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. Miroslav Ploščica, 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. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ ALG1b/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:
 Test
 Exam

Learning outcomes:
 To obtain a deeper knowledge on vector spaces, systems of linear equations and affine spaces.

Brief outline of the course:
 Vector spaces, subspaces. A basis, a dimension and a characterization of n-dimensional vector spaces. The rank of a matrix, the Frobenius theorem. Homogeneous systems of linear equations, a fundamental solution set. Affine spaces, subspaces and their positions. Convex sets, convex polyhedrons.

Recommended literature:
 A. F. Beardon: Algebra and Geometry, Cambridge University Press, 2005
 G. Birkhoff, S. Mac Lane: A Survey of Modern Algebra, New York 1965

Course language:
 Slovak

Notes:

Course assessment
 Total number of assessed students: 238

A	B	C	D	E	FX
12.61	11.76	18.07	11.34	44.12	2.1

Provides: doc. RNDr. Jaroslav Ivančo, CSc., RNDr. Miroslava Černegová

Date of last modification: 14.02.2014

Approved: doc. RNDr. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science	

Course ID: ÚMV/ ALG1c/10	**Course name:** Algebra III

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: 3.

Course level: I.

Prerequisities: ÚMV/ALG1b/10

Conditions for course completion:
 Awarded according to continual evaluation, written and oral examination.

Learning outcomes:
 The students learn basic concepts, theorems and methods of linear algebra, at the level necessary for applications in geometry and other parts of mathematics. They obtain knowledge about the fundamentals of group theory and ring theory, and about properties of the polynomial integral domains.

Brief outline of the course:
 - Ring, integral domain. Integral domain of polynomials over a field. Decomposition into irreducible factors. Roots of polynomials.
 - Linear mappings and their matrices. Operations with linear mappings, matrices of sums and compositions of linear mappings. Regular linear transformations, regular matrices.
 - Eigenvalues ans eigenvectors, similar matrices. Bilinear and quadratic forms.
 - Groups, subgroups, cyclic groups, normal subgroups, factorization.

Recommended literature:
 S.Mac Lane, G.Birkhoff: Algebra, The Macmillan Company, New York, 1964
 D.A.R. Wallace: Groups,rings and fields, Springer, 1998
 G. Birkhoff, S. MacLane: Prehľad modernej algebry, Alfa Bratislava, 1979 (in Slovak)
 T. Katriňák a kol.: Algebra a teoretická aritmetika 1, Alfa Bratislava, 1985 (in Slovak)

Course language:
 Slovak

Notes:

Course assessment
 Total number of assessed students: 85

A	B	C	D	E	FX
8.24	15.29	22.35	27.06	27.06	0.0

Provides: doc. RNDr. Miroslav Ploščica, CSc.

Date of last modification: 14.02.2014
Approved: doc. RNDr. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science	

Course ID: ÚMV/ ALG1d/10	**Course name:** Algebra 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/ALG1c/10

Conditions for course completion:
 Awarded according to continual evaluation, written and oral examination.

Learning outcomes:
 The students deepen their knowledge about groups, rings and fields. They learn the fundamentals of algebraic numbers, extensions of fields and Galois theory. They obtain basic orientation in the methods of a modern algebra.

Brief outline of the course:
 - Ideals in rings, factorization.
 -Field extensions, algebraic elements. Finite and algebraic extensions. Constructions with straightedge and compass. Algebraic numbers. Finite fields.
 - Galois groups of polynomials.

Recommended literature:
 S.Mac Lane, G.Birkhoff: Algebra, The Macmillan Company, New York, 1964
 G. Birkhoff, S. MacLane: Prehľad modernej algebry, Alfa Bratislava, 1979 (in Slovak)
 T. Katriňák a kol.: Algebra a teoretická aritmetika 1, Alfa Bratislava, 1985 (in Slovak)
 J. J. Rotman: Advanced Modern Algebra, Amer. Math. Soc., Providence, 2010

Course language:
 Slovak or English

Notes:

Course assessment
 Total number of assessed students: 49

A	B	C	D	E	FX
10.2	18.37	24.49	26.53	20.41	0.0

Provides: doc. RNDr. Miroslav Ploščica, CSc.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	

Course ID: ÚINF/ASU1/13	**Course name:** Algorithms and data structures

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: ÚINF/PAZ1b/03

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
 Total number of assessed students: 176

A	B	C	D	E	FX
10.8	9.66	14.2	21.02	38.64	5.68

Provides: RNDr. Rastislav Krivoš-Belluš, PhD.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Miroslav Ploščica, 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. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science	

Course ID: ÚINF/ AFJ1b/00	**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: 5

Recommended semester/trimester of the course: 5.

Course level: I., II.

Prerequisities: ÚINF/AFJ1a/03

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

Recommended literature:
 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: 471

A	B	C	D	E	FX
37.58	13.8	20.59	18.68	6.37	2.97

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

Date of last modification: 03.02.2014

Approved: doc. RNDr. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science	

Course ID: ÚMV/ZAG/10	**Course name:** Basic algebra and geometry

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/ALG1d/10 and ÚMV/GEO1b/10 and ÚMV/LCO/10

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
 Total number of assessed students: 36

A	B	C	D	E	FX
16.67	36.11	30.56	11.11	5.56	0.0

Provides:

Date of last modification: 26.02.2014

Approved: doc. RNDr. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science

Course ID: ÚMV/ ZDI/10	**Course name:** Basic discrete mathematics and computer science

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/DSMc/10 and ÚINF/TVY/10 and ÚINF/AFJ1b/00

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
 Total number of assessed students: 41

A	B	C	D	E	FX
36.59	24.39	14.63	14.63	9.76	0.0

Provides:

Date of last modification: 26.02.2014

Approved: doc. RNDr. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: ÚMV/ ZMA/10	**Course name:** Basic mathematical analysis	

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/MANb/10 and ÚMV/MAN1c/10 and ÚMV/MAN1d/10		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		

Course assessment
 Total number of assessed students: 13

A	B	C	D	E	FX
46.15	23.08	23.08	7.69	0.0	0.0

Provides:
Date of last modification: 26.02.2014
Approved: doc. RNDr. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science	

Course ID: ÚMV/ ZBR/14	**Course name:** Bridge Fundamentals

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.

Prerequisities:

Conditions for course completion:
 Active participation on exercises.

Learning outcomes:
 A student gets acquainted with fundamentals of the contract bridge, develops his/her logical thinking and consolidates his/her habits of positive social behaviour.

Brief outline of the course:
 Bridge rules.
 Principles of the bidding system Standard American.
 Basic techniques of declarer's play.
 Basic techniques of the defence.
 Lead conventions, signals.
 Common bidding conventions.
 Selected advanced techniques of the card play.
 Partnership cooperation in the contract bridge.
 Bridge ethics.

Recommended literature:
 T. Menyhért: Kurz bridžu 2013, http://new.bridgekosice.sk/kurz-bridzu-2013/
 R. Pavlicek: Learn To Play Bridge!, http://www.rpbridge.net/1a00.htm
 ACBL SAYC System Booklet, http://ebookbrowsee.net/acbl-sayc-pdf-d201415187

Course language:
 Slovak or English

Notes:
 Minimum number of participants is 4.

Course assessment
 Total number of assessed students: 7

abs	n
85.71	14.29

Provides: doc. RNDr. Miroslav Ploščica, CSc., prof. RNDr. Mirko Horňák, CSc.
Date of last modification: 11.02.2014
Approved: doc. RNDr. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science	

Course ID: ÚMV/ FKP/10	**Course name:** Complex analysis

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: ÚMV/MAN1c/10 or ÚMV/MAN2d/10 or ÚMV/MAN3c/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 complex functions and develop the ability to use this theory.

Brief outline of the course:
Complex numbers, complex sequences and series. Function of a complex variable - limits, continuity, differetiability, Cauchy-Riemann equations. Integration in the complex plane - Cauchy's theorems and its consequences. Laurent's series, residues and Cauchy's residue theorem. Laplace and Fourier transform and their applications.

Recommended literature:
1. Priestley, H.A.: Introduction to Complex Analysis. Oxford University Press, Oxford, 2004.
2. Sveshnikov, A. - Tikhonov, A.: The Theory of Functions of a Complex Variable. Mir Publishers, Moscow, 1973.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 88

A	B	C	D	E	FX
9.09	5.68	26.14	20.45	27.27	11.36

Provides: doc. RNDr. Ondrej Hutník, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Miroslav Ploščica, 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: 3.

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. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science

Course ID: ÚMV/ KOP/10	**Course name:** Convex programming

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: 6.

Course level: I.

Prerequisities: ÚMV/LCO/10

Conditions for course completion:
Based on the results of written tests (two per term, with emphasis on problem solving) and on the oral examination.

Learning outcomes:
To learn the theoretical basis and the most important methods of nonlinear programming

Brief outline of the course:
Practical problems leading to a nonlinear program. Convex sets and their properties. Convex functions – properties and criteria of convexity. Necessary and sufficient conditions of optimality. Karush-Kuhn-Tucker conditions. Quadratic programming.

Recommended literature:
Bazaraa, Sherali, Shetty: Nonlinear programming, Wiley, New York 1993

Course language:
Slovak or English

Notes:

Course assessment
Total number of assessed students: 128

A	B	C	D	E	FX
12.5	17.97	15.63	13.28	32.81	7.81

Provides: doc. RNDr. Tomáš Madaras, PhD., RNDr. Pavol Široczki

Date of last modification: 14.02.2014

Approved: doc. RNDr. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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

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

Number of credits: 5

Recommended semester/trimester of the course: 5.

Course level: I., II.

Prerequisities:

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

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

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

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

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

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 406

A	B	C	D	E	FX
17.24	11.58	21.18	16.75	26.11	7.14

Provides: RNDr. Ivan Mojsej, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Miroslav Ploščica, 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: 1.

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. Miroslav Ploščica, 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: 2.

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. Miroslav Ploščica, CSc.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science	

Course ID: ÚMV/ DSMc/10	**Course name:** Discrete mathematics 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/DSMb/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 fundamental methods of graph theory. Abilities of applications of graph theory.

Brief outline of the course:
 Eulerian and Hamiltonian graphs.
 Connectivity: Theorem of Menger.
 Matching: Theorem of Tutte.
 Planar graphs: Theorem of Kuratowski.
 Plane graphs: Euler polyhedral formula and its consequences,
 Introduction to the theory of light graphs in plane graphs.
 Colourings of plane graphs.
 Crossing numbers of graphs.
 Introduction to the topological graph theory.
 Edge colourings: Theorem of Vizing.
 Application of Graph theory: The shortest path problem, the critical path method.

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: 49					
A	B	C	D	E	FX
10.2	34.69	12.24	30.61	12.24	0.0

Provides: prof. RNDr. Stanislav Jendroľ, DrSc., doc. RNDr. Roman Soták, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science	

Course ID: ÚMV/ DSMd/10	**Course name:** Discrete mathematics IV

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: ÚMV/DSMc/10

Conditions for course completion:

Learning outcomes:
To obtain additional knowledge in graph theory and get familiar with connections with other areas in mathematics.

Brief outline of the course:
Graph automorphisms, orbits
Adjacency matrix, eccentricity of a vertex, radius and diameter of a graph
Spectrum of a graph, characteristic polynomial
Permutation group, stabilizer of an object, set of fixed points of a permutation
Burnside's lemma, Pólya's enumeration theorem
Inventory of n-vertex graphs
Probabilistic method in graph theory

Recommended literature:
1. J.L. Gross, J. Yellen: Graph Theory and its Applications, Chapmann&Hall, 2006
2. J.M. Harris, J.L. Hirst, M.J. Mossinghoff: Combinatorics and Graph Theory, Springer, 2008
3. N. Biggs: Algebraic Graph Theory, Cambridge University Press, 1993
4. J. Matoušek, J. Vondrák: The Probabilistic Method, Lecture Notes, 2002

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 39

A	B	C	D	E	FX
23.08	12.82	33.33	10.26	20.51	0.0

Provides: RNDr. Igor Fabrici, Dr. rer. nat.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Miroslav Ploščica, 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. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science	

Course ID: ÚMV/ GEO1a/10	**Course name:** Geometry I

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: 3.

Course level: I.

Prerequisities: ÚMV/ALG1b/10

Conditions for course completion:
 Test
 Exam

Learning outcomes:
 To obtain a deeper knowledge on Euclidean spaces and basic geometric transformations.

Brief outline of the course:
 Euclidean spaces, the distance and angle of subspaces. The measure of angle and the volume of convex polyhedron. Geometry of the triangle. Curves and surfaces of second order. Affine transformations. Isometric transformations and similitudes.

Recommended literature:
 A. F. Beardon: Algebra and geometry, Cambridge University Press, 2005

Course language:
 Slovak

Notes:

Course assessment
 Total number of assessed students: 178

A	B	C	D	E	FX
8.99	10.67	13.48	18.54	43.82	4.49

Provides: doc. RNDr. Jaroslav Ivančo, CSc.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science	

Course ID: ÚMV/ GEO1b/10	**Course name:** Geometry II

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: ÚMV/GEO1a/10 and ÚMV/MANb/10

Conditions for course completion:
 Test
 Exam

Learning outcomes:
 To obtain a deeper knowledge on curves and surfaces in Euclidean spaces.

Brief outline of the course:
 Plane curves and space curves. The tangent line, the osculating plane. The curvature and torsion of a curve, the Frenet formulas. The theory of surfaces, fundamental forms.

Recommended literature:
 Ch. Hsiung: A First Course in Differential Geometry, Cambridge 1997
 W. Kuhnel: Differential Geometry Curves-Surfaces-Manifolds, AMS 2002

Course language:
 Slovak

Notes:

Course assessment
 Total number of assessed students: 94

A	B	C	D	E	FX
13.83	11.7	15.96	15.96	41.49	1.06

Provides: doc. RNDr. Jaroslav Ivančo, CSc.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	

Course ID: ÚINF/ UKR1/09	**Course name:** Introduction to Cryptology

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

Number of credits: 6

Recommended semester/trimester of the course: 5.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:
 Learn basic design principals and algorithms of symmetric and asymmetric cryptography. Specify how cryptographic tools are applied to achieve privacy and authentication. Understand both the importance of cryptographic key management, and the different key management requirements and practices associated with the use of different security techniques.

Brief outline of the course:
 Cryptosystems, basic principles, breaking a cryptosystem, notions of cryptographic security. Classical cryptography and cryptoanalysis, block ciphers, stream ciphers. Public-key encryption, message authentication, signature schemes, hash functions, techniques for entity authentication and digital signatures. Protocols for key establishment, transport, agreement and maintenance. Certification and public-key infrastructure management.

Recommended literature:
 STINSON, D. R. Cryptography: Theory and Practie. CRC Press, 2005.
 MAO, W. Modern Cryptography: Theory and Practice. Prentice Hall, 2003.
 SCHNEIER, B. Applied Cryptography. Wiley, 1996.
 MENEZES, A., OORSCHOT, P. van, VANSTONE, S. Handbook of Applied Cryptography. CRC Press, 1996.

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

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: 5.

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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science	

Course ID: ÚMV/ LCO/10	**Course name:** Linear and integer programming

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

Number of credits: 5

Recommended semester/trimester of the course: 5.

Course level: I.

Prerequisities: ÚMV/ALGa/10

Conditions for course completion:
Two tests, using software CASSIM, oral exam

Learning outcomes:
To learn the solving methods of linear programming

Brief outline of the course:
Formulation of linear and integer programs. Graphic solution. Simplex method, its variants and finiteness. Duality and its economic interpretation. Sensitivity analysis and parametric programming. Algorithms for integer programming.

Recommended literature:
Ch. Papadimitriou – K. Steiglitz: Combinatorial Optimization: Algorithms and Complexity, 1984
R.J. Vanderbei, Linear Programming:Foundations and Extentions (Kluwer 2001), electronic version: http://www.princeton.edu/~rvdb/LPbook/

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 123

A	B	C	D	E	FX
22.76	13.82	22.76	20.33	19.51	0.81

Provides: doc. RNDr. Roman Soták, PhD., RNDr. Pavol Široczki

Date of last modification: 14.02.2014

Approved: doc. RNDr. Miroslav Ploščica, 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. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	

Course ID: ÚINF/ LOP1/04	**Course name:** Logic programming

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

Number of credits: 5

Recommended semester/trimester of the course: 6.

Course level: I., II.

Prerequisities:

Conditions for course completion:

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

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

Recommended literature:
BRATKO, I.: Prolog – programming for artificial intelligence, third edition. Addison-Wesley, 2001

Course language:

Notes:

Course assessment
Total number of assessed students: 211

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

Provides: RNDr. Ondrej Krídlo, PhD.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science	

Course ID: ÚMV/MAN1c/10	**Course name:** Mathematical analysis III

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: 3.

Course level: I.

Prerequisities: ÚMV/MANb/10

Conditions for course completion:
 exam

Learning outcomes:
 Understanding of the basic rigorous ideas of Mathematical Analysis.

Brief outline of the course:
 Riemann integral. Functional series. Pointwise and uniform convergence. Power series. Fourier series. Euclidean spaces. Limits and continuity of real functions of several variables. Partial derivatives. Implicit function. Inverse mapping. Local, global and constrained extrema.

Recommended literature:
 B. S. Thomson, J. B. Bruckner, A. M. Bruckner: Elementary Real Analysis, Prentice Hall, 2001.
 J. Doboš, M. Záskalická: Zbierka úloh z matematiky III, Elfa, Košice, 2002.
 Л. Д. Кудрявцев, А. Д. Кутасов, В. И. Чехлов, М. И. Шабунин: Сборник задач по математическому анализу, Наука, Москва, 1995.
 Qian, Z., Analysis III: Integration, Mathematical Institute, Oxford, 2011.

Course language:
 Slovak

Notes:

Course assessment
 Total number of assessed students: 251

A	B	C	D	E	FX
2.39	3.98	8.37	16.73	45.82	22.71

Provides: prof. RNDr. Jozef Doboš, CSc., RNDr. Michal Dečo, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science	

Course ID: ÚMV/ MAN1d/10	**Course name:** Mathematical analysis IV

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: 4.

Course level: I.

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

Conditions for course completion:
 exam

Learning outcomes:
 Understanding of the basic rigorous ideas of Mathematical Analysis.

Brief outline of the course:
 Metric spaces. Complete, compact and connected sets. Rings sigma-rings. Measure. Outer measure. Lebesgue measure. Measurable sets. Measurable functions. Legesgue integral. Lebesgue integral versus Riemann integral. Calculations of Lebesgue integrals. Applications.

Recommended literature:
 B. S. Thomson, J. B. Bruckner, A. M. Bruckner: Elementary Real Analysis, Prentice Hall, 2001.
 A. M. Bruckner, J. B. Bruckner, B. S. Thomson: Real Analysis, Prentice Hall, 1997.
 T. Neubrunn, B. Riečan: Miera a integrál, Veda, Bratislava, 1981.
 B. Riečan, T. Neubrunn: Teória miery, Veda, Bratislava, 1992.
 Т. А. Леонтьева, В. С. Панферов, В. С. Серов: Задачи по теории функций действительного переменного, Издательство Московского университета, Москва, 1997.

Course language:
 Slovak

Notes:

Course assessment
 Total number of assessed students: 208

A	B	C	D	E	FX
3.85	4.81	13.94	23.08	41.35	12.98

Provides: prof. RNDr. Jozef Doboš, CSc., RNDr. Michal Dečo, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science

Course ID: ÚMV/ MSW/10	**Course name:** Mathematical software

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

Number of credits: 3

Recommended semester/trimester of the course: 2.

Course level: I.

Prerequisities:

Conditions for course completion: Tests from both Excel and Maple   Given at the basis of partial tests.

Learning outcomes: To develop student's knowledge and skills to use numerical and grafical representations of data and modelling by solving of various types of mathematical problems in environment of spreadsheet and in environment of system of symbolic calculations Maple.

Brief outline of the course: The creation and use of formulas with mathematical functions, graphical and numerical solving of equations and systems of equations, utilize of arithmetical, graphical and stochastic models by solving of mathematical problems, linear optimalization. Basic description of Maple software, manipulation of mathematical expressions, finding solutions of equalities and inequalities, mathematical analysis, linear algebra, number, graph and set theory in Maple, graphical possibilities of Maple.

Recommended literature: 1. Shingareva, Lizárraga-Celaya: Maple and Mathematica. A problem solving approach for mathematics, Springer Wien NewYork, 2007   2. Eberhart: Maple problem solving handbook, University of Kentucky, 2009   3. Šťastný: Matematické a statistické výpočty v Microsoft Excelu, Computer Press 2001

Course language: Slovak

Notes:

Course assessment   Total number of assessed students: 117

A	B	C	D	E	FX
17.09	25.64	21.37	23.08	8.55	4.27

Provides: doc. RNDr. Stanislav Lukáč, PhD., RNDr. Daniel Klein, PhD.

Date of last modification: 14.02.2014
Approved: doc. RNDr. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science	

Course ID: ÚMV/ NMT/10	**Course name:** Numerical mathematics

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: 4.

Course level: I.

Prerequisities: ÚMV/MAN1c/10 and ÚMV/ALG1c/10

Conditions for course completion:
During semester it is possible to obtain at maximum 30 points for creating, debugging and explaining of functioning of programmes devoted to numerical methods. A student is eligible for the oral part of examination after obtaining at least 10 out of the mentioned 30 points. On the oral part of examination a student answers two questions chosen by him/her at random, one from the group A (40 points at maximum) and one from the group B (30 points at maximum). Evaluation scale: A ... 90-100 p., B ... 80-89 p., C ... 70-79 p., D ... 60-69 p., E ... 50-59 p., FX ... 0-49 p.

Learning outcomes:
A student gets acquainted with basic numerical methods, with conditions of their use and with errors accompanying approximations by numerical methods. He/she practically tests his/her own computer programmes corresponding to some numerical methods.

Brief outline of the course:
Interpolation (ordinary, generalised). Numerical differentiation. Numerical integration (rules, errors). Gaussian quadrature. Interval-halving method. Regula falsi method. Newton's method. Method of successive iterations. Bernoulli's method. LU-decomposition. Method of least squares.

Recommended literature:
A. Ralston, A First Course in Numerical Analysis, McGraw-Hill, New York 1965
A. Björck and G. Dahlquist, Numerical Methods, Prentice-Hall, Englewood Cliffs 1974; reprint Dover Publications, Mineola 2003

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 142

A	B	C	D	E	FX
9.86	16.9	8.45	15.49	31.69	17.61

Provides: prof. RNDr. Mirko Horňák, CSc.

Date of last modification: 14.02.2014	
Approved: doc. RNDr. Miroslav Ploščica, CSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science	

Course ID: ÚMV/ POV/10	**Course name:** Practical operations research

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: 6.

Course level: I.

Prerequisities:

Conditions for course completion:
 Based on evaluation of individual projects.

Learning outcomes:
 To provide the basics of mathematical modelling of real-world problems and selected methods of solving the problems of uni- and multicriterial optimization

Brief outline of the course:
 Elements of decision theory, games against nature. Mathematical modelling of real-world problems. Linear and nonlinear models. Multicriterial optimization.

Recommended literature:
 electronic information sources

Course language:
 Slovak

Notes:

Course assessment
Total number of assessed students: 17

A	B	C	D	E	FX
58.82	29.41	11.76	0.0	0.0	0.0

Provides: doc. RNDr. Tomáš Madaras, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ ZUC/10	Course name: Principles of book-keeping

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: 5.

Course level: I.

Prerequisities: ÚMV/MANb/10

Conditions for course completion:
 Three tests: single-entry accountig (complex example), double-entry accounting (complex example), conceptual apparatus of accounting. The final evaluation is given at the basis of partial tests.

Learning outcomes:
 To learn basics of economic conceptual and procedural apparatus of accounting.

Brief outline of the course:
 The history and legal regulations of accounting. Structure of accounting in a bussines company, bank and insurance company; accounting information system. Various kinds of business, trade licence and trade law. Company subjects, banks and insurance companies - the financial instruments. Single-entry accountig system, statements. Assets and its sources. Assets and liability pricing. Balance principle. Assets and liabilities list. Balance sheet, structure of assets and liabilities. Double-entry accounting records. Account, accounting on accounts of balance sheet and income statement. Synthetic and analytical records. Account classification of business companies, banks and insurance companies, the principles of its construction. Balance sheet, income statement. Financial statement (simple and consolidated).

Recommended literature:
 Soukupová B., Šlosárová A., Baštincová A.: Účtovníctvo. Bratislava: Iura Edition, 2001
 Máziková a kol.: Účtovníctvo (učebné texty). Bratislava: Iura Edition, 2009
 Beňová E. a kol.: Financie a mena. Bratislava: Iura Edition, 2005
 The Law of NR SR no. 43/2002 Z. z. on accounting, the law on income tax no. 595/2003 Z. z.

Course language:
 Slovak

Notes:

Course assessment					
Total number of assessed students: 83					
A	B	C	D	E	FX
13.25	18.07	32.53	20.48	14.46	1.2

Provides: RNDr. Daniel Klein, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Miroslav Ploščica, 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: 6.

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. Miroslav Ploščica, 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. Miroslav Ploščica, 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

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. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ SDR/10	**Course name:** Seminar on differential equations

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: Final grading reflects the activity of the student during the semester and the quality of presentation of a paper (or papers).

Learning outcomes: Gain, extend knowledge of some areas in the theory of differential and difference equations.

Brief outline of the course: The work in seminar consists of study of selected topics in the theory of differential and difference equations extending knowledge obtained in the course Differential equations, and their presentation.

Recommended literature: Journal literature.

Course language: Slovak

Notes:

Course assessment
Total number of assessed students: 4

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

Provides: Mgr. Jozef Kiseľák, PhD., RNDr. Ivan Mojsej, PhD.

Date of last modification: 14.02.2014

Approved: doc. RNDr. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, 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. Miroslav Ploščica, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	

Faculty: Faculty of Science	

Course ID: ÚINF/ TYS1/06	**Course name:** Typographical systems

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:
To provide the basic information on principles for typesetting of documents containing mathematical formulas in Plain TeX, AMS-TeX, and LaTeX.

Brief outline of the course:
Typesetting of a plain text, special text symbols, using of text fonts. TeX macros. Enumerations in text and footnote command. Parameter setting determining the appearance of the pages. Typesetting of mathematical formulas in text and displays, aligning formulas. Definitions of TeX macros. Making tables and pictures. Definitions, theorems, and proofs in a mathematical document. Contents, bibliography, sections in a document.

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 223

A	B	C	D	E	FX
46.64	18.39	21.08	5.38	7.62	0.9

Provides: doc. RNDr. Stanislav Krajči, PhD.

Date of last modification: 03.02.2014

Approved: doc. RNDr. Miroslav Ploščica, 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. Miroslav Ploščica, CSc.