10.97	5.87	2.55	0.51

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., doc. RNDr. Matúš Harminc, CSc.

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: 6.

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., doc. RNDr. Matúš Harminc, CSc.

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: 5.

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., doc. RNDr. Matúš Harminc, CSc.

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: **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., doc. RNDr. Matúš Harminc, CSc.

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: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **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., doc. RNDr. Matúš Harminc, CSc.

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., doc. RNDr. Matúš Harminc, CSc.

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., doc. RNDr. Matúš Harminc, CSc.

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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

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: **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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

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: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **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., doc. RNDr. Matúš Harminc, CSc.

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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

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: **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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

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: **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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

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:
Course type:
Recommended course-load (hours):
Per week: Per study period:
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., doc. RNDr. Matúš Harminc, CSc.

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: 6.

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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ IKTP/10	**Course name:** Information and Communication Technologies

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.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:
Text processing using a word processor.
Processing and evaluation of information using a spreadsheet.
Search, retrieval and exchange of information via the Internet.
Creating presentations.

Recommended literature:
1. Franců, M: Jak zvládnout testy ECDL. Praha : Computer Press. 2007. 160 s. ISBN 978-80-251-1485-8
2. Jančařík, A. et al.: S počítačem do Evropy – ECDL. 2. vydanie. Praha : Computer Press, 2007. 152 s. ISBN 80-251-1844-3
3. Kolektív autorov: Sylabus ECDL verzia 5.0. [on-line] [citované 9.2.2010]. Dostupné na internete: <http://www.ecdl.sk/buxus/docs//interne_informacie/Sylabus_V5.0/20090630ECDL-SylabusV50_SK-V01_FIN.pdf>
4. Kalakay, R. et al: Informačné a komunikačné technológie - prezenčný kurz. [on-line] [citované 9.2.2010]. Dostupné na internete: <http://moodle.science.upjs.sk/course/view.php?id=90>

Course language:

Notes:

Course assessment
Total number of assessed students: 970

A	B	C	D	E	FX
66.8	17.63	6.91	3.51	1.75	3.4

Provides: Mgr. Alexander Szabari, PhD., RNDr. Jozef Studenovský, CSc., RNDr. Zuzana Bednárová, PhD., doc. Ing. Štefánia Gallová, CSc.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ IKTD/10	**Course name:** Information and Communication Technologies - distance learning

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.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:
Text processing using a word processor.
Processing and evaluation of information using a spreadsheet.
Search, retrieval and exchange of information via the Internet.
Creating presentations.

Recommended literature:
1. Franců, M: Jak zvládnout testy ECDL. Praha : Computer Press. 2007. 160 s. ISBN 978-80-251-1485-8
2. Jančařík, A. et al.: S počítačem do Evropy – ECDL. 2. vydanie. Praha : Computer Press, 2007. 152 s. ISBN 80-251-1844-3
3. Kolektív autorov: Sylabus ECDL verzia 5.0. [on-line] [citované 9.2.2010]. Dostupné na internete: <http://www.ecdl.sk/buxus/docs//interne_informacie/Sylabus_V5.0/20090630ECDL-SylabusV50_SK-V01_FIN.pdf>
4. Kalakay, R. et al: Informačné a komunikačné technológie - prezenčný kurz. [on-line] [citované 9.2.2010]. Dostupné na internete: <http://moodle.science.upjs.sk/course/view.php?id=90>

Course language:

Notes:

Course assessment
Total number of assessed students: 113

A	B	C	D	E	FX
75.22	7.08	3.54	0.0	3.54	10.62

Provides: doc. Ing. Štefánia Gallová, CSc., RNDr. Jozef Studenovský, CSc., RNDr. Zuzana Bednárová, PhD.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

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: 3.

Course level: I., II.

Prerequisities:

Conditions for course completion:

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

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

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

Course language:

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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ UAD/10	**Course name:** Introduction to data analysis

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

Number of credits: 2

Recommended semester/trimester of the course: 3.

Course level: I.

Prerequisities:

Conditions for course completion:
Test and individual project work.
Oral presentation of the individual project work.

Learning outcomes:
To know the basic purpose of statistical data analysis, its methods and statistical thinking and understand its importance for science and practical life.
To understand elementary statistical concepts.
To gain experience in handling real data using spreadsheet Excel and statistical software R-Excel.

Brief outline of the course:
1. Introduction (the basic philosophy and aim of statistical data analysis, descriptive and inductive statistics)
2. Collecting Data (types of data, random sample, randomized experiment)
3. Handling Data (visualization, summarizing – measures of center, measures of variability, relationships in data – introduction to regression and correlation)
4. Statistical inference (elementary view into estimation and testing hypothesis)

Recommended literature:
1. Anděl, J.: Statistické metody, Matfyzpress, Praha, 1998 (in Czech)
2. Heiberger, R.M., Neuwirth, E.: R Through Excel: A Spreadsheet Interface for Statistics, Data Analysis, and Graphics, Springer, 2009
3. Rossman, A.J.: Workshop Statistics: Discovery with Data and Fathom, 3rd ed. Wiley, 2009
4. Utts, J.M.: Seeing Through Statistics, Thomson Brooks/Cole, Belmont, 2005
5. Utts, J.M., Heckard R.F.: Mind on Statistics, 3rd ed. Thomson Brooks/Cole, Belmont, 2007
6. Zvára, K., Štěpán, J.: Pravděpodobnost a matematická statistika, Matfyzpress, Praha, 2001 (in Czech)

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 213

A	B	C	D	E	FX
30.99	27.23	31.92	9.39	0.0	0.47

Provides: RNDr. Martina Hančová, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ UDM/10	**Course name:** Introduction to mathematics
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: 3	
Recommended semester/trimester of the course: 1.	
Course level: I.	
Prerequisities:	
Conditions for course completion: Two tests during the semester.	
Learning outcomes: Repetition of problematic sections of the secondary mathematics by interesting tasks.	
Brief outline of the course: Simplification of algebraic expressions. Real number, absolute value of real numbers; equations and inequalities. Irrational equations and inequalities. Concept of function. Linear and quadratic function; equations and inequalities. Exponencial and logarithmic function; equations and inequalities. Goniometric functions; equations and inequalities. Complex numbers.	
Recommended literature: 1. V. Medek - L. Mišík - T. Šalát: REPETITÓRIUM STREDOŠKOLSKEJ MATEMATIKY, Alfa Bratislava, 1976 2. S. Richtárová - D. Kyselová: MATEMATIKA (pomôcka pre maturantov a uchádzačov o štúdium na vysokých školách), Enigma Nitra, 1998 3. O. Hudec – Z. Kimáková – E. Švidroňová: PRÍKLADY Z MATEMATIKY (pre uchádzačov o štúdium na TU v Košiciach), EF TU Košice, 1999 4. F. Peller – V. Šáner – J. Eliáš – Ľ. Pinda: MATEMATIKA – Podklady na prijímacie testy pre uchádzačov o štúdium, Ekonóm Bratislava, 2000/2001 5. F. Vesajda – F. Talafous: ZBIERKA ÚLOH Z MATEMATIKY pre stredné všeobecnovzdelávacie školy a gymnáziá, SPN Bratislava, 1973 6. J. Lukášová – O. Odvárko – B. Riečan – J. Šedivý – J. Vyšín: ÚLOHY Z MATEMATIKY pre 4. ročník gymnázia, SPN Bratislava, 1976	
Course language: Slovak	
Notes:	

Course assessment
Total number of assessed students: 344

A	B	C	D	E	FX
21.8	11.92	17.44	15.99	20.06	12.79

Provides: doc. RNDr. Matúš Harminc, CSc., RNDr. Jana Borzová, RNDr. Veronika Hubeňáková

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ UIN1/13	**Course name:** Introduction to study of informatics

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

Number of credits: 4

Recommended semester/trimester of the course: 1.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 159

A	B	C	D	E	FX
30.19	21.38	18.24	15.72	5.03	9.43

Provides: doc. RNDr. Stanislav Krajči, PhD., RNDr. Ondrej Krídlo, PhD., Mgr. Alexander Szabari, PhD.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: Dek. PF UPJŠ/USPV/13	**Course name:** Introduction to Study of Sciences
Course type, scope and the method: **Course type:** Lecture / Practice **Recommended course-load (hours):** **Per week: Per study period:** 12s / 3d **Course method:** present	
Number of credits: 2	
Recommended semester/trimester of the course: 1.	
Course level: I.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 539

abs	n
95.18	4.82

Provides: doc. RNDr. Mária Kožurková, CSc., prof. RNDr. Katarína Cechlárová, DrSc., prof. RNDr. Beňadik Šmajda, CSc., prof. Mgr. Jaroslav Hofierka, PhD., doc. RNDr. Ivan Žežula, CSc., doc. RNDr. Vladimír Zeleňák, PhD., Doc. RNDr. Jozef Hanč, PhD., RNDr. Ondrej Krídlo, PhD., Mgr. Vladislav Kolarčik, PhD., RNDr. Janetta Nestorová-Dická, PhD.
Date of last modification: 17.02.2014
Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ LTM/10	**Course name:** Logic and set theory

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: 5.

Course level: I.

Prerequisities: ÚMV/MANb/10

Conditions for course completion:
Exam

Learning outcomes:
To obtain a basic knowledge on the mathematical notion of an infinity. Analysis of the notion of a proof.

Brief outline of the course:
Set as a mathematical formularization of an infinity. Properties of the set of reals. Mathematical induction. Relations and mappings.
Finite and countable sets. Cardinality of continuum. Elementary cardinal arithmetics.
Sentential calculus, an axiomatization. Completness Theorem. Methods of proofs. Language of predicate calculus, examples. Axiomatizations of predicate calculus and the notion of a proof. Methods of proofs in predicate calculus.

Recommended literature:
E. Mendelson, Introduction to Mathematical Logic, van Nostrand 1964.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 488

A	B	C	D	E	FX
12.91	16.19	20.49	24.59	14.75	11.07

Provides: RNDr. Jaroslav Šupina, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ MAE/10	**Course name:** Macroeconomics

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: 5.

Course level: I.

Prerequisities:

Conditions for course completion:
Final mark is given based on the results of the tests written during the semester and oral exam, that evaluates the verbal argument about the studied models.

Learning outcomes:

Brief outline of the course:
Basic macroekonomic notions: Gross domestic product, inflation, unemployment.. Analysis of godds markets. Financial markets. IS-LM model in closed economy. Open economy. IS-LM model in open economy. Models of labour market. Phillips curve, Okun law. Inflation and economic growth. High depth.

Recommended literature:
1. Olivier Blanchard, Alessia Amighini, Francesco Giavazzi:MACROECONOMICS, A EUROPEAN PERSPECTIVE, Pearson Education, 2010
2. N.GREGORY MANKIW, MACROECONOMICS, 7th Edition, Harvard University,Worth Publishers 2009

Course language:
Slovak and English

Notes:

Course assessment
Total number of assessed students: 59

A	B	C	D	E	FX
18.64	15.25	23.73	22.03	13.56	6.78

Provides: prof. RNDr. Katarína Cechlárová, DrSc., RNDr. Eva Oceľáková

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ MANa/10	**Course name:** Mathematical analysis I

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

Number of credits: 7

Recommended semester/trimester of the course: 1.

Course level: I.

Prerequisities:

Conditions for course completion:
Two written test during semeter and activity student to practice. Final evaluation is given by continuous assessment, written and oral part of the exam.

Learning outcomes:
The aim of the course is to give introductory knowledge about real numbers, sequences and series of real numbers, and to develop certain calculation skills in the field.

Brief outline of the course:
Real numbers - axioms and properties. Real functions - basic properties (monotone, bounded, even/ odd, inverse), transformations of graphs of functions. Infinite sequences - operations, boundedness, monotonicity, convergence. Infinite series - operations, convergence, criteria of convergence.

Recommended literature:
1. Brannan, D.: A First Course in Mathematical Analysis, Cambridge University Press, Cambridge 2006.
2. Bruckner, A. M., Bruckner J. B., Thomson, B. S.: Real Analysis, Second Edition, ClassicalRealAnalysis.com, 2008.
3. Zorich, V. A.: Mathematical Analysis I, Springer-Verlag 2002.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 1265

A	B	C	D	E	FX
6.17	7.75	12.02	13.04	34.78	26.25

Provides: doc. RNDr. Ondrej Hutník, PhD., RNDr. Lenka Halčinová, PhD., RNDr. Jaroslav Šupina, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/MANb/10	**Course name:** Mathematical analysis II

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 4 / 3 **Per study period:** 56 / 42
Course method: present

Number of credits: 8

Recommended semester/trimester of the course: 2.

Course level: I.

Prerequisities: ÚMV/MANa/10

Conditions for course completion:
Two written test during semeter and activity student to practice. Final evaluation is given by continuous assessment, written and oral part of the exam.

Learning outcomes:
The purpose of the course is to provide introductory knowledge in differential and integral calculus of real functions of one real variable and to develop computational skills in the field.

Brief outline of the course:
Limit and continuity of real functions, elementary functions. Differential calculus - derivatives of the first and of higher orders, the basic theorems of differential calculus and their use to study properties and behavior of functions. Indefinite integral - basic methods for finding primitive functions. Newton integral and its basic properties.

Recommended literature:
1. Brannan, D.: A First Course in Mathematical Analysis, Cambridge University Press, Cambridge 2006.
2. Bruckner, A. M., Bruckner J. B., Thomson, B. S.: Real Analysis, Second Edition, ClassicalRealAnalysis.com, 2008.
3. Zorich, V. A.: Mathematical Analysis I, Springer-Verlag 2002.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 791

A	B	C	D	E	FX
8.47	8.09	12.14	18.71	36.16	16.43

Provides: doc. RNDr. Ondrej Hutník, PhD., RNDr. Lenka Halčinová, PhD., RNDr. Jaroslav Šupina, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ MAN2c/10	**Course name:** Mathematical analysis III

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: I.

Prerequisities: ÚMV/MANb/10

Conditions for course completion:
Two written test during semeter and activity student to practice. Final evaluation is given by continuous assessment, written and oral part of the exam.

Learning outcomes:
The purpose of the course is to provide introductory knowledge in Riemann integral calculus of real functions of one real variable and series of real functions. To develop computational skills in the field and extend the student ability to use this theory in applications.
To teach the basic knowledge of the subject mater in the sylabus and develop the ability to use this theory.

Brief outline of the course:
Definite Riemann integral - definition, elementary properties, calculation methods, applications. Improper Riemann integral. Sequences and series of real functions – pointwise and uniform convergence, properties of the limit function and the sum. Power series, Taylor series and their applications.

Recommended literature:
1. O. Hutník: Určitý integrál, UPJŠ, Košice, 2012 (in Slovak).
2. Brannan, D.: A First Course in Mathematical Analysis, Cambridge University Press, Cambridge 2006.
3. Bruckner, A. M. - Bruckner J. B. - Thomson, B. S.: Real Analysis, Second Edition, ClassicalRealAnalysis.com, 2008.
4. Zorich, V. A.: Mathematical Analysis I, Springer-Verlag 2002.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 607

A	B	C	D	E	FX
7.08	6.59	12.69	18.12	43.33	12.19

Provides: doc. RNDr. Ondrej Hutník, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ MAN2d/10	**Course name:** Mathematical analysis IV

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: 4.

Course level: I.

Prerequisities: ÚMV/MANb/10

Conditions for course completion:
Continuous assessment is taken the form of small tests and two main tests during the semester. Final evaluation is given by continuous assessment (40%), written and oral part of the exam (60%).

Learning outcomes:
To teach the basic knowledge of the subject matter in the syllabus and develop the ability to use this theory. The students also learn mathematical culture, notation and mathematical way of thinking and expression.

Brief outline of the course:
1. Metric space - Euclidean space, topological properties of points and sets in metric space.
2. Function of several real variables - basic concepts, limits and continuity.
3. Differential calculus of functions of several real variables - partial derivative, differentiability and total differential (also higher order), Taylor polynomials, directional derivative, local and global extrema, constrained local extrema.
4. Double (two dimensional) integral - definition, calculation methods, applications.

Recommended literature:
1. L. Kluvánek, I. Mišík, M. Švec: Matematika I, II, SVTL, Bratislava, 1959 (in Slovak).
2. Z. Došlá, O. Došlý: Diferenciální počet funkcí více proměnných, vysokoškolský učebný text, Masarykova univerzita v Brne, Brno, 2003 (in Czech).
3. R. E. Williamson, H. F. Trotter: Multivariable mathematics, Prentice Hall (Pearson), Upper Saddle River, 2004.
4. B. S. Thomson, J. B. Bruckner, A. M. Bruckner: Elementary real analysis, Prentice Hall (Pearson), Lexington, 2008.
5. J. Stewart: Calculus: Early transcendentals, Brooks Cole (Thomson), Toronto, 2008.
6. P. Pták: Calculus II (A course for engineers), ČVUT v Prahe, Praha, 1997.
7. J. Eliaš, J. Horváth, J. Kajan: Zbierka úloh z vyššej matematiky 3, 4, SVTL, Bratislava, 1966 (in Slovak).

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 278

A	B	C	D	E	FX
8.63	8.99	17.63	19.78	35.25	9.71

Provides: doc. RNDr. Božena Mihalíková, CSc.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/MRUa/10	**Course name:** Mathematical problem solving strategies 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: 4.

Course level: I.

Prerequisities:

Conditions for course completion:
Continuous assessment and final test.

Learning outcomes:
To deepen and systematize the knowledge and skills of students to use appropriate methods for solving of tasks at primary and secondary school and to characterize the specific problems of mathematics teaching at primary and secondary school.

Brief outline of the course:
Basic knowledge of school mathematics, various methods of problem solving, the problems from mathematical competitions for the topics Equations and inequalities and their systems, Elementary functions, Financial mathematics.

Recommended literature:
[1] Hejný, M. a kol., Teória vyučovania matematiky 2. SPN, Bratislava 1989 (in slovak).
[2] Kopka, J., Hrozny problémů ve školské matematice, Univerzita J. E. Purkyně, Ústí nad Labem 1999 (in czech).
[3] Textbooks and collections of mathematical tasks.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 107

A	B	C	D	E	FX
32.71	25.23	22.43	13.08	6.54	0.0

Provides: doc. RNDr. Stanislav Lukáč, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ MRUb/10	**Course name:** Mathematical problem solving strategies 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: 5.

Course level: I.

Prerequisities:

Conditions for course completion:
The award is based on the results of written checks carried out during the semester.
Evaluation will be awarded on the basis of continuous assessment and final test.

Learning outcomes:
To acquaint students with problems and strategies for the solutions of the problems at the primary and secondary school, and with the specific problems of teaching mathematics at primary and secondary school.

Brief outline of the course:
Stereometry. Stochastics, probability. Financial Mathematics.

Recommended literature:
[1] Hejný, M. a kol., Teória vyučovania matematiky 2. SPN, Bratislava 1989 (in slovak)
[2] Kopka, J., Hrozny problémů ve školské matematice, Univerzita J. E. Purkyně, Ústí nad Labem 1999 (in czech)
[3] Plocki, A., Pravdepodobnosť okolo nás. Katolícka univerzita, Ružomberok 2007
[4] Učebnice a zbierky úloh z matematiky ZŠ a SŠ

Course language:

Notes:

Course assessment
Total number of assessed students: 77

A	B	C	D	E	FX
42.86	10.39	31.17	7.79	7.79	0.0

Provides: doc. RNDr. Dušan Šveda, CSc.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ MRUc/10	**Course name:** Mathematical problem solving strategies 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: 6.

Course level: I.

Prerequisities:

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

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

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

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

Course language:

Notes:

Course assessment
Total number of assessed students: 81

A	B	C	D	E	FX
23.46	41.98	23.46	9.88	1.23	0.0

Provides: doc. RNDr. Matúš Harminc, CSc.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ MTM/10	**Course name:** Mathematics

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

Number of credits: 0

Recommended semester/trimester of the course:

Course level: I.

Prerequisities: ÚMV/MAN2c/10 and ÚMV/ALG2b/10 and ÚMV/ATC/10

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 79

A	B	C	D	E	FX
18.99	21.52	25.32	24.05	10.13	0.0

Provides:

Date of last modification: 26.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ MIE/13	**Course name:** Microeconomics

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: 5.

Course level: I.

Prerequisities:

Conditions for course completion:
The minimum necessary number of points from tests written during semester is 50%, plus the ability of verbal argumentation in the final oral exam.

Learning outcomes:
Understanding of basic principles of microeconomics and ability to apply them in practical situations.

Brief outline of the course:
Economics and economy. Supply and demand. Consumer Theory. Theory of firm. Perfect competition. Monopoly. Labour market. Market failure. Externalities and Public goods.

Recommended literature:
1. http://umv.science.upjs.sk/cechlarova/MIE/MIE.htm - podklady k prednáška, testy na cvičenia, materiály z dennej tlače
2. H.L. Varian, Intermediate Mikroekonomics, WW Norton, 1993
3. J.M. Perloff, Microeconomics, 6th Edtion, Addison Wesley, 2012
4. J. Sloman, Economics, 6th Edition, Prentice Hall, 2006

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 58

A	B	C	D	E	FX
27.59	17.24	20.69	20.69	12.07	1.72

Provides: prof. RNDr. Katarína Cechlárová, DrSc.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

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: **Course type:** Practice **Recommended course-load (hours):** **Per week:** 36 **Per study period:** 504 **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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ TCS/10	**Course name:** Number theory

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: 5.

Course level: I.

Prerequisities: ÚMV/ATC/10

Conditions for course completion:
According to tests and exam.

Learning outcomes:
To obtain knowledge on quadratic congruences.

Brief outline of the course:
Chinese remainder theorem, Euler function, quadratic congruences, Pythagorean equation.

Recommended literature:
M. B. Nathanson: Elementary Methods in Number Theory. Springer, 2000.
H. E. Rose: A Course in Number Theory. Clarendon Press, Oxford, 1994.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 513

A	B	C	D	E	FX
26.12	27.29	30.21	11.11	2.73	2.53

Provides: doc. RNDr. Matúš Harminc, CSc.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/OSY1/11	**Course name:** Operating systems

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: 3.

Course level: I., II.

Prerequisities: ÚINF/PAZ1a/10

Conditions for course completion:
Written tests.

Learning outcomes:
The purpose of the operating systems subject is to provide the students how to organize and control hardware and software so that the device is live and behaves in a flexible but predictable way.

Brief outline of the course:
Operating systems structure and components, process, files, threads, CPU processor scheduling, schedule algorithms, interprocess communi-cations, deadlocks, synchronization, multitasking, virtualisation.

Recommended literature:
STALLINGS, W.: Operating Systems. Internal and Design Principles. Pearson, Prentice Hall, 2005.
SILBERSCHATZ, A. et al.: Operating Systems Concepts. Addison-Wesley, Reading MA, 2000.

Course language:

Notes:

Course assessment
Total number of assessed students: 102

A	B	C	D	E	FX
32.35	6.86	17.65	12.75	19.61	10.78

Provides: doc. Ing. Štefánia Gallová, CSc., RNDr. Peter Gurský, PhD.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/PRP2/14	**Course name:** Principles of computers

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: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 66

A	B	C	D	E	FX
34.85	10.61	19.7	13.64	19.7	1.52

Provides: doc. Ing. Štefánia Gallová, CSc.

Date of last modification: 19.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ PSTa/10	**Course name:** Probability and statistics 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: 4.

Course level: I.

Prerequisities: ÚMV/MAN1c/10 or ÚMV/MAN2c/10

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

Learning outcomes:
To provide a grounding in axiomatic theory of probability, random variables and their characteristics, special types of distributions and their applications.

Brief outline of the course:
Probability space, definitions and properties of probability. Conditional probability and independence. Random variables, their distribution function and characteristics. Mean, variance and skewness.. Discrete and absolutely continuous distributions. Quantile and characteristic functions, their properties. Relation between characteristic function and moments. Median and mode. Transformation of random variables. Special types of distributions with applications (binomial, Poisson, geometric, uniform, exponential, normal, chí-square, Student, Fisher). Central limit theorem.

Recommended literature:
1. Skřivánková V.: Probability and Statistics, UPJŠ, Košice, 2009
2. Dekking at al.: A Modern Introduction to Probability and Statistics, Springer, 2005.
3. Pfeiffer P.E.:Probability for Applications, Springer,New York,1990.
4. Ross S.M.: Introduction to Probabability Models, Elsevier, 2007.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 264

A	B	C	D	E	FX
7.58	14.39	16.67	25.0	25.76	10.61

Provides: doc. RNDr. Valéria Skřivánková, CSc., RNDr. Martina Hančová, PhD.

Date of last modification: 14.02.2014
Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ PAZ1a/10	**Course name:** Programming, algorithms, and complexity

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 3 / 4 **Per study period:** 42 / 56
Course method: present

Number of credits: 8

Recommended semester/trimester of the course: 1.

Course level: I., II.

Prerequisities:

Conditions for course completion:

Learning outcomes:
The course does not require having any programming experiences. The aim of the course is to teach students basics of algorithms and programming. The methodology used in the course is "object oriented programming first". The primary goal of the course is to teach students to make good programming habits and a good object-oriented design. The programming language used in the course is Java with professional IDE Eclipse.

Brief outline of the course:
First part of the course (with turtle graphics): New Eclipse project, interactive communication with objects, simple turtle graphics, making user methods, local variables, variable types, arithmetic and logical expressions, random numbers, conditions, loops for and while, debugging, references, chars, Strings, arrays, instance variables, mouse events, simple array algorithms.
Second part of the course (without turtle graphics): Exceptions, using try-catch-finally block, files and directories, conversion from string variables, encapsulation, constructors with parameters, constructors hierarchy, getters and setters, interfaces, inheritance and polymorphism, abstract classes and methods, packages, visibility modifiers, sorting using Arrays.sort() and interfaces Comparable and Comparator, Java Collections Framework: autoboxing, interface List, ArrayList, LinkedList, interface Set and class HashSet, methods equals() and hashCode(), for-each loop, interface Map and class HashMap, custom Exceptions, rethrowing exceptions, exceptions' inheritance, Runtime exceptions, Errors, static variables and methods.

Recommended literature:
ECKEL, B.: Thinking in Java, Pearson, 2006
SIERRA, K., BATES, B.: Head First Java, O'Reilly Media; 2nd edition, 2005

Course language:

Notes:

Course assessment
Total number of assessed students: 421

A	B	C	D	E	FX
15.68	7.84	12.35	15.2	12.59	36.34

Provides: RNDr. Peter Gurský, PhD., RNDr. František Galčík, PhD., PaedDr. Ján Guniš, PhD., RNDr. Zuzana Bednárová, PhD.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/PAZ1b/03	**Course name:** Programming, algorithms, and complexity

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 2 / 4 **Per study period:** 28 / 56
Course method: present

Number of credits: 7

Recommended semester/trimester of the course: 2.

Course level: I., II.

Prerequisities: ÚINF/PAZ1a/10 or ÚFV/POF1b/99

Conditions for course completion:
Oral and practical examination.

Learning outcomes:
To understand basic principles of algorithm design (including basic data structures). To apply these principles and knowledge to solve simple algorithmic tasks efficiently.

Brief outline of the course:
Recursion, introduction to time complexity and O-notation, binary search and sorting algorithms (SelectionSort, QuickSort, MergeSort, HeapSort), basic data structures (linked list, stack, queue, trees, binary search trees) – implementation and applications, backtracking, divide and conquer, dynamic programming, greedy algorithms, basic graph algorithms (DFS, BFS, Dijkstra's algorithms, Bellman-Ford algorithm, Floyd-Warshall algorithm, topological sorting), introduction to stringology.

Recommended literature:
CORMEN, T.H., LEISERSON, Ch.E., RIVEST, R.L, STEIN, C. Introduction to Algorithms. The MIT Press, 2009.
KLEINBERG, J., TARDOS, E.: Algorithm Design, Cornell University, Addison Wesley, New York, 2006.

Course language:

Notes:

Course assessment
Total number of assessed students: 991

A	B	C	D	E	FX
11.2	6.26	9.89	20.18	24.22	28.25

Provides: RNDr. František Galčík, PhD., PaedDr. Ján Guniš, PhD., RNDr. Zuzana Bednárová, PhD., Mgr. Matej Nikorovič, doc. RNDr. Gabriela Andrejková, CSc.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/PRS/11	**Course name:** Programming of robotic kits

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 0 / 3 **Per study period:** 0 / 42
Course method: present

Number of credits: 3

Recommended semester/trimester of the course: 6.

Course level: I.

Prerequisities:

Conditions for course completion:
Assessment of individual work on computers for a number of sub-assignments - robotic mini-project.
Creating and presenting a programmed robotic model including documentation.

Learning outcomes:
- To acquire an overview of robotic sets and robotic programming environments.
- To acquire skills in constructing and programming robots in selected robotic programming environments.

Brief outline of the course:
Robotic set (Lego Mindstorms) - components, engines, sensors, basics of constructing of the mechanical parts of the model. Programming robotic models in languages NXT-G and NXC - branching statements, loops, blocks, events, parallel processes that work with sensors, datalogging, communication among several NXT bricks. Creating mini-project (eg, traffic lights, parking, dance creations, guitar, smart thermometer, measuring distance). Robotic competition, ideas for demanding projects. Creation and presentation of the final project - a programmed robot model (eg, navigate a maze, sports, paramedic) including documentation.

Recommended literature:
1. BUMGARDNER, J. (2007) The Origins of Mindstorms. Wired, 2007. http://www.wired.com/geekdad/2007/03/the_origins_of_/
2. Carnegie Mellon. Robotics Academy. http://www.education.rec.ri.cmu.edu/
3. KABÁTOVÁ, M. a kol. (2010) Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika: Didaktika robotických stavebníc. Bratislava : ŠPÚ, 2010. ISBN 978-80-8118-070-5
4. KABÁTOVÁ, M. - PEKÁROVÁ, J. (2008) Hra = učenie sa. LEGO a robotika vo vyučovaní budúcich učiteľov. Didinfo 2008. Banská Bystrica: FPV UMB. ISBN 978-80-8083-556-9
5. PETROVIČ, P. - BALOGH, R. - PEKÁROVÁ, J. (2008) Robotické vzdelávacie iniciatívy. In: Informatika v škole a v praxi. Zborník 4. ročníka medzinárodnej konferencie. Ružomberok: Pedagogická fakulta Katolíckej univerzity v Ružomberku, str. 239 – 248. ISBN 978-80-8084-362-5

Course language:

Notes:

Course assessment
Total number of assessed students: 35

A	B	C	D	E	FX
51.43	17.14	17.14	0.0	0.0	14.29

Provides: RNDr. Ľubomír Šnajder, PhD., RNDr. Jozef Studenovský, CSc.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/PSW1/06	**Course name:** Programming of web-pages

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: I.

Prerequisities:

Conditions for course completion:
Evaluation of partial assignments.
The secure dynamic web applications using JavaScript, PHP, MySQL.

Learning outcomes:
Acquire overview about modern technologies to make dynamic web pages. Be able to make web pages with cascading styles according to W3C standards. Use technologies on server side (PHP) and on client side (JavaScript). Understand relational databases (MySQL). Understand web applications security risks and know how to eliminate them.

Brief outline of the course:
Principle of making web pages. HTML language, W3C standards. Optimization of work, cascading styles. Tools for creating the web. Programming in JavaScript. Simple scripts for dynamic web pages. Programming on server side, script language PHP. Application based on PHP. Work with MySQL database. Conjunction of used technologies. Selected problems resolvable by technologies on server side and on client side.

Recommended literature:
GILMORE, W. Jason. Beginning PHP and MySQL: from novice to professional. 4th ed. New York: Apress, 2010. ISBN 978-143-0231-141.
KOSEK, Jiří. PHP - tvorba interaktivních internetových aplikací: podrobný průvodce. Vyd. 1. Praha: Grada, 1999, 490 s. Průvodce (Grada). ISBN 80-716-9373-1.
SUEHRING, Steve a Janet VALADE. PHP, MySQL, JavaScript. Vyd. 1. Brno: Computer Press, 2006, xxiv, 692 pages. --For dummies. ISBN 978-1-118-21370-4.
HUSEBY, Sverre H. Zranitelný kód. Brno: Computer Press, 2006, 207 s. ISBN 80-251-1180-6.
THE OWASP FOUNDATION. OWASP [online]. 2014 [cit. 2014-02-26]. Dostupné z: https://www.owasp.org/index.php/Main_Page

Course language:
slovak

Notes:

Course assessment
Total number of assessed students: 165

A	B	C	D	E	FX
9.09	7.88	7.88	6.67	24.24	44.24

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

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/PRO1a/13	**Course name:** Project I.

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

Number of credits: 4

Recommended semester/trimester of the course: 4.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 114

A	B	C	D	E	FX
69.3	15.79	14.04	0.0	0.88	0.0

Provides: Mgr. Alexander Szabari, PhD.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ PRO1b/13	**Course name:** Project II.

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: 5.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 72

A	B	C	D	E	FX
56.94	13.89	20.83	2.78	4.17	1.39

Provides: Mgr. Alexander Szabari, PhD., doc. Ing. Štefánia Gallová, CSc.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ PBS/07	**Course name:** Pro-seminar to bachelor thesis
Course type, scope and the method: **Course type:** Practice **Recommended course-load (hours):** **Per week:** 1 **Per study period:** 14 **Course method:** present	
Number of credits: 1	
Recommended semester/trimester of the course: 4.	
Course level: I.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course: The seminar is oriented to problems prospective to preparations of Bachelor theses.	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 184	

abs	n
90.22	9.78

Provides: RNDr. Tomáš Horváth, PhD., RNDr. František Galčík, PhD.
Date of last modification: 03.02.2014
Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: KPPaPZ/PPZBc/12	**Course name:** Psychology and Health Psychology (Bc. study)

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

Number of credits: 4

Recommended semester/trimester of the course: 5.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 92

A	B	C	D	E	FX
14.13	20.65	25.0	28.26	11.96	0.0

Provides: PhDr. Anna Janovská, PhD., PhDr. Karolína Barinková, PhD., Mgr. Lucia Hricová

Date of last modification: 04.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚTVŠ/ ÚTVŠ/CM/13	**Course name:** Seaside Aerobic Exercise
Course type, scope and the method: **Course type:** Practice **Recommended course-load (hours):** **Per week:** 36 **Per study period:** 504 **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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/VKA/10	**Course name:** Selected topics in algebra

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: 6.

Course level: I.

Prerequisities:

Conditions for course completion:
According to tests and to the exam.

Learning outcomes:
To obtain basic knowledge on universal algebra; to be able to apply the theory in concrete situations.

Brief outline of the course:
Relations, operations, algebraic structures. Substructures. Congruences, homomorphism theorems. Automorphism groups and endomorphism monoids. Terms, term operations, identities, varieties.

Recommended literature:
B. Jónsson: Topics in Universal Algebra, Springer-Verlag 1972
M. Kolibiar a kol.: Algebra a príbuzné disciplíny, Bratislava 1992

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 79

A	B	C	D	E	FX
5.06	18.99	25.32	25.32	22.78	2.53

Provides: prof. RNDr. Danica Studenovská, CSc.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ VEM/10	**Course name:** Selected topics in elementary mathematics

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

Number of credits: 3

Recommended semester/trimester of the course: 5.

Course level: I.

Prerequisities: ÚMV/MAN2c/10

Conditions for course completion:
exam

Learning outcomes:
Obtain knowledge about the structure of elementary mathematics with respect to advanced mathematics; the development of mathematical skills of prospective teachers.

Brief outline of the course:
Language of Mathematics; syntax and semantics; sets, relations, rational and irrational numbers, equations and inequations in reals; elementary functions

Recommended literature:
W.W. Esty: The Language of Mathematics, Montana State University, 2007.
F. Klein: Elementary mathematics from an advanced standpoint, Dower Publications, 1945.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 173

A	B	C	D	E	FX
20.81	16.76	19.08	17.92	23.12	2.31

Provides: prof. RNDr. Jozef Doboš, CSc.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ VKI/08	**Course name:** Selected topics in informatics and information technologies

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: 6

Recommended semester/trimester of the course: 1.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 40

A	B	C	D	E	FX
27.5	25.0	25.0	2.5	7.5	12.5

Provides: doc. RNDr. Stanislav Krajči, PhD., RNDr. Jozef Studenovský, CSc.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ BSI1a/04	**Course name:** Seminar 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: 5.

Course level: I.

Prerequisities:

Conditions for course completion:
Presentation of algorithms for problems of a higher complexity. Presentation of results connecting to the bachalor theses, known and own results.

Learning outcomes:
To inform students about new results in informatics with the goal using them in bachalor theses.

Brief outline of the course:
The seminar has a connection to the bachalor theses and to the repetitorium in informatics. Students present results of their work once in semester at least.

Recommended literature:
Sources of problems:
www.ksp.sk
www.ksp.sk/MOP/
Special research literature according to bachalor theses.

Course language:

Notes:

Course assessment
Total number of assessed students: 171

A	B	C	D	E	FX
17.54	16.96	24.56	18.13	20.47	2.34

Provides: doc. RNDr. Gabriela Andrejková, CSc.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ BSI1b/04	**Course name:** Seminar 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: 6.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:
To inform students about new results in informatics with the goal using them in bachalor theses. To repeat important knowledges in informatics.

Brief outline of the course:
The seminar has a connection to the bachalor theses and to the repetitorium in informatics. Students present results of their work once in semester at least. To get credits, it is necessary to get the developed number of points from repetitorium.

Recommended literature:
Sources of problems:
www.ksp.sk
www.ksp.sk/MOP/
Special research literature according to bachelor theses.

Course language:

Notes:

Course assessment
Total number of assessed students: 98

A	B	C	D	E	FX
22.45	21.43	26.53	18.37	10.2	1.02

Provides: doc. RNDr. Gabriela Andrejková, CSc.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/SRP1/12	**Course name:** Seminar in informatics and information technologies

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: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 14

A	B	C	D	E	FX
57.14	21.43	7.14	7.14	0.0	7.14

Provides: doc. RNDr. Stanislav Krajči, PhD.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

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

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

Number of credits: 2

Recommended semester/trimester of the course: 5.

Course level: I., II.

Prerequisities:

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

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

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

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

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 111

A	B	C	D	E	FX
80.18	5.41	9.01	2.7	2.7	0.0

Provides: RNDr. Ingrid Semanišinová, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ SMO/10	**Course name:** Seminar to mathematical olympiad

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: 6.

Course level: I., II.

Prerequisities:

Conditions for course completion:
Individual problem solving during seminars and homework.
More than 91 points - evaluation of A.
81-90 points - evaluation of B.
71-80 points - rating C.
61-70 points - evaluation of D.
51-60 points - evaluation of E.
Less than 50 points - FX evaluation.

Learning outcomes:
Students become familiar with solving problems from mathematical olympiads and mathematical competitions. They acquire theoretical basics necessary to lead mathematical group of talented children.

Brief outline of the course:
Number theory.
Equations, inequations, inequalities.
Word problems.
Planimetry.
Stereometry.
Combinatorics. Pigeonhole principle. Combinatorial geometry. Probability.
Math games. Interesting problems.

Recommended literature:
Brožúry z edície Škola mladých matematikov. (in slovak)
Séria brožúr: XY. ročník matematickej olympiády. (in slovak)
Ziegler, G.M.: Matematika Vám to spočítá, Universum, Praha, 2011. (in czech)
Zhouf, J. a kol.: Matematické příběhy z korespondenčních seminářu, Prometheus, Praha, 2006. (in czech)

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 128

A	B	C	D	E	FX
67.19	12.5	10.16	7.03	3.13	0.0

Provides: RNDr. Ingrid Semanišinová, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/SWI1/07	**Course name:** Software engineering

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: 4.

Course level: I.

Prerequisities: ÚINF/DBS1a/03

Conditions for course completion:

Learning outcomes:

Brief outline of the course:
System, subsystem, software system. Software processes. Introduction to project management. Requirements gathering. Software modeling. Introduction to UML. Software architectures. Software development methodologies. Verification and validation. Resource management.

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 59

A	B	C	D	E	FX
1.69	10.17	15.25	20.34	37.29	15.25

Provides: doc. RNDr. Gabriel Semanišin, PhD., Mgr. Alexander Szabari, PhD.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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

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

Number of credits: 2

Recommended semester/trimester of the course: 1.

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

Prerequisities:

Conditions for course completion:

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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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

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

Number of credits: 2

Recommended semester/trimester of the course: 2.

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

Prerequisities:

Conditions for course completion:

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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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

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

Number of credits: 2

Recommended semester/trimester of the course: 3.

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

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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

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

Number of credits: 2

Recommended semester/trimester of the course: 4.

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

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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

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

Number of credits: 4

Recommended semester/trimester of the course:

Course level: I., II.

Prerequisities:

Conditions for course completion:

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

Brief outline of the course:

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

Course language:
Slovak or English

Notes:

Course assessment
Total number of assessed students: 47

A	B	C	D	E	FX
97.87	2.13	0.0	0.0	0.0	0.0

Provides:

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚTVŠ/ LKSp//13	**Course name:** Summer Course-Rafting of TISA River
Course type, scope and the method: **Course type:** Practice **Recommended course-load (hours):** **Per week:** 36 **Per study period:** 504 **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: 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., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

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

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ SLO1a/06	**Course name:** Symbolic logic

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: 6.

Course level: I., II.

Prerequisities:

Conditions for course completion:

Learning outcomes:
To understand basic notions of sentence and predicate logic - sentence, sentence scheme, provability, satisfiability, term, formula.

Brief outline of the course:
Predicate logic – logic language, syntax and semantics, term, formula. Axioms, proof, provability. Interpretation, truth, model. Correctness of the predicate logic.

Recommended literature:
GOLDSTERN M., JUDAH H.: The Incompleteness Phenomenon, A New Course in Mathematical Logic, A K Peters, Wellesley, Massachusetts, 1995
http://cs.ics.upjs.sk/~krajci/skola/vyucba/ucebneTexty/logika/logika.pdf

Course language:

Notes:

Course assessment
Total number of assessed students: 324

A	B	C	D	E	FX
18.21	7.41	13.58	12.35	33.33	15.12

Provides: doc. RNDr. Stanislav Krajči, PhD.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ SPP1a/14	**Course name:** Školské programovacie prostredia I.

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

Number of credits: 4

Recommended semester/trimester of the course: 3.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 240

A	B	C	D	E	FX
36.25	20.0	17.08	10.42	9.17	7.08

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

Date of last modification: 11.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ SPP1b/14	**Course name:** Školské programovacie prostredia II.

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

Number of credits: 4

Recommended semester/trimester of the course: 6.

Course level: I.

Prerequisities:

Conditions for course completion:
Creation of educational project in selected children's programming environment (Scratch/ AppInventor).
Designing and presentation of graded tasks collection in selected children's programming environment.

Learning outcomes:
1. To get an overview of children's programming environments.
2. To acquire programming skills in selected children's programming environments.
3. To compile a collection of graded learning tasks on programming.

Brief outline of the course:
Teaching of algorithms and programming in elementary school - the objectives, content, textbooks and methodological materials. Algorithmic computer games. Overview of children's programming environments. Programming in Scratch/AppInventor, creating educational projects. Creating graded set of tasks to selected children's programming environment.

Recommended literature:
1. LOVÁSZOVÁ, G. a kol. (2010) Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika: Malé programovacie jazyky. Bratislava : ŠPÚ, 2010. ISBN 978-80-8118-066-8
2. SALANCI, Ľ. a kol. (2010) Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika: Didaktika programovania. Bratislava : ŠPÚ, 2010. ISBN 978-80-8118-065-1
3. LOVÁSZOVÁ, G. a kol. (2011) Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika: Didaktika programovania pre ZŠ 1. Bratislava : ŠPÚ, 2010. ISBN 978-80-8118-080-4
4. LOVÁSZOVÁ, G. a kol. (2011) Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika: Didaktika programovania pre ZŠ 2. Bratislava : ŠPÚ, 2010. ISBN 978–80–8118–091-0

Course language:

Notes:

Course assessment
Total number of assessed students: 7

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

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

Date of last modification: 11.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/SZP/10	**Course name:** Thesis related 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: 5.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:
To provide students with basic information concerning writing the text of thesis and the presentation of thesis results.

Brief outline of the course:
Necessary elements and formal aspects of a thesis. WYSIWYG editors, LaTeX, drawing programs. Presentation software, Microsoft PowerPoint and its clones, Beamer. Suggestions for presentation and contribution making.

Recommended literature:
http://www.upjs.sk/pracoviska/univerzitna-kniznica/zaverecne-prace/

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 100

abs	n
100.0	0.0

Provides: doc. RNDr. Dušan Šveda, CSc.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.

COURSE INFORMATION LETTER

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: **Course type:** Practice **Recommended course-load (hours):** **Per week:** 36 **Per study period:** 504 **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.
Date of last modification: 15.01.2014
Approved: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Matúš Harminc, CSc.